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CATHOLIC SOCIAL TEACHING IN ACTION:
FACING THE CHALLENGES OF THE DIGITAL AGE

Edited by

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VOLUME'S ABSTRACT

The articles collected in this volume report, with a few minor changes, presentations given during the international annual Conference and Consultation organized by the Foundation in 2017. In particular, Section 1 reports a general introduction to the annual Conference's themes and the concluding reports of both the Conference and the Consultation, here included to give an overview of what had emerged from the discussions. In this first session, moreover, both a summary of the Conference organized in Berlin by the German Chapter and a closing remark reflection from the Italian Chapter's Conference are also included. Sections 2, 3 and 4 reports papers and comments from Conference and Consultation. The book includes an Introduction by Giovanni Marseguerra (CAPPF Scientific Committee Coordinator) and Anna Maria Tarantola (CAPPF Board member and Delegate the for the Scientific Committee).

Overall, the papers here collected provide the main ideas that have characterized the work of the Foundation over the last two years and illustrate the efforts made by the Foundation to respond to the concerns raised by the Holy Father on the occasion of the audiences granted to the Foundation in 2016 and 2017. Specifically, three broad topics are addressed in the volume, all related to the transformations of the digital age. First the role of catholic social teaching in the current global turmoil, then the future of jobs and wages in a rapidly changing and technology driven environment and, finally, some relevant recently emerged ethical issues in economics and finance.

The common thread running through all the contributions is the multidimensional nature of solidarity, here envisaged as a crucial community value of our society and a key principle of catholic social teaching which should guide our behav-

ior in a forward looking manner. In this respect, intergenerational solidarity acquires a special relevance for its capacity to take into consideration future generations in current decisions.

DISCORSO DEL SANTO PADRE FRANCESCO
AI PARTECIPANTI ALL'INCONTRO PROMOSSO
DELLA FONDAZIONE
CENTESIMUS ANNUS – PRO PONTIFICE

Sala Clementina
Sabato, 20 maggio 2017

Cari amici,

vi dò un cordiale benvenuto in occasione della Conferenza Internazionale della Fondazione *Centesimus Annus – Pro Pontifice*. Ringrazio il Presidente, Signor Domingo Sugranyes Bickel, per le sue gentili espressioni di saluto a vostro nome. Esprimo il mio apprezzamento per i vostri sforzi nel cercare modi alternativi di comprensione dell'economia, dello sviluppo e del commercio, per rispondere alle sfide etiche poste dall'imporsi di nuovi paradigmi e forme di potere derivate dalla tecnologia, dalla cultura dello spreco e da stili di vita che ignorano i poveri e disprezzano i deboli (cf. Enc. *Laudato si'*, 16).

Molte persone si impegnano per unire la famiglia umana nella comune ricerca di uno sviluppo sostenibile e integrale, poiché sappiamo che le cose possono cambiare (cf. *ibid.*, 13). La vostra Fondazione offre anche un prezioso contributo precisamente nel considerare le attività commerciali e quelle finanziarie alla luce della ricca tradizione della dottrina sociale della Chiesa e di una intelligente ricerca di alternative costruttive. Sulla base della vostra competenza ed esperienza, e in cooperazione con altre persone di buona volontà, vi siete impegnati a sviluppare modelli di crescita economica centrati sulla dignità, sulla libertà e la creatività, che sono caratteristiche peculiari della persona umana.

La vostra Dichiarazione di quest'anno nota giustamente che la lotta contro la povertà esige una migliore comprensione di essa come fenomeno umano e non meramente economico. Promuovere lo sviluppo umano integrale richiede dialogo e coinvolgimento con i bisogni e le aspirazioni della gente, richiede di ascoltare i poveri e la loro quotidiana esperienza di privazioni molteplici e sovrapposte, escogitando specifiche risposte a situazioni concrete. Ciò richiede di dar vita, all'interno delle comunità e tra le comunità e il mondo degli affari, a strutture di mediazione capaci di mettere insieme persone e risorse, iniziando processi nei quali i poveri siano i protagonisti principali e i beneficiari. Un tale approccio all'attività economica, basato sulla persona, incoraggerà l'iniziativa e la creatività, lo spirito imprenditoriale e le comunità di lavoro e d'impresa, e in tal modo favorirà l'inclusione sociale e la crescita di una cultura di solidarietà efficace.

In questi giorni avete posto particolare attenzione alla questione cruciale della creazione di lavoro nel contesto della nuova rivoluzione tecnologica in atto. Come non potremmo essere preoccupati per il grave problema della disoccupazione dei giovani e degli adulti che non dispongono dei mezzi per "promuovere" sé stessi? E questo è arrivato a un livello molto grave, molto grave. È un problema che ha assunto proporzioni veramente drammatiche sia nei Paesi sviluppati che in quelli in via di sviluppo e che chiede di essere affrontato per un senso di giustizia tra le generazioni e di responsabilità per il futuro. In modo analogo, gli sforzi per affrontare l'insieme delle questioni connesse alla crescita delle nuove tecnologie, alla trasformazione dei mercati e alle legittime aspirazioni dei lavoratori devono prendere in considerazione non solo gli individui ma anche le famiglie. Questa, come sapete, è stata una preoccupazione espressa dalle recenti Assemblee sinodali sulla famiglia, che hanno rilevato come l'incertezza nelle condizioni lavorative spesso finisce per aumentare la pressione e i problemi della famiglia ed ha un effetto sulla capacità della famiglia di partecipare fruttuosa-

mente alla vita della società (cf. Esort. ap. postsin. *Amoris Laetitia*, 44).

Cari amici, vi incoraggio, incoraggio i vostri sforzi per portare la luce del Vangelo e la ricchezza della dottrina sociale della Chiesa su queste pressanti questioni contribuendo a un dibattito informato, al dialogo e alla ricerca, ma anche impegnandovi in quel cambiamento di atteggiamento, di opinioni e di stile di vita che è essenziale per costruire un mondo più giusto, libero e in armonia.

Nel formulare il mio auspicio e il mio augurio per la fertilità del vostro lavoro, invoco la benedizione di Dio su di voi, sulle vostre famiglie e sui membri della vostra Fondazione.

ADDRESS OF HIS HOLINESS POPE FRANCIS
TO PARTICIPANTS IN THE CONGRESS
ORGANIZED BY THE
CENTESIMUS ANNUS – PRO PONTIFICE FOUNDATION

Clementine Hall
Saturday, 20 May 2017

Dear Friends,

I offer you a warm welcome on the occasion of the International Conference of the *Centesimus Annus – Pro Pontifice* Foundation. I thank your President, Mr Domingo Sugranyes Bickel, for his kind greeting in your name. I express my appreciation for your efforts to seek other ways of understanding the economy and progress, and business, to meet the ethical challenges posed by the imposition of new paradigms and forms of power derived from technology, the throwaway culture and lifestyles that ignore the poor and despise the weak (cf. Enc. *Laudato si'*, 16).

Many people are struggling to bring the whole human family together to seek a sustainable and integral development, for we know that things can change (cf. *ibid*, 13). Your Foundation is also making a valuable contribution precisely by approaching business and finances both in the light of the rich heritage of the Church's social doctrine and the intelligent search for "constructive alternatives". Drawing on your own expertise and experience, and in cooperation with other people of good will, you are committed to developing models of economic growth centred on the dignity, freedom and creativity that are the hallmark of the human person.

Your Foundation's 2017 Statement rightly notes that the fight against poverty demands a better understanding of the reality of poverty as a human and not merely economic phe-

nomenon. Promoting integral human development demands dialogue and engagement with people's needs and aspirations, listening to the poor and their daily experience of "multidimensional, overlapping deprivations", and devising specific responses to concrete situations. This calls for the creation, within communities and between communities and business, of mediating structures capable of bringing people and resources together, initiating processes in which the poor are the principal actors and beneficiaries. Such a person-based approach to economic activity will encourage initiative and creativity, the entrepreneurial spirit and communities of labour and enterprise, and thus favour social inclusion and the growth of a culture of effective solidarity.

In these days, you have paid particular attention to the critical issue of job creation in the context of the ongoing new technological revolution. How can we not be concerned about the grave problem of unemployment among the young and among adults who have not the means to "upgrade" themselves? This has reached a very grave point, very grave. It is a problem that has reached truly dramatic proportions in both developed and developing countries, and needs to be addressed, not least out of a sense of intergenerational justice and responsibility for the future. In a similar way, efforts to address the complex of issues associated with the growth of new technologies, the transformation of markets and the legitimate aspirations of the workforce must take into account not only individuals but families as well. This, as you know, was a concern expressed by the recent Synod assemblies on the family, which noted that uncertainty about work situations often contributes to family pressures and problems, and has an effect on the family's ability to participate fruitfully in the life of society (cf. Post-Syn. Ap. Ex. *Amoris Laetitia*, 44).

Dear friends, I encourage you, I encourage your efforts to bring the light of the Gospel and the richness of the Church's social teaching to these pressing issues by contributing to informed discussion, dialogue and research, but also by com-

mitting yourselves for that change of attitudes, opinions and lifestyles which is essential for building a world of greater justice, freedom and harmony.

In offering my prayerful good wishes for the fruitfulness of your work, I cordially invoke upon you, your families and your associates God's blessings of joy and peace.

DISCURSO DEL SANTO PADRE FRANCISCO
A LOS PARTICIPANTES EN UN ENCUENTRO
ORGANIZADO POR LA FUNDACIÓN
CENTESIMUS ANNUS – PRO PONTIFICE

Sala Clementina
Sábado, 20 de mayo de 2017

Queridos amigos:

Os doy una cordial bienvenida con ocasión de la Conferencia Internacional de la Fundación *Centesimus Annus – Pro Pontifice*. Doy gracias al presidente, Domingo Sugranyes Bickel, por sus gentiles expresiones de saludo en vuestro nombre. Expreso mi aprecio por vuestros esfuerzos en el buscar formas alternativas de comprensión de la economía, el desarrollo y el comercio, para responder a los desafíos éticos planteados por la imposición de nuevos paradigmas y formas de poder derivadas de la tecnología, de la cultura del descarte y de los estilos de vida que ignoran a los pobres y desprecian a los débiles (cf. Enc. *Laudato si'*, 16).

Muchas personas se comprometen para unir la familia humana en la búsqueda común de un desarrollo sostenible e integral, ya que sabemos que las cosas pueden cambiar (cf. *ibid.*, 13). Vuestra fundación ofrece también una preciosa contribución precisamente en el considerar las actividades comerciales y las financieras a la luz de la rica tradición de la doctrina social de la Iglesia y de una inteligente búsqueda de alternativas constructivas. Sobre la base de vuestra competencia y experiencia, y en cooperación con otras personas de buena voluntad, os habéis comprometido a desarrollar modelos de crecimiento económico centrados en la dignidad, la libertad y la creatividad, que son características peculiares de la persona humana.

Vuestra Declaración de este año señala justamente que la lucha contra la pobreza exige una mejor comprensión de esta como fenómeno humano y no meramente económico. Promover el desarrollo humano integral requiere diálogo e implicación con las necesidades y las aspiraciones de la gente, requiere escuchar a los pobres y su experiencia cotidiana de privaciones múltiples y superpuestas, elaborando respuestas específicas a situaciones concretas. Esto requiere dar vida, dentro de las comunidades y entre las comunidades y el mundo de los negocios, a estructuras de mediación capaces de poner juntos personas y recursos, empezando procesos en los cuales los pobres sean los protagonistas principales y los beneficiarios. Tal enfoque a la actividad económica, basado en la persona, animará la iniciativa y la creatividad, el espíritu emprendedor y las comunidades de trabajo y de empresa, y de tal forma favorecerá la inclusión social y el crecimiento de una cultura de solidaridad eficaz.

En estos días habéis puesto particular atención a la cuestión crucial de la creación de trabajo en el contexto de la nueva revolución tecnológica actual. ¿Cómo no estar preocupados por el grave problema del desempleo juvenil y de los adultos que no disponen de medios para “promoverse” a sí mismos? Y esto ha llegado a un nivel muy grave, muy grave. Es un problema que ha asumido proporciones realmente dramáticas tanto en los países desarrollados como en los que están en vías de desarrollo y que pide ser afrontado por un sentido de justicia entre las generaciones y de responsabilidad para el futuro. De forma análoga, los esfuerzos para afrontar el conjunto de las cuestiones conectadas al crecimiento de las nuevas tecnologías, a la transformación de los mercados y a las legítimas aspiraciones de los trabajadores deben tomar en cuenta no solo a los individuos sino también a las familias. Esta, como sabéis, ha sido una preocupación expresada por las recientes Asambleas sinodales sobre la familia, que han revelado cómo la incertidumbre en las condiciones laborales a menudo termina por aumentar la presión y los problemas

de la familia y tiene un efecto sobre la capacidad de la familia de participar fructuosamente en la vida de la sociedad (cf. Exort. ap. postsin. *Amoris Laetitia*, 44).

Queridos amigos, os animo, animo vuestros esfuerzos para llevar la luz del Evangelio y la riqueza de la Doctrina social de la Iglesia sobre estos asuntos urgentes contribuyendo a un debate informado, al diálogo y a la investigación, pero también comprometiéndoos en ese cambio de actitud, de opiniones y de estilo de vida que es esencial para construir un mundo más justo, libre y en armonía.

En el formular mi esperanza y mi deseo por la fecundidad de vuestro trabajo, invoco la bendición de Dios sobre vosotros, vuestras familias y los miembros de vuestra Fundación.

ANSPRACHE VON PAPST FRANZISKUS
AN DIE TEILNEHMER DER BEGEGNUNG,
DIE DIE STIFTUNG
CENTESIMUS ANNUS – PRO PONTIFICE
ORGANISIERT HAT

Clementina-Saal
Samstag, 20. Mai 2017

Liebe Freunde!

Herzlich heiÙe ich euch willkommen aus Anlass der Internationalen Konferenz der Stiftung »Centesimus Annus pro Pontifice«. Ich danke dem Prasidenten, Herrn Domingo Sureda, fur seine freundlichen Worte der BegruÙung in eurem Namen. Ich mochte meine Wertschatzung fur euer Bemuhlen zum Ausdruck bringen, alternative Verstandnisweisen der Wirtschaft, des Fortschritts und des Handels zu suchen, um auf die ethischen Herausforderungen zu antworten, die gestellt werden von der Vorherrschaft neuer Paradigmen und Formen der Macht. Denn diese sind entstanden aus der Technologie, der Wegwerfkultur und Lebensstilen, die die Armen ignorieren und die Schwachen verachten (vgl. Enzyklika *Laudato si'*, 16).

Viele Menschen setzen sich dafur ein, die Menschheitsfamilie zu vereinen in der gemeinsamen Suche nach einer nachhaltigen und ganzheitlichen Entwicklung, denn wir wissen, dass sich die Dinge andern konnen (vgl. *ebd.*, 13). Eure Stiftung leistet ebenso einen wertvollen Beitrag zur Beurteilung der kommerziellen und wirtschaftlichen Aktivitaten im Licht der reichen Tradition der kirchlichen Soziallehre und der intelligenten Suche nach konstruktiven Alternativen. Gestutzt auf eure Kompetenz und Erfahrung und in Zusammenarbeit mit anderen Menschen guten Willens habt ich euch dafur

eingesetzt, Modelle des Wirtschaftswachstums zu entwickeln, die auf Würde, Freiheit und Kreativität gegründet sind, die besonderen Merkmale der menschlichen Person.

Eure diesjährige Erklärung unterstreicht zu Recht, dass der Kampf gegen die Armut deren besseres Verständnis als menschliches und nicht rein ökonomisches Phänomen erfordert. Die ganzheitliche menschliche Entwicklung zu fördern, das macht den Dialog und die Einbeziehung der Bedürfnisse und Bestrebungen der Menschen notwendig; es erfordert, auf die Armen und ihre tägliche Erfahrung vielfältiger, sich überlagernder Entbehrungen zu hören, indem man spezifische Antworten auf konkrete Situationen erarbeitet. Das wiederum macht es erforderlich, Strukturen ins Leben zu rufen – innerhalb der Gemeinschaften und als zwischen den Gemeinschaften und der Geschäftswelt vermittelnde Instanzen –, die in der Lage sind, Menschen und Ressourcen zusammenzubringen, indem sie Prozesse anstoßen, deren Protagonisten und Begünstigte die Armen selbst sind. Ein solcher, auf die Person gegründeter Ansatz in den Wirtschaftsaktivitäten wird den Initiativegeist und die Kreativität, den unternehmerischen Geist und die Arbeits- und Unternehmensgemeinschaften ermutigen, und so wird er die soziale Inklusion und das Zunehmen einer Kultur wirksamer Solidarität fördern.

In diesen Tagen habt ihr besondere Aufmerksamkeit der entscheidenden Frage gewidmet, wie man im Kontext der derzeitigen neuen technischen Revolution Arbeitsplätze schaffen kann. Wie sollten wir nicht besorgt sein angesichts des gravierenden Problems der Arbeitslosigkeit von Jugendlichen und jungen Erwachsenen, die über keine Mittel verfügen, um für sich selbst zu »werben«? Und das hat ein sehr gravierendes, ein sehr gravierendes Niveau erreicht. Es handelt sich um ein Problem, das sowohl in den hochentwickelten als auch in den Entwicklungsländern wahrhaft dramatische Ausmaße angenommen hat und das angegangen werden muss, schon aus einem Bewusstsein für die Gerech-

tigkeit zwischen den Generationen und für die Verantwortlichkeit im Hinblick auf die Zukunft heraus. Ebenso darf das Bemühen, die mit dem Wachsen der neuen Technologien, dem Wandel der Märkte und dem berechtigten Streben der Arbeitnehmer zusammenhängenden Fragen insgesamt anzugehen, nicht nur die Einzelperson in den Blick nehmen, sondern es muss auch die Familien berücksichtigen. Wir ihr wisst, war dies eine Sorge, die von den letzten Synodenversammlungen über die Familie zum Ausdruck gebracht wurde. Man hat unterstrichen, dass unsichere Arbeitsbedingungen häufig den Druck und die Probleme der Familie vergrößern und sich nachteilig auf die Fähigkeit der Familie auswirken, am Leben der Gesellschaft in fruchtbarer Weise teilzuhaben (vgl. Nachsynodales Apostolisches Schreiben *Amoris laetitia*, 44).

Liebe Freunde, ich möchte euch ermutigen; ich möchte euer Bemühen ermutigen, das Licht des Evangeliums und den Reichtum der Soziallehre der Kirche in die Behandlung dieser drängenden Fragen einzubringen, und so zu einer fachkundigen Debatte, zum Dialog und zur Forschung beizutragen, aber auch euch einzusetzen für eine Veränderung der Haltung, der Meinungen und Lebensstile, die wesentlich ist, um eine gerechtere, freiere und harmonischere Welt aufzubauen.

Während ich meiner Hoffnung und meinem Wunsch Ausdruck verleihe, dass eure Arbeit fruchtbar sein möge, rufe ich den Segen Gottes auf euch, eure Familien und die Mitglieder eurer Stiftung herab.

INDIRIZZO DI SALUTO AL SANTO PADRE
DEL PRESIDENTE DELLA
FONDAZIONE CENTESIMUS ANNUS – PRO PONTIFICE

DOMINGO SUGRANYES BICKEL

Sabato, 20 maggio 2017

Santo Padre,

Le estamos extraordinariamente agradecidos por haber querido recibir una vez más a la Fundación Centesimus Annus – Pro Pontifice (sigo en italiano).

Un anno fa la Vostra Santità ci proponeva una traccia da seguire per *"contribuire a generare nuovi modelli di progresso economico più direttamente orientati al bene comune, all'inclusione e allo sviluppo integrale, all'incremento del lavoro e all'investimento nelle risorse umane"*.

Un progetto che abbiamo accolto come nostra idea guida, benché superi le nostre forze! Tenendo sempre presenti le possibilità dell'economia reale, stiamo approfondendo tre temi: il ruolo dell'impresarialità nella lotta contro la povertà; la possibilità di un lavoro degno per tutti nel contesto della rivoluzione tecnologica digitale; le nuove alleanze che rendono possibili i cambiamenti, tanto nei comportamenti quanto nelle istituzioni.

Ci si può chiedere se questi dibattiti siano utili. Innanzitutto il cambiamento e la diffusione delle idee può servire al cambiamento dei comportamenti; il nostro modesto contributo vuole promuovere, nella Chiesa e in vari ambienti imprenditoriali e professionali, un movimento d'opinione favorevole alla volontà di riforma.

Tuttavia i nostri dibattiti hanno anche dei risvolti pratici. Ecco due esempi che conosco di prima mano:

– In Spagna un gruppo di aderenti alla Fondazione ha lanciato una campagna per restituire vitalità alla formazione professionale, una formazione disprezzata in molti ambienti, pur essendo una risposta valida tanto al dramma della disoccupazione giovanile quanto alla riconversione dei lavoratori disoccupati per ragioni tecnologiche o economiche.

– A Londra stiamo promovendo una rete di azione solidaria, *The Voluntary Solidarity Fund*, che vorremmo sviluppare anche altrove: si tratta di avviare iniziative di solidarietà, sia in forma economica sia di volontariato, nelle diocesi e nelle parrocchie per dei progetti di accompagnamento a lunga scadenza. Cerchiamo così di sostenere persone o famiglie in situazioni precarie, per aiutare queste persone ad uscirne con le proprie forze. Per questa iniziativa ci permetteremo di sollecitare l'appoggio morale di Vostra Santità.

Ognuno di noi deve aderire personalmente all'impegno per il dialogo, per l'integrazione, per delle risposte con contenuti concreti. Le Sue parole e la Sua paterna benedizione, Santo Padre, ci daranno un nuovo slancio sulla strada intrapresa.

ADDRESS TO THE HOLY FATHER
FROM THE PRESIDENT OF THE
CENTESIMUS ANNUS – PRO PONTIFICE FOUNDATION

DOMINGO SUGRANYES BICKEL

Saturday, 20 May 2017

Holy Father,

Le estamos extraordinariamente agradecidos por haber querido recibir una vez más a la Fundación Centesimus Annus pro Pontifice.

A year ago Your Holiness suggested a path we could follow towards *“generating new models of economic progress more clearly directed to the universal common good, inclusion and integral development, the creation of labour and investment in human resources”*.

A project that we received as our guiding principle, although it is beyond our forces! Keeping in mind the possibilities of the real economy, we are examining closely three issues: the role of entrepreneurship in the fight against poverty; the possibility of dignified work for everyone in the context of the digital technology revolution; new alliances that make changes possible as much in behaviour as in institutions.

One could ask oneself whether these debates are useful. Firstly, can change and the spread of ideas be used for a change in behaviour? Our simple contribution is to promote in the Church and in various business and professional environments, a movement of opinion favourable to the desire for reform.

Nevertheless, our debates also have practical implications. Here are two examples that I know at first hand:

– In Spain, a group of Foundation members has launched a campaign to restore vitality to professional training – a training that has been devalued in many areas, although it is a valid response both to the drama of youth unemployment and to the re-transformation of workers who are unemployed for technological or economic reasons.

In London, we are promoting a network of solidary action, *The Voluntary Solidarity Fund* which we would also like to develop elsewhere: it involves setting up solidarity initiatives, both in economic form and in voluntary services, in dioceses and parishes by following projects that need long-term support. This is how we try to assist those who find themselves in difficult situations, helping them to emerge from these precarious situations through their own efforts. We would be grateful for the moral support of Your Holiness for this initiative.

Each one of us must personally adhere to the commitment to dialogue, integration, to give practical responses. Your words and your paternal blessing, Holy Father, give us new momentum to continue on the path you outlined.

SALUDO AL SANTO PADRE
DEL PRESIDENTE DE LA
FUNDACIÓN CENTESIMUS ANNUS PRO PONTIFICE

DOMINGO SUGRANYES BICKEL

Sábado, 20 de mayo de 2017

Santo Padre,

GRUSSWORT DES PRÄSIDENTEN DER STIFTUNG
CENTESIMUS ANNUS – PRO PONTIFICE
AN DEN HEILIGEN VATER

DOMINGO SUGRANYES BICKEL

Samstag, 20. Mai 2017

Heiliger Vater,

INTRODUCTION: SOLIDARITY IN THE DIGITAL AGE

GIOVANNI MARSEGUERRA and ANNA MARIA TARANTOLA

1. Increasing inequality, social exclusion and persistent massive poverty are central features of the first two decades of the 21st century. After a lengthy and pervasive globalization process, the number of people left behind appears to be much greater than was expected. Globalization has today entered a new phase which has sometimes been called “digital globalization” to emphasize the increasing relevance of the flows of data and information. Digital flows exert today a larger impact on GDP growth than traditional trade in goods given that every cross-border transaction has a significant digital component. It was only a few decades ago that globalization was held by many, even by some critics, to be an inevitable, unstoppable force. However, even if cross-border capital flows have declined sharply since 2008, the globalization process did not stop. It just underwent a metamorphosis.

2. According to many, rejecting globalization was to be considered like rejecting the sunrise. In the prevailing opinion globalization was indeed a strategy that would benefit all and in all respects. The Great Recession of the late 2000s will show, alas, that this conclusion was wrong.

Through international trade and foreign direct investments on one side, technological progress and cultural interrelation on the other, countries have become ever more closely linked and interdependent. While this process has brought greater prosperity and unprecedented opportunities to emerging countries (particularly China and India), many countries have been excluded from the benefits of the process

and so called advanced economies have experienced increasing income inequalities. Globalisation, even in its digitalised version, does have its winners and losers and, as a matter of fact, the gap between the wealthy Northern half of the hemisphere and its poor Southern counterpart is still dramatically wide.

It is fair to say that globalisation itself is a rather complex process with many facets including economic, political and cultural aspects, and the exact link between this process and income inequality, though extensively investigated, has not yet clearly been identified. In fact, a sound understanding of the key factors driving inequality trends is still to be achieved. There are many emerging countries, notably China, that have been able to catch up with the developed world in the course of globalisation. On the other hand, many advanced countries, notably the US, have experienced substantial increase in income inequality and growing divergence between rich and poor. According to a recent analysis carried out by Branko Milanovic¹, one of the world's leading economist of inequality, on people's incomes around the world in the past 20 years, the top 1 percent saw major gains, and so did the world's lower-middle class – the cohort in China and India that went from making a few hundred dollars a year to several thousand. But the middle class in the United States and Europe has stagnated for two decades.

In this complex and alarming scenario, the words of Pope Francis urge us to rediscover the practice of mutual solidarity: *"Today we are living in a world which is growing ever 'smaller' and where, as a result, it would seem to be easier for all of us to be neighbours. Developments in travel and communications technology are bringing us closer together and making us more connected, even as globalization makes us increasingly interdependent. Nonetheless,*

¹BRANKO MILANOVIC, *Global Inequality. A New Approach for the Age of Globalization*, Harvard University Press, 2016.

divisions, which are sometimes quite deep, continue to exist within our human family. On the global level we see a scandalous gap between the opulence of the wealthy and the utter destitution of the poor. Often we need only walk the streets of a city to see the contrast between people living on the street and the brilliant lights of the store windows. We have become so accustomed to these things that they no longer unsettle us. Our world suffers from many forms of exclusion, marginalization and poverty, to say nothing of conflicts born of a combination of economic, political, ideological, and, sadly, even religious motives. [...] The walls which divide us can be broken down only if we are prepared to listen and learn from one another. We need to resolve our differences through forms of dialogue which help us grow in understanding and mutual respect” (Message of Pope Francis for the 48th World Communications Day, Communication at the Service of an Authentic Culture of Encounter, 1 June 2014).

On January 1st (World Day for Peace), 1998, in His message “From the Justice of Each Comes Peace for All”, Saint John Paul II had already warned that “*the challenge, in short, is to ensure a globalisation in solidarity, a globalisation without marginalization*”. And in His address to the Pontifical Academy of Social Science on the 27th of April 2001, he clearly pointed out that “*globalisation, a priori, is neither good nor bad. It will be what people make of it. No system is an end in itself, and it is necessary to insist that globalisation, like any other system, must be at the service of the human person; it must serve solidarity and the common good*”. The same holds true today with respect to the digitalization processes which characterize our current period of life.

3. As any technology driven process, digitalization is having both positive and negative effects on society. Overall the fourth industrial revolution is having a positive impact on people’s life but it is bringing at the same time a consistent number of negative effects, at least in the short and medium term. Many existing jobs are being substituted by robots and

computer-driven processes, while new emerging jobs require different sets of skills. Due to technology and other factors, large numbers of young people are left out of employment. Economic behavior characterized by aggressive consumption patterns still persist in many rich countries whilst at the same time these rich countries receive unprecedented massive immigration flows of people pushed from the desperation in their poor native countries. Contradictions of this sort abound in the “prosperous” digital age.

Today any sort of information is easily and rapidly acquired. In just a few years the potential for learning has extraordinarily increased, as it has increased the number of people that can benefit from it. Digitalization has made the spread of knowledge easier and has changed the ways people interact. Resulting benefits, however, have also increased inequality. At the beginning of the XXI century, we are witnessing a process of increasing divide, even if poverty is declining in part as a result of the successful implementation of the UN’s Millennium development goals.

To rightly address the benefits of the digital age, however, remains a difficult task and we have to admit that we still struggle with facing the challenges of technological progress, as clearly indicated by Pope Francis in his recent Encyclical Letter *Laudato si’*: *“Humanity has entered a new era in which our technical prowess has brought us to a crossroads. We are the beneficiaries of two centuries of enormous waves of change: steam engines, railways, the telegraph, electricity, automobiles, aeroplanes, chemical industries, modern medicine, information technology and, more recently, the digital revolution, robotics, biotechnologies and nanotechnologies. It is right to rejoice in these advances and to be excited by the immense possibilities which they continue to open up before us, for ‘science and technology are wonderful products of a God-given human creativity’. [...] Yet it must also be recognized that nuclear energy, biotechnology, information technology, knowledge of our DNA, and many other abilities which we have acquired, have given us tremendous power. [...] The fact is that ‘contempo-*

rary man has not been trained to use power well', because our immense technological development has not been accompanied by a development in human responsibility, values and conscience. Each age tends to have only a meagre awareness of its own limitations. It is possible that we do not grasp the gravity of the challenges now before us" (POPE FRANCIS, *Laudato si'*, nn. 102-105).

The problem is to understand how economic growth and fair and balanced development can be prompted in the digital age by a more solidaristic behaviour so to orient the digital transformation to generate a more inclusive and equal society.

4. The articles collected in this volume report, with a few minor changes, presentations given during the international annual Conference and Consultation organized by the Foundation in 2017. In particular, Section 1 reports a general introduction to the annual Conference's themes and the concluding reports of both the Conference and the Consultation, here included to give an overview of what had emerged from the discussions. In this first session, moreover, both a summary of the Conference organized in Berlin by the German Chapter and a closing remark reflection from the Italian Chapter's Conference are also included. Sections 2, 3 and 4 reports papers and comments from Conference and Consultation.

Given the broad range of issues examined and in the light of the summaries and reports included in Section 1 of the volume, this short introduction simply seeks to shed light on some of the main ideas that have characterized the work of the Foundation over the last two years, alongside an attempt to outline the efforts made by the Foundation to respond to the concerns raised by the Holy Father on the occasion of the audiences granted to the Foundation in 2016 and 2017. In particular, we will first explain how inclusion and integration should be practiced as essential antidotes to inequality and injustice, and we will then move to two crucial actors of digitalization processes, i.e. business firms and universities. The connecting line of this Introduction is the multidimensional

nature of solidarity, here envisaged as a crucial community value of our society and a key principle of catholic social teaching which should guide our behavior in a forward looking manner. In this respect, intergenerational solidarity acquires a special relevance for its capacity to take into consideration future generations in current decisions.

5. In his message to the participants at the international conference organized by the *Centesimus Annus – Pro Pontifice* Foundation in 2016, Pope Francis reminded us – with an explicit reference to the *Centesimus Annus* Encyclical – that *“economic activity cannot be conducted in an institutional or political vacuum”*. He emphasized the essential ethical component of any economic activity and clearly pointed out that *“it must always stand at the service of the human person and the universal common good”*. He went on explaining how *“[A]n economic vision geared to profit and material well-being alone is – as experience is daily showing us – incapable of contributing in a positive way to a globalization that favours the integral development of the world’s peoples, a just distribution of the earth’s resources, the guarantee of dignified labour and the encouragement of private initiative and local enterprise”*. And he concluded: *“It is my hope that your Conference will contribute to generating new models of economic progress more clearly directed to the universal common good, inclusion and integral development, the creation of labour and investment in human resources”*.

This recommendation to the Foundation for a deep rethinking of our current socio-economic model, was reiterated one year later, in May 2017. *“Many people are struggling to bring the whole human family together to seek a sustainable and integral development, for we know that things can change (cf. ibid, 13). Your Foundation is also making a valuable contribution precisely by approaching business and finances both in the light of the rich heritage of the Church’s social doctrine and the intelligent search for ‘constructive alternatives’. Drawing on your own expertise and experience, and in cooperation with other people of good will, you are*

committed to developing models of economic growth centred on the dignity, freedom and creativity that are the hallmark of the human person”.

6. The above reported excerpts from the Holy Father’s Messages set out a clear path both of reflection and action. Pope Francis’ words are all weighed and full of significance. They sound overall as an invitation for our Foundation to *“contribute to generating new models of economic progress”* with the underlying idea that these models should inform our behavior *“for we know that things can change”*. To generate implies an action that should bring fruits, tangible results. New models of economic progress more clearly directed to the universal common good, inclusion and integral development, the creation of labor and investment in human resources. Pope Francis refers to concrete, not only theoretical, models. Models capable to produce new behaviors, new objectives, new forms of producing and selling goods and services. He refers, above all, to different ways to do business and to different remuneration schemes. To eradicate poverty, inequality and exclusion. He asks for a courageous change in the current predominant model, based on free market enthusiasm, on consumption and finance, on shareholders’ value creation and short-termism. To generate such new models implies the capacity to orient our actions, our behaviors and our objectives towards the common good.

Economic progress is not limited to economic growth. In His address to the participants in the Convention organized by the Dicastery for Promoting Integral Human Development on the fiftieth anniversary of *“Populorum Progressio”* (4 April 2017), Pope Francis says: *“What is meant, today and in the near future, by ‘integral development’, that is, the development of each man and of the whole man? In the footsteps of Paul vi, perhaps in the very word integrate – so dear to me – we can identify a fundamental direction for the new Dicastery. Let us look at a few aspects together.*

It is a matter of integrating the diverse peoples of the earth. The duty of solidarity obliges us to seek just ways of sharing, so there may not exist that tragic inequality between those who have too much and those who have nothing, between those who reject and those who are rejected.

Only the path of integration among peoples allows humanity a future of peace and hope.

It is a matter of offering feasible models of social integration. Everyone has a contribution to offer to the whole of society; everyone has a trait that can be useful in living together; no one is excluded from contributing something for the good of all. This is, at the same time, a right and a duty. It is the principle of subsidiarity that guarantees the need for everyone's contribution, whether as individuals or as groups, if we want to create a human coexistence open to all.

It is also a matter of integrating in development all those elements that render it truly such. The various systems: the economy, finance, work, culture, family life, religion are, each in its own way, a fundamental circumstance for this growth. None of them can be an absolute, and none can be excluded from the concept of integral human development which, in other words, takes into account that human life is like an orchestra that performs well if the various instruments are in harmony and follow a score shared by all" (4 April 2017).

7. Inclusion and inequalities reduction are of special concern to Pope Francis because he is well aware that neglecting these issues may have particularly serious consequences. A huge amount of research shows that inequality and exclusion have perverse effects not only on people's living conditions but also on social cohesion, on individual psychology, on diseases and life expectancy, on economic growth. In this respect, it is of fundamental importance for each of us to be aware of his/her responsibility in orienting his/her actions for the common good – as individual, as entrepreneur, as banker, as politician, as manager, as member of a community. If we are able to build positive relations with everybody, if we

do not limit ourselves to personal success but we take care of others, then results will be concrete and effective.

Pope Francis urges to commit ourselves *“for that change of attitudes, opinions and lifestyles which is essential for building a world of greater justice, freedom and harmony”*. It is not a matter of revolutions but it rather requires to activate a continuous flux of small changes in a clear and coherent direction in order to build a more inclusive society and a fairer, more solidaristic and sustainable economic system.

8. In His address to participants of the Fortune-Time global forum, on the 3rd of December 2016, the Pope says: *“Our great challenge is to respond to global levels of injustice by promoting a local and even personal sense of responsibility so that no one is excluded from participating in society. Thus, the question before us is how best to encourage one another and our respective communities to respond to the suffering and needs we see, both from afar and in our midst. The renewal, purification and strengthening of solid economic models depends on our own personal conversion and generosity to those in need”* (3 December 2016).

In the light of these crucial indications, we should start thinking how to turn our thoughts and our reflection towards lines of research capable to respond in a concrete way to the challenge posed by the Pope to combine participation and responsibility so as to produce integration. We live today in a deeply unequal society which in many respects is falling apart. Inequality between young and old, between men and women, between locals and immigrants, between those who have a job and those who don't, between those who have the capabilities to keep up with technological change and those who don't. Pope Francis is asking us to change all this by promoting integration. Integration of those who have (or who have too much) and those who have not (or who have nothing), integration of who is in and who is out. Who is in should bear the responsibility of making those who currently are out part of our society, part of our economic life, part of our com-

munity. Participation and responsibility are two sides of the same coin, the coin being a relation among human beings.

9. Today it seems of paramount importance to investigate, in light of the Catholic Social Teaching, the digital transformation and the consequences of artificial intelligence and the massive use of robots, the so called fourth industrial revolution. This analysis is crucial to understand the implications as far as the quantity and quality of labor, the type of social relations, the new forms of producing and selling goods and services, the quality of life, the families. It is an intricate issue which should be addressed with courage, responsibility and discernment. Discernment in particular is often referred to by the Pope, i.e. the capacity to discern between right and wrong.

The digital era is an irreversible process that cannot be stopped but can be governed in order not to exalt positive aspects and mitigate negative consequences. It reminds us the first industrial revolution and how the Church in the great Encyclical *Rerum Novarum* was able both to envisage its most critical aspects and to emphasize the many issues related to the so called social question. Today it is equally important to face the effects of the digital revolution in terms of increased inequality and reduced job opportunities. Furthermore, it is crucial to analyze the implications for our society, for human relations, for enterprises, for institutions and for families.

Pope Francis, in his 2017 address to our Foundation, warned us that *"...efforts to address together the questions connected with the growth of the new technologies, with the transformation of markets and with the legitimate aspirations of workers must take into consideration not only individuals but also families. As you know, this has been an expressed concern of the recent Synodal Assemblies on the Family, which have highlighted how the uncertainty in work conditions often ends by increasing the pressure and problems of the family and has an effect on the family's capacity to participate fruitfully in the life of the society"*.

10. The analysis of the effects of digitalization (and of related required actions) cannot be separated from the analysis of globalization. Pope Francis has in many occasions warned about the damages of a not inclusive globalization process. Today the issue is not only that of wealth creation but rather (and above all) that of how wealth and income are distributed. Current digital globalization processes pose a problem of identity which should be addressed with special reference to current living conditions. It is crucial to avoid the search for identity becoming ethno-phobia, racial-phobia, or even religio-phobia. Digitalization and globalization require new forms of education and training.

Business firms are crucial actors of this change. They are communities of people, they produce goods and services, they interact with large pools of people and with the environment, they create jobs and relations. As emphasized by the Holy Father, enterprises' orientation for the common good is crucial for the success of new social models. The following are some concrete examples of this orientation for the common good:

- I) an ethical conduct based on a spirit of service;
- II) the search of profit should be pursued always bearing in mind that *"the purpose of a business firm is not simply to make a profit, but is to be found in its very existence as a community of persons who in various ways are endeavouring to satisfy their basic needs, and who form a particular group at the service of the whole of society"* (Saint JOHN PAUL II, *Centesimus Annus*, n. 35), with furthermore a special attention for the protection of the environment (cf. Pope FRANCIS, *Laudato si'*, nn. 190-195);
- III) the adoption of new corporate welfare policies, new gender policies, new organizational models, new remuneration schemes;
- IV) the regular provision of social audit reports;
- V) the regular application of the principles of fairness, transparency and reciprocity.

Fairness should be the crucial element of corporate culture in order to build confidence within the firm. Transparency is a way to combat corruption. All these behaviors should not be considered as utopia. On the contrary, in the medium and long term they bring advantages for all, even economic advantages, as shown by a huge amount of research.

An equally important role may have Universities. Enterprises are places where things are produced, universities are places where ideas are developed and people are trained. Two fundamental actors for the success of the new model of economic and social progress. Catholic Universities may provide a crucial contribution to improve the quality of public debate, to identify the most relevant topics to be discussed, to offer realistic solutions as far as performance indicators and remuneration schemes is concerned, to provide effective model of social inclusion.

Universities train people and provide knowledge and skills. Today skills are increasingly becoming more important than knowledge. But which kind of skills are today required to train young people and to make them capable to face the complexity and the difficulties of a global, highly interlinked and rapidly changing world whilst at the same time preserving the orientation for the common good? Are current academic programs appropriate to achieve this new consciousness?

On these crucial issues our Foundation can perform significant and effective work in close cooperation with business firms and universities not only starting projects of common interest but also granting these institutions a forum to explain what they have already done. Issues worth discussing are, for example, how do firms face digitalization and manage industrial relations, how do they cope with environmental issues, what do they do to facilitate the entrance in the workplace of women and young workers, and so forth. It would be interesting and important to give voice to women and young people as crucial actors capable of bringing real change. Example is an essential driving force.

In order to fulfill its mandate of disseminating the Catholic Social Teaching and of having an effective impact on the behavior of people, enterprise and institutions, as forcefully requested by the Holy Father, our Foundation should become more attractive and open to a larger possible number of persons. It should be an influent and authoritative voice of the teaching of the Church in the world. It should make the difference. It should be a place of reflection, of listening and of action.



*Fondazione Centesimus Annus
Pro Pontifice*

DICHIARAZIONE 2017:

COSTRUIRE ALTERNATIVE PER PROMUOVERE LA DIGNITÀ UMANA

1. LE INDICAZIONI DEL PAPA

Nel suo discorso del 13 maggio 2016, Papa Francesco ha chiesto alla Fondazione *Centesimus Annus – Pro Pontifice* (CAPP)¹ di *“contribuire a generare nuovi modelli di progresso economico più direttamente orientati al bene comune, all’inclusione e allo sviluppo integrale, all’incremento del lavoro e all’investimento nelle risorse umane”*.

Per tradurre questi obiettivi in pratica occorrono dei cambiamenti nel comportamento economico e un impegno personale a vari livelli, dalle istituzioni politiche e la gestione delle imprese fino ai lavoratori e ai consumatori. Questi cambiamenti mettono in discussione gli atteggiamenti basilari, come la Chiesa continua a far nel pensiero sociale cattolico, e più precisamente le prevalenti versioni utilitaristiche, positivistiche o emotive dell’etica o, a un altro livello, l’idea del “valore

¹Guidata da laici, la Fondazione Centesimus Annus pro Pontifice, con sede in Vaticano, è una piattaforma sulla dottrina sociale della Chiesa applicata alla vita economica. La presente dichiarazione si basa sulle attività recenti della Fondazione ed è stata approvata dal Consiglio di Amministrazione nella riunione del 3 marzo 2017. Per maggiori dettagli consultare www.centesimusannus.org.

azionario” quale obiettivo sufficiente per assicurare da solo che l’economia operi per il bene comune. Interrogare i valori morali diventa ancora più urgente nel contesto di un’economia digitale che offre nuove possibilità di inclusione, ma che pone anche nuove sfide etiche. Come i pontefici ripetono instancabilmente da oltre 125 anni, in questa ricerca la vera bussola deve essere la dignità di ogni persona umana. E il messaggio può essere compreso e condiviso tanto dai cristiani quanto dai non cristiani.

La Fondazione *Centesimus Annus – Pro Pontifice* si rivolge a persone che operano nella vita economica. Nell’ambito del nostro mandato, è utile mettere a confronto le esortazioni morali con le analisi compiute da esperti accademici e con l’esperienza di professionisti, apportando così una dimensione di fattibilità alla ricerca di modelli alternativi.

Negli ultimi due anni la Fondazione ha concentrato il proprio lavoro su tre temi importanti. Tutti e tre offrono la possibilità di proporre alternative costruttive:

- Iniziativa imprenditoriale nella lotta contro la povertà
- Un’economia digitale al servizio del bene comune
- Nuove alleanze nella ricerca di riforme economiche inclusive.

1.1. *Iniziative delle imprese nella lotta contro la povertà*²

“Affinché questi uomini e donne concreti possano sottrarsi alla povertà estrema, bisogna consentire loro di essere degni attori del loro stesso destino. Lo sviluppo umano integrale e il pieno esercizio della dignità umana non possono essere imposti. Devono essere costruiti e realizzati”³.

²Dai dibattiti tenuti al convegno internazionale della Fondazione CAPP, Vaticano, maggio 2016, e alla conferenza della Fondazione CAPP-USA/Fordham University, New York City, settembre 2016.

³Papa FRANCESCO, *Incontro con i Membri dell’Assemblea Generale dell’Organizzazione delle Nazioni Unite*, 25 settembre 2015.

La crescita economica e un mercato integrato nelle istituzioni e nelle relazioni sociali sono gli unici contesti in cui la povertà in effetti è stata ridotta in modo consistente. Ma ciò non basta: ci sono esigenze permanenti di sviluppo umano che la crescita economica da sola non può risolvere.⁴ Occorre avere una migliore misura e comprensione della povertà. Un processo di sviluppo umano e partecipativo è servito al meglio attraverso l'iniziativa imprenditoriale autonoma e responsabile.

– La povertà non si misura in maniera adeguata con i dati sul reddito. Gli esperti sono i poveri stessi, e ciò che viene misurato deve corrispondere alla loro esperienza di privazioni multidimensionali, sovrapposte. La Fondazione CAPP desidera sostenere la ricerca e il riconoscimento di nuove metodologie come, per esempio, il Fordham Francis Index (FFI), elaborato dal programma internazionale di economia politica e sviluppo dell'università di Fordham. Questo indice si basa sulle priorità del Santo Padre e comprende sette indicatori facilmente accessibili: acqua, cibo, alloggio, occupazione, educazione, parità di genere e libertà religiosa.

– La vera alternativa agli approcci burocratici utilitaristici è un percorso basato sulla persona, favorito internamente dall'imprenditoria, e aiutato in modo efficace dall'esterno. L'obiettivo deve essere quello di promuovere le piccole e medie imprese, che sono la struttura portante delle economie sviluppate. In questo processo, il profitto non va considerato un male rispetto alla riduzione della povertà. I poveri sono tali perché sono esclusi dalle reti di produttività e di scambio. I piccoli imprenditori devono essere sostenuti nel cammino per raggiungere la massa critica; le politiche di credito e quelle governative devono tendere a questo processo che crea ricchezza, e non soltanto a mitigare la povertà.

⁴FONDAZIONE CENTESIMUS ANNUS – PRO PONTIFICE, Dichiarazione 2015, *Un'economia di mercato riformata: imprenditorialità per lo sviluppo umano*.

– Il mondo degli affari in generale sta rispondendo alla responsabilità etica verso i poveri attraverso progetti filantropici, e ciò è tanto positivo quanto necessario per alcune attività, che richiedono sovvenzioni costanti. Tuttavia, in modo più creativo, un numero crescente di aziende e istituzioni finanziarie stanno utilizzando i propri modelli d'impresa anche per contribuire alla riduzione della povertà, specialmente per la promozione dell'imprenditoria, lo sviluppo di piccole aziende, abitazioni convenienti e il sostegno di gruppi femminili. Le buone pratiche di questo genere devono essere conosciute e allargate.

– Esistono modi possibili di condividere il rischio attraverso la collaborazione trasversale di società e banche, in programmi di investimento con impatto sullo sviluppo, elaborati nel dialogo con le parti coinvolte. Alla luce della dottrina sociale della Chiesa, c'è bisogno di "broker di buona volontà", *mediatori più che intermediari*⁵, che possano fare incontrare le aziende e le banche con le iniziative locali e i gruppi per lo sviluppo. I membri della Chiesa possono conferire a questi contatti forza istituzionale, credibilità, conoscenza e generosità imparziale.

– La crisi dei rifugiati e la lotta contro la tratta di esseri umani esige un'azione specifica. Ma l'obiettivo a lungo termine deve essere, come ha indicato Papa Francesco, quello di *"difendere il diritto di ciascuno a vivere con dignità, anzitutto esercitando il diritto a non emigrare per contribuire allo sviluppo del Paese d'origine"*⁶.

– La disparità dei redditi, anche nei paesi sviluppati, implica una minacciosa vulnerabilità per molte persone e famiglie. Per aiutare le persone ad aiutare se stesse ed evitare che ritornino nella povertà, dobbiamo promuovere nuove iniziative di condivisione che coinvolgano un numero maggiore di

⁵Intervista a Papa FRANCESCO, *El País*, 22 gennaio 2017.

⁶Messaggio per la Giornata Mondiale del Migrante e del Rifugiato, 2016.

persone, specialmente nella Chiesa. È questa l'idea alla base della rete di *Fondi Volontari di Solidarietà*, che si sta costituendo in seguito ai dibattiti tenuti in varie istanze della Fondazione CAPP.

1.2. *Lavoro e salari nelle economie sviluppate: tecnologia digitale, paura della perdita di lavoro ed educazione*⁷

“Il lavoro dovrebbe essere l'ambito di questo multiforme sviluppo personale, dove si mettono in gioco molte dimensioni della vita: la creatività, la proiezione nel futuro, lo sviluppo delle capacità, l'esercizio dei valori, la comunicazione con gli altri, un atteggiamento di adorazione. Perciò la realtà sociale del mondo di oggi, al di là degli interessi limitati delle imprese e di una discutibile razionalità economica, esige che 'si continui a perseguire quale priorità l'obiettivo dell'accesso al lavoro [...] per tutti'”⁸.

Il lavoro dignitoso è una parte essenziale dello sviluppo umano. Oggi, l'industria, il commercio e le attività finanziarie, come anche le istituzioni pubbliche, si trovano dinanzi a grandi sfide e opportunità nel contesto della digitalizzazione e dei “big data”. Queste innovazioni trasformative offrono un grande potenziale per una finanza e uno sviluppo economico inclusivi, ma pongono anche grandi sfide riguardo al futuro dell'occupazione. E suscitano una serie di nuovi interrogativi etici riguardanti la verità nella comunicazione, la pressione estrema, le incertezze sul futuro del lavoro significativo, la mancanza di relazioni interpersonali e la questione dell'agire morale in processi di autoapprendimento guidati dalle macchine. La forza e gli effetti dell'*imperativo tecnologico* che vi è

⁷Dai dibattiti del convegno italiano della Fondazione CAPP/Civiltà Cattolica, Roma, novembre 2016, e della consultazione della Fondazione CAPP/Universidad Pontificia Comillas/BBVA, Madrid, gennaio 2017.

⁸*Laudato si'*, n. 127.

alla base sono difficili da discernere: la tecnologia è un mezzo, e talvolta non è facile distinguere quali fini persegua. I gruppi della Chiesa devono aggiornare il loro pensiero sulla legittimità dell'*imperativo tecnologico* e sulle questioni etiche tipiche dell'iperconnettività.

Non emergerà un quadro completo degli effetti dell'attuale rivoluzione digitale sull'occupazione fino a quando le nuove tecnologie non saranno standardizzate e consolidate. Poiché "robot e computer stanno divorando posti di lavoro", serve un'analisi serena sulle occupazioni che scompaiono e sulle altre che emergono, tenendo conto della storia, e senza coltivare proposte utopistiche di reddito universale e di "fine del lavoro", che minerebbero la dignità e la libertà umana. Dobbiamo anche individuare gli ostacoli esistenti al cambiamento, siano essi legali, manageriali o educativi: i licenziamenti a volte non sono causati dalla tecnologia, bensì sono la conseguenza di cambiamenti nel comportamento dei consumatori o il prezzo pagato per una errata gestione nel passato. La Chiesa può svolgere un ruolo importante nell'educare la scelta dei consumatori. La digitalizzazione deve essere analizzata insieme alla demografia e alle tensioni intergenerazionali. Ci sono anche alcuni segnali positivi di una nuova mentalità di lavoro, che ancora appartiene solo a una minoranza, dove la flessibilità è vista come un'opportunità per svolgere attività autonome e significative orientate alla comunità.

– Il settore pubblico, sia come ente di regolamentazione sia come promotore di molti sviluppi tecnologici, può svolgere un ruolo nell'influenzare la direzione e il passo del cambiamento tecnologico, in modo da ridurre al minimo i suoi effetti negativi sull'occupazione e sulle condizioni di lavoro. Il dibattito nei campi dell'educazione, delle reti di sicurezza sociale, delle politiche pubbliche e private nell'era digitale esige a sua volta un nuovo inizio nel dialogo tra datori di lavoro e lavoratori. Il pensiero sociale cattolico potrebbe offrire

una piattaforma per un tale dialogo costruttivo tra le parti sociali.

– Sosteniamo l'uso trasparente, cooperativo della tecnologia dei "big data" ai fini del bene comune: per esempio, per una finanza inclusiva, per una migliore gestione del rischio settoriale, per la protezione contro le catastrofi naturali, per mercati del lavoro ben funzionanti, per lo sviluppo di rapporti d'affari internazionali.

– Le politiche per l'educazione devono rivalutare il prestigio dalla formazione professionale. Occorre fornire sostegno finanziario alle istituzioni che offrono processi educativi in tal senso. Si devono in aggiunta approntare scivoli che rendano possibile l'accesso all'università a chi, partendo da un percorso di formazione professionale, abbia le migliori predisposizioni ad accedere ad un insegnamento di tipo accademico.

– La formazione permanente dei lavoratori è una responsabilità fondamentale dell'impresa, quale modo per consentire un equilibrio tra flessibilità e sicurezza.

– La portabilità dei diritti di previdenza e il principio del contributo sono fondamentali per continuare a spostare la tutela dal lavoro al lavoratore.

– Dirigenti e lavoratori dovrebbero unire le forze per monitorare l'ambiente digitale in un modo che favorisca la conoscenza e la motivazione.

– Sono necessari nuovi modi di combinare l'iniziativa pubblica e quella privata per dedicarsi alle possibilità che i disoccupati (giovani e anziani) trovino lavoro. Le attività di assistenza alla persona devono essere rivalutate e meglio retribuite.

1.3. Nuove alleanze per un cambiamento⁹

“Rivolgo un invito urgente a rinnovare il dialogo sul modo in cui stiamo costruendo il futuro del pianeta. Abbiamo bisogno di un confronto che ci unisca tutti, perché la sfida ambientale che viviamo, e le sue radici umane, ci riguardano e ci toccano tutti”.¹⁰

La Santa Sede esercita, attraverso il suo insegnamento e la sua azione diplomatica, un ruolo permanente come autorità morale a livello mondiale. Per esempio, sulla questione di “[i]ntere regioni [...] abbandonate da popolazioni in fuga dalla guerra, da persecuzioni, sfruttamento e povertà [...] [I]a Santa Sede continuerà ad incoraggiare i Governi a superare ogni forma di gretto nazionalismo e, soprattutto, a riconoscere l’unità della razza umana [...]. [I] migranti sono uomini e donne che godono degli stessi diritti universali, prima di tutto il diritto alla vita e alla dignità. È compito di tutte le società civili, compreso il loro settore commerciale, accompagnare questa azione e impegnarsi attivamente nell’accogliere e integrare migranti e rifugiati”¹¹.

Il messaggio non è rivolto soltanto ai membri della Chiesa cattolica. La sua efficacia dipende dal fatto che credenti e non credenti, cristiani o altri, uniscano le loro forze in un programma fondamentale comune, che è essenziale per la sostenibilità del nostro pianeta e per una ragionevole ricerca della dignità per tutti. Dobbiamo accantonare le vecchie vie costituite, spesso sclerotizzate, e promuovere le possibilità di nuove alleanze basate sulla responsabilità condivisa e su interessi comuni. Ciò esige nuove conversazioni etiche: *“La sfida richiede profondità, attenzione alla vita, sensibilità spirituale.*

⁹Dal convegno internazionale della Fondazione CAPP, Vaticano, maggio 2016.

¹⁰*Laudato si’*, n. 14.

¹¹S.E.R. Monsignor PAUL GALLAGHER, Segretario per i Rapporti con gli Stati, *Discorso al convegno della Fondazione CAPP*, 14 maggio 2016.

Dialogare significa essere convinti che l'altro abbia qualcosa di buono da dire".¹²

Promuovere nuove alleanze per un cambiamento si traduce in due orientamenti pratici immediati:

– Per un dialogo utile, dobbiamo essere capaci di argomentare in maniera convincente contro i mali morali, in un modo che non sia esclusivo né relativistico. A tal fine, come laici cristiani, dovremmo dedicare più tempo e sforzi alla nostra educazione e formazione, abbandonando un atteggiamento passivo come membri della Chiesa e essendo in grado di sostenere un dibattito maturo e costruttivo su questioni morali con tutte le persone di buona volontà.

– Le politiche aziendali delle imprese e i nostri impegni pubblici dovrebbero comprendere l'ascolto dei poveri e l'inclusione dei loro obiettivi come criteri pienamente legittimi.

2. IL CAMMINO SUL QUALE PROCEDERE

La Fondazione CAPP continuerà a discutere su modi pratici e realistici di applicare gli insegnamenti del Papa, nella ricerca di alternative costruttive per promuovere la dignità umana. Lo farà attraverso l'analisi e l'interpretazione di nuovi fatti sociali, senza perdere di vista le sfide internazionali attuali. Dai suoi membri ci si aspetta che aiutino a elaborare e a diffondere le conclusioni della Fondazione e a tradurle in azione nella loro cerchia di contatti e nei limiti delle loro possibilità.

Nell'attuale ambiente politico turbolento, con movimenti di estrema destra e di estrema sinistra che sembrano guadagnare popolarità mentre c'è una maggioranza che appare disillusa dalla politica, le persone che desiderano riconciliare la loro fede cristiana con l'impegno sociale e politico devono

¹²Papa FRANCESCO, *Messaggio per la Giornata Mondiale delle Comunicazioni Sociali*, 2014.

abbandonare i pregiudizi e aprirsi al dialogo in quella che Papa Francesco definisce la *cultura dell'incontro*.

Far parte di un gruppo come la Fondazione CAPP significa aderire a un nuovo umanesimo, orientati al presente e al futuro, al fine di integrarsi, dialogare e fornire nuove risposte creative.

Dal Vaticano, marzo 2017



*Centesimus Annus
Pro Pontifice Foundation*

2017 STATEMENT:

CONSTRUCTING ALTERNATIVES TO PROMOTE HUMAN DIGNITY

1. THE POPE'S BRIEF

In his address of May 13th, 2016, Pope Francis asked the *Centesimus Annus – Pro Pontifice* (CAPP) Foundation¹ to “*contribute to generating new models of economic progress more clearly directed to the universal common good, inclusion and integral development, the creation of labour and investment in human resources*”.

Translating these aims into practice requires changes in economic behaviour and personal commitment at various levels, from political institutions to business management, to workers and consumers. Such changes question underlying attitudes, as the Church consistently does in Catholic Social Thought, namely the prevailing utilitarian, positivistic, or emotive versions of ethics or, at another level, the idea of ‘shareholder value’ as a sufficient goal to ensure on its own

¹The Centesimus Annus pro Pontifice Foundation is a Vatican based, lay-led platform on Catholic social teaching applied to social and economic life. This statement is based on the Foundation’s recent activities and was approved by its Board on March 3, 2017. More details on www.centesimusannus.org.

that the economy will work for the common good. Questioning moral attitudes is ever more urgent in the context of a digital economy, which offers new possibilities for inclusion but also poses new ethical challenges. As the Popes tirelessly repeat for more than 125 years, the dignity of all human persons must be the true compass in this search. And the message can be understood and shared by Christians and non-Christians alike.

The *Centesimus Annus – Pro Pontifice* Foundation addresses people who are active in economic life. Within our brief, it is useful to contrast moral exhortations with the analysis made by academic experts and with the experience of professionals, thereby contributing a dimension of feasibility to the search for alternative models.

In the last two years, the Foundation has focused its work on three main themes. All of them offer possibilities to focus on constructive alternatives:

- Business initiative in the Fight against Poverty
- A Digital Economy at the Service of the Common Good
- New alliances in the search for Inclusive Economic Reforms.

1.1. *Business initiative in the fight against poverty*²

“To enable these real men and women to escape from extreme poverty, we must allow them to be dignified agents of their own destiny. Integral human development and the full exercise of human dignity cannot be imposed. They must be built up and allowed to unfold”³.

²From debates held at the Vatican CAPP international conference, Vatican, May 2016 and at the CAPP-USA/Fordham University conference, New York City, September 2016.

³Pope FRANCIS, *Meeting with the Members of the General Assembly of the United Nations Organization*, 25 September 2015.

Economic growth and a market embedded in institutions and social relations are the only contexts in which poverty has been effectively reduced in large numbers. But this is not enough: there are permanent demands of human development which economic growth does not solve by itself.⁴ We need better measurement and better understanding of poverty. A process of human and participative development is best served by autonomous and responsible entrepreneurial initiative.

– Poverty is not adequately measured by income figures. The experts are the poor themselves, and what is measured should match their experience of multidimensional, overlapping deprivations. The CAPP Foundation wishes to support research and recognition of new methodologies like, for example, the Fordham Francis Index (FFI) developed by Fordham University's International Political Economy and Development Program. This is based on the Holy Father's priorities and includes seven easily accessible indicators: water, food, housing, employment, education, gender equity and religious freedom.

– The real alternative to bureaucratic utilitarian approaches is a person-based path, internally fostered by entrepreneurship, and effectively helped from outside. The aim should be to promote small- and medium-sized enterprises, which are the bone of developed economies. In this process, profit is not to be considered an evil in relation to poverty reduction. Poor people are poor because they are excluded from networks of productivity and exchange. Small business owners should be supported on the way to reach critical mass; credit and government policies should aim at this wealth-creating process, not just at mitigating poverty.

⁴CENTESIMUS ANNUS – PRO PONTIFICE FOUNDATION, 2015 Statement, *A Reformed Market Economy: Entrepreneurship for Human Development*.

– Business in general is responding to ethical responsibility towards the poor through philanthropy projects, and this is both positive and necessary for certain activities, which need ongoing subsidies. But more creatively, a growing number of companies and financial institutions are using their own business models to contribute to poverty reduction as well, particularly for the promotion of entrepreneurship, small business development, affordable housing and the support of women’s groups. Good practice of this kind must be known and extended.

– There are possible ways to share risk by working together across corporations and banks in development impact investment projects designed in dialogue with the parties involved. In the light of the social teaching of the Church, there is need for ‘goodwill brokers’, *mediators rather than intermediaries*⁵, who can bring together corporations and banks with local initiatives and development groups. Church members can lend institutional strength, credibility, knowledge and unbiased generosity to these contacts.

– The refugee crisis and the fight against human traffick- ing requires specific action. But the long-term objective should be, as indicated by Pope Francis, “*to defend each person’s right to live with dignity, first and foremost by exercising the right not to emigrate and to contribute to the development of one’s country of origin*”⁶.

– Income inequality, even in developed countries, implies threatening vulnerability for many persons and families. To help people helping themselves and avoid falling back into poverty, we need to foster new sharing initiatives involving a larger number of people, especially within the Church. This is the idea behind the *Voluntary Solidarity Fund* network, which

⁵Interview with Pope FRANCIS, *El País*, January 22, 2017.

⁶*Message for the World Day of Migrants and Refugees*, 2016.

is being set up as a follow-up to debates held in several CAPP Foundation instances.

1.2. *Work and wages in developed economies: digital technology, fear of job loss and education*⁷

*“Work should be the setting for this rich personal growth, where many aspects of life enter into play: creativity, planning for the future, developing our talents, living out our values, relating to others, giving glory to God. It follows that, in the reality of today’s global society, it is essential that we continue to prioritize the goal of access to steady employment for everyone, no matter the limited interests of business and dubious economic reasoning”.*⁸

Decent work is a vital part of human development. Nowadays, industry, commerce and financial activities as well as public institutions face deep challenges and opportunities in the context of digitization and ‘big data’. These transformative innovations offer great potential for inclusive finance and economic development, but they also pose challenges about the future of jobs. And they raise a range of new ethical questions relating to truth in communication, extreme time pressure, uncertainties about the future of meaningful work, lack of interpersonal relations and the question of moral agency in machine driven self-learning processes. The strength and effects of the underlying *technology imperative* are difficult to discern: technology is a means, but sometimes it is not easy to distinguish the ends it pursues. Church groups need to update their thinking on the legitimacy of the *technology imperative* and on the ethical issues typical of hyper-connectivity.

⁷From debates at the CAPP/Civiltà Cattolica Italian conference, Rome, November 2016 and at CAPP/Universidad Pontificia Comillas/BBVA consultation, Madrid, January 2017.

⁸*Laudato si’*, 127.

A full picture of the present digital revolution on jobs will not emerge until new technologies are standardized and consolidated. As ‘robots and computers are eating jobs’, we need a serene analysis about jobs disappearing and others emerging, taking history into account, and without cultivating utopian proposals of universal income and the ‘end of work’, which would undermine human dignity and freedom. We also need to identify the existing obstacles to change, whether legal, managerial or educational: lay-offs sometimes are not caused by technology, but are the consequence of changes in consumer behaviour or the price paid for past mismanagement. The Church has an important role to play in educating consumer choice. Digitization needs to be seen together with demographics and intergenerational tensions. There are also some positive signs of a new work mentality, still the fact of a small minority, where flexibility is seen as an opportunity for autonomous and meaningful community-oriented activities.

– The public sector, both as regulator and as sponsor of many technical developments, has a role to play in influencing the direction and the pace of technical change so as to minimize its negative effects on employment and working conditions. The debate in the field of education, social safety nets, public and private policies in the digital era also requires a new start in the dialogue among employers and workers. Catholic Social Thought could offer a platform for such free and constructive dialogue among social partners.

– We support transparent, co-operative use of ‘big data’ technology for common good purposes: for instance for inclusive finance, better sectorial risk management, protection against natural catastrophes, well-functioning job markets, international business relationship developments.

– Education policies need to revalue the prestige of professional vocational training. Financial support should go to practical educational institutions. Corresponding bridging

possibilities towards university should be available for those academically most gifted.

– Permanent education of workers is an essential business responsibility as a way to allow a balance between flexibility and security.

– Portability of welfare rights and the principle of contribution are essential to continue shifting protection from jobs towards the working person.

– Managers and workers should join efforts to monitor the digital environment in a way that promotes knowledge and a sense of purpose.

– New ways of combining public and private initiative are necessary to address the possibilities of the unemployed (young and old) to find employment. Personal care activities need to be re-valued and better paid.

1.3. *New alliances for change*⁹

“I urgently appeal, then, for a new dialogue about how we are shaping the future of our planet. We need a conversation that includes everyone, since the environment challenge we are undergoing, and its human roots, concern and affect us all”¹⁰.

The Holy See exercises through its teaching and through diplomatic action a permanent role as world-wide moral authority. For instance, on the question of *“populations and entire regions being displaced, trying to flee from war, from persecution, from exploitation and poverty, [...] the Holy See will continue to encourage Governments to overcome every form of narrow nationalism and, above all, to recognise the unity of the human race. [...] Migrants are men and women who enjoy the same universal rights,*

⁹From CAPP international conference, Vatican, May 2016.

¹⁰*Laudato si'*, 14.

above all the right to life and to dignity. It is the task of all civil societies, including the commercial sector of those societies, to accompany this action and to engage actively in welcoming and integrating migrants and refugees”¹¹.

The message is being addressed not only to members of the Catholic Church. Its effectiveness depends on believers and non-believers, Christians or otherwise, to join forces on a common basic program which is essential for sustainability of our planet and for a reasonable pursuit of dignity for all. We need to leave aside the old, often sclerotic established ways and promote possibilities for new alliances based on shared responsibility and shared interest. This requires new ethical conversations: *“We are challenged to be people of depth, attentive to what is happening around us and spiritually alert. To dialogue means to believe that the ‘other’ has something worthwhile to say”¹².*

To foster new alliances for change translates into two immediate practical guidelines:

– For a useful dialogue, we need to be capable of arguing convincingly against moral ills in a way which is neither exclusive nor relativistic. For this purpose, as Christian lay people we should commit more time and effort to self-education and training, abandoning a passive attitude as Church members and being able to sustain mature, constructive debate on moral issues with all people of good will.

– Business corporate policies and our public engagements should include listening to the poor and including their aims as fully legitimate criteria.

¹¹ Archbishop PAUL GALLAGHER, Secretary for Relations with States, *Address to the CAPP Foundation conference*, 14 May, 2016.

¹² Pope FRANCIS, *World Communications Day Message*, 2014.

2. THE WAY FORWARD

The CAPP Foundation will continue to debate practical and realistic ways of applying the Pope's teachings, in the search for constructive alternatives to promote human dignity. It will do it through the analysis and understanding of new social facts, and with an eye to current international challenges. CAPP members are expected to help elaborate and disseminate its findings and translate them into action within their circle of contacts and within their possibilities.

In the present turbulent political environment, with far-right and far-left movements seeming to gain traction while a majority appears to be disillusioned with politics, people who wish to reconcile their Christian faith with their social and political commitment need to abandon prejudice and open up for dialogue in what Pope Francis calls *the culture of encounter*.

Participating in a group like the CAPP Foundation means adhering to a new humanism, oriented to the present and future, with the aim to integrate, to dialogue and to produce creative new answers.

The Vatican, March 2017

SECTION 1
2017 CONFERENCES AND CONSULTATION:
PRESENTATION AND SUMMARIES



*Fondazione Centesimus Annus
Pro Pontifice*

TERZA EDIZIONE DEL CONCORSO INTERNAZIONALE
“ECONOMIA E SOCIETÀ”

CERIMONIA DI CONSEGNA DEI PREMI

Palazzo della Cancelleria, Roma, 18 maggio 2017

INTERVENTO DEL SEGRETARIO DI STATO
SUA EMINENZA IL CARDINALE PIETRO PAROLIN

Em.mo Presidente della Giuria, Cardinale Reinhard Marx,
Egregio Signor Presidente della Fondazione *Centesimus Annus – Pro Pontifice*, Dott. Domingo Sugranyes Bickel,
Eccellenze,
Professori,
Signore e Signori,

esprimo vivo ringraziamento per l’invito a presiedere nuovamente la cerimonia di consegna dei premi del Concorso internazionale “*Economia e Società*”, ormai alla sua terza edizione, nell’ambito della Conferenza annuale della Fondazione, che quest’anno porta il titolo: “*Constructive alternatives in an era of turmoil. Job creation and human integrity in the digital space-incentives for solidarity and civic virtue*”.

Mi compiaccio per la presenza in sala dei tre vincitori del premio: il Prof. Markus Vogt, il Rev. Padre Dominique Grei-

ner e il Dottor Burkhard Schäfers. Ognuno di loro, nel proprio ambito di ricerca o di lavoro, e nello sviluppo delle proprie competenze, ci aiuta a dare risposte alle domande e alle preoccupazioni suscitate dagli sviluppi economici e tecnologici del XXI secolo, di questa epoca che alcuni hanno indicato come quella della quarta rivoluzione industriale.

Di fronte alla tendenza sempre presente di interpretare e modellare la realtà sociale a partire da un paradigma ideologico unidimensionale – marxismo, liberismo, nel secolo scorso e, oggi, ciò che si potrebbe chiamare “tecnolatria”, che cerca di camuffare una nuova ideologia con i tratti della scienza – gli autori premiati contribuiscono a rafforzare il modo di pensare proprio della dottrina sociale cristiana, che si impegna a risolvere i problemi sociali considerando le loro molteplici dimensioni e armonizzandole nel rispetto della dignità della persona umana. Tale metodologia intellettuale è adatta a suscitare idee nuove, capaci di rinnovare i canali di trasmissione di concetti antichi, e tuttora validi. Così fa il Professor Vogt, con l’affermazione della multidimensionalità dell’approccio alla comprensione della realtà sociale e con la proposta della “sostenibilità” quale quarto elemento di base della dottrina sociale della Chiesa. Così fa anche Padre Greiner, tramite la comunicazione agile, creativa e propositiva della stessa dottrina. Così, infine, il giornalista Schäfers, che suggerisce la riconsiderazione delle idee del Padre Oswald von Nell-Breuning, che ebbero un ruolo importantissimo nello sviluppo della dottrina sociale cristiana durante il pontificato di Pio XI e che continuano a offrire spunti validi per affrontare le sfide odierne. I lavori premiati mostrano come lo stesso Concorso indetto dalla Fondazione *Centesimus Annus – Pro Pontifice* sia un mezzo efficace per promuovere autentiche risposte alle importanti sfide della politica e dell’economia mondiale.

Insieme con l’invito a condividere questo momento, la Fondazione *Centesimus Annus* mi ha fatto pervenire la “Dichiarazione 2017”, “*Costruire alternative per promuovere la di-*

gnità umana”, la quale anche propone un approccio multidimensionale e non ideologico alle scienze sociali, come alla prassi politica ed economica, affinché esse possano veramente operare per il bene comune. Grazie per le risposte agli insegnamenti e alle esortazioni del Santo Padre che la medesima contiene, risposte che mostrano la vitalità del pensiero dell’imprenditoria cristiana.

Infatti, si vuole un coinvolgimento di tutti gli attori sociali, specialmente degli imprenditori, non solo per aumentare l’impegno alla beneficenza, ma per affrontare in modo deciso il problema dell’inuguaglianza e della disparità dei redditi che, come la Dichiarazione ben rileva, porta a situazioni di vulnerabilità per molte persone e per le famiglie, anche nei Paesi più sviluppati. Occorre innanzitutto uno spirito di magnanimità generosità: il Vangelo ci propone l’esempio di Zaccheo, che colpito dallo sguardo di Gesù condivide la metà delle sue ricchezze con i poveri. Per questo è di grande importanza incoraggiare i *Fondi Volontari di Solidarietà*, che si stanno costituendo, anche come effetto del dialogo approfondito in seno alla Fondazione *Centesimus Annus*.

Al riguardo, porto il ringraziamento del Santo Padre per il contributo delle disponibilità dell’esercizio 2016 che la Fondazione ha offerto per le opere di carità del Papa, in particolare, per il sostegno ai profughi minori non accompagnati. Non posso non unirmi al desiderio del Consiglio della Fondazione ed incoraggiare i membri all’azione caritativa sotto la guida ispirata di Papa Francesco.

Inoltre, come chiede lo stesso Papa, occorrono azioni urgenti per aiutare i più poveri a divenire i primi attori del loro destino. Così, appare necessario concepire e diffondere modelli e pratiche d’impresa accessibili anche a loro. Sul piano delle scienze sociali, serve poi discernere nuovi metodi di analisi e di misurazione, che corrispondano alle esperienze reali dei più deboli.

In pari tempo, non si può non condividere la chiamata ad includere i poveri nelle reti di produttività e a sviluppare una

mediazione finanziaria alla misura delle loro necessità e possibilità. È anche da studiare con particolare attenzione il suggerimento dei *“broker di buona volontà”*, veri mediatori più che intermediari, che facciano incontrare le aziende e le banche con le iniziative locali, con i gruppi per lo sviluppo e con le micro-aziende, per trovare quanto prima modelli effettivamente applicabili.

La Dichiarazione *Centesimus Annus* 2017 affronta ugualmente il tema dei migranti e dei rifugiati, riconoscendo che l’obiettivo fondamentale deve essere quello di *“difendere il diritto di ciascuno a vivere con dignità, anzitutto esercitando il diritto a non emigrare”*¹. Ciò richiede una decisa azione per la pace. Sappiamo bene che questo non dipende in prima battuta dagli imprenditori, quanto dai governi e dalla comunità internazionale. Però gli stessi imprenditori possono offrire un prezioso contributo, sensibilizzando l’opinione pubblica, dialogando personalmente e istituzionalmente con la classe politica, promovendo tramite la collaborazione la conoscenza e l’accoglienza e, direi, soprattutto, unendo la loro preghiera a quella del Santo Padre.

Un ultimo ventaglio di temi riguarda l’economia digitale, la robotizzazione ed i *“big data”*, cioè l’immensa ed articolata massa di informazioni sulle persone e i loro comportamenti, ottenute tramite l’interazione digitale dei singoli. Molto è stato pubblicato recentemente sui pericoli per il lavoro, per l’inclusione sociale, per la libertà di questa nuova fase, alle volte anche con accenti drammatici. D’altra parte, in modo più sereno, si riconosce che queste innovazioni offrono un grande potenziale per promuovere un’economia sostenibile e veramente inclusiva. Parimenti, le nuove tecnologie possono accrescere, di fatto, la partecipazione dei singoli nelle decisioni politiche e nella difesa dei diritti. Tutto dipende da quale

¹[inserire testo come in inglese.](#)

orientamento si riuscirà a dare al profondo cambiamento in corso.

A questo punto, vorrei ricollegarmi agli autori premiati che, con approcci diversi, ma ancorati ai principi fondamentali della dottrina sociale della Chiesa, intendono l'economia e la politica come luoghi di esercizio privilegiato della virtù della prudenza². Il messaggio è che sempre è necessario un adeguato discernimento, alla luce della giustizia, di tutti gli elementi in gioco nelle varie situazioni storiche e di come diventa urgente assumere decisioni coraggiose per fare il bene, anche quando ciò può costare grandi sacrifici personali.

Rivolgendosi alle Nazioni Unite, Papa Francesco ha fatto ricorso alle virtù cardinali, come linee guida dell'azione politica internazionale. Le sue parole si applicano felicemente anche all'universo imprenditoriale. Ricordava il Papa che *“la definizione classica di giustizia... contiene come elemento essenziale una volontà costante e perpetua: Iustitia est constans et perpetua voluntas ius suum cuique tribuendi. Il mondo chiede con forza a tutti i governanti una volontà effettiva, pratica, costante, fatta di passi concreti e di misure immediate, per preservare e migliorare l'ambiente naturale e vincere quanto prima il fenomeno dell'esclusione sociale ed economica... Non bisogna perdere di vista, in nessun momento, che l'azione politica ed economica è efficace solo quando è concepita come un'attività prudentiale, guidata da un concetto perenne di giustizia e che tiene sempre presente che, prima e aldilà di piani e programmi, ci sono donne e uomini concreti, uguali ai governanti, che vivono, lottano e soffrono, e che molte volte si vedono obbligati a vivere miseramente, privati di qualsiasi diritto”*³.

Il Santo Padre alza costantemente la Sua voce profetica per chiedere una “rivoluzione della tenerezza”. Il *management* aziendale può far parte di tale rivoluzione, senza perdere la sua professionalità ma, al contrario, esercitandola sempre con

²Cf. *Compendio della Dottrina Sociale della Chiesa*, 547-548 e nota 1147; *Catechismo della Chiesa Cattolica*, 1806.

³[inserire testo come in inglese.](#)

maggior serietà, animato da autentico spirito di servizio per lo sviluppo umano integrale. Credo che ciò sia la finalità propria anche del Concorso internazionale *“Economia e Società”*, così come delle Conferenze annuali della Fondazione *Centesimus Annus – Pro Pontifice*, e della Fondazione stessa. Formulo, pertanto, fervidi auguri perché queste attività si svolgano sempre con più efficacia e incidenza ecclesiale e sociale. Grazie per tutto quello che generosamente state realizzando per la Chiesa e per il bene della società umana.



*Centesimus Annus
Pro Pontifice Foundation*

THIRD EDITION OF THE INTERNATIONAL PRIZE FOR
"ECONOMY AND SOCIETY"

??? CERIMONIA DI CONSEGNA DEI PREMI ???

Palazzo della Cancelleria, Rome, 18th May 2017

SPEECH BY THE SECRETARY OF STATE
H.E. CARDINAL PIETRO PAROLIN

Your Eminence Cardinal Reinhard Marx, President of the
Jury

Dr. Domingo Sugranyes Bickel, President of the *Centesimus
Annus – Pro Pontifice* Foundation

Your Excellencies

Distinguished Professors

Ladies and Gentlemen

allow me to express my thanks for the renewed invitation to preside at this ceremony, during which the prizes of the third edition of the international "Economy and Society" Competition will be awarded. This takes place in the context of the Foundation's annual conference, which this year is entitled: "*Constructive alternatives in an era of turmoil. Job creation and human integrity in the digital space – incentives for solidarity and civic virtue*".

I am pleased to know that the three prize-winners are with us this evening: Professor Markus Vogt, Reverend Father Dominique Greiner and Doctor Burkhard Schäfers. Each one of them, within their specific field of research and work, and in the development of their expertise, helps us to find answers to the questions and concerns raised by the economic and technological developments of the twenty-first century, an era which some have called the “Fourth Industrial Revolution”.

We face a tendency to interpret social reality in terms of one-dimensional ideological paradigms, be it the Marxism or *laissez-faire* economics of the last century, or, in today’s world, what is often call “technolatry”, which seeks to use the features of science to disguise a new ideology. The prize-winners contribute to strengthening the way of thinking of Christian social teaching, which is committed to resolving social problems by considering them in their complexity and harmonizing them in a respect for the dignity of the human person. This intellectual methodology is well suited to giving rise to new ideas capable of encouraging a handing on of older but still useful ideas. Professor Vogt does this by affirming a multidimensional approach to understanding social reality and by proposing “sustainability” as the fourth basic element of the Church’s social teaching. Father Grenier does the same, by way of a flexible, creative and constructive communication of the same teaching. Likewise, the journalist Burkhard Schäfers suggests reconsidering the ideas of Father Oswald von Nell-Breuning, which played a vital role in the development of Christian social teaching during the Pontificate of Pius XI and which continue to offer useful starting points for facing today’s challenges. The prize-winning works show how this competition, run by the *Centesimus Annus – Pro Pontifice* Foundation, helps promote authentic answers to the serious problems of politics and the global economy.

Together with the invitation to share this moment with you, the *Centesimus Annus* Foundation sent me the 2017 Dec-

laration “*Constructing Alternatives to Promote Human Dignity*”. This document proposes a multidimensional and non-ideological approach to the social sciences, as well as to political and economic *praxis*, so that they may genuinely be at the service of the common good. Thank you for the replies to the teachings and exhortations of the Holy Father contained in the declaration. These replies demonstrate the vitality of the thought of Christian entrepreneurship.

We truly need the involvement of all social agents, especially entrepreneurs, not only to increase the commitment to charity, but also to address, in a decisive manner, the problem of inequality and disparity of income. As the Declaration clearly highlights, this leads to situations of vulnerability for many people and for families, even in developed countries. What is needed, above all, is a spirit of noble generosity. The Gospel offers the example of Zacchaeus, who, struck by the gaze of Jesus, shares half of his wealth with the poor. For this reason it is important to encourage the *Voluntary Solidarity Funds*, which are a tangible sign of the thorough dialogue within the *Centesimus Annus* Foundation.

In this regard, I wish to convey the thanks of the Holy Father for the contribution which the Foundation, from its available funds in 2016, has donated to the Pope’s charitable works, and in particular for the support offered to unaccompanied young refugees. I join with the Foundation’s Board in encouraging all members to engage in charitable activity under the inspired guidance of Pope Francis.

Indeed, as the Pope himself points out, urgent action is called for in order to help the poorest become the primary agents of their own destiny. To this end, it seems necessary to produce and promote business models and practices that are accessible to them. As for the social sciences, new methods of analysis and evaluation are required, which will correspond to the real experience of the weakest.

At the same time, it is impossible not to share the call to include the poor in the networks of productivity and to devel-

op a financial mediation that is adapted to their needs and possibilities. The suggestion of the “goodwill broker” is an idea that merits particular consideration: genuine mediators rather than intermediaries, who facilitate contact between businesses and banks on the one hand, and local initiatives, development groups and micro-businesses on the other, with the aim of quickly finding models that can be applied effectively.

The 2017 *Centesimus Annus* Declaration also addresses the theme of migrants and refugees, recognising that the fundamental objective must be “to defend each person’s right to live with dignity, first and foremost by exercising the right not to emigrate”¹. This requires decisive action in favour of peace. We know well, of course, that in the first instance this does not depend on entrepreneurs, but on governments and the international community. Entrepreneurs can, however, offer an invaluable contribution by raising awareness, cultivating a personal and institutional dialogue with the political class, promoting a sense of welcome and understanding through cooperation, and, above all, I would suggest, by joining their prayers with those of the Holy Father.

A final range of themes concerns the digital economy, “robotisation” and “big data”, that is the immense and articulated mass of information on people and their behaviour, obtained in the course of an individual’s digital interaction. Much has been published recently on this new phase, sometimes with dramatic emphasis, and its dangers for work, for social inclusion and for freedom. On the other hand, more calmly, it is recognised that these innovations offer great potential for promoting a sustainable and truly inclusive economy. By the same token, the new technologies can increase *de facto* the participation of individuals in political decisions and

¹ Cf. *Message for the World Day of Migrants and Refugees 2015*.

in the defence of rights. Everything will depend on the direction given to the profound change currently underway.

At this point, I would like to come back to the prize-winners, who, with different approaches, yet anchored in the fundamental principles of the social teaching of the Church, understand economics and politics as places for the privileged exercise of the virtue of prudence². The key message is the necessity of appropriate discernment, carried out in the light of justice, considering all the elements in play in various historical situations, and recognising the urgency of making courageous decisions in order to do good, even when it might come at the cost of great personal sacrifice.

Addressing the United Nations, Pope Francis turned to the cardinal virtues as a guide for international political action. His words can easily be applied to the entrepreneurial world. The Pope recalled that *"the classic definition of justice [...] contains as one of its essential elements a constant and perpetual will: Iustitia est constans et perpetua voluntas ius sum cuique tribuendi. Our world demands of all government leaders a will which is effective, practical and constant, concrete steps and immediate measures for preserving and improving the natural environment and thus putting an end as quickly as possible to the phenomenon of social and economic exclusion. [...] It must never be forgotten that political and economic activity is only effective when it is understood as a prudential activity, guided by a perennial concept of justice and constantly conscious of the fact that, above and beyond our plans and programmes, we are dealing with real men and women who live, struggle and suffer, and are often forced to live in great poverty, deprived of all rights"*³.

The Holy Father constantly raises his prophetic voice to ask for a "revolution of tenderness". Business management

² Cf. *Compendium of the Social Doctrine of the Church*, 547-548 & Note 1147; *Catechism of the Catholic Church*, 1806.

³ Pope FRANCIS, *Meeting with the Members of the General Assembly of the United Nations Organization*, New York, 25 September 2015.

can play its part in such a revolution, without losing its professional standards. On the contrary it can proceed ever more conscientiously, motivated by an authentic spirit of service in favour of integral human development. I believe this is also the ultimate aim of the international "Economy and Society" Prize, as it is of the annual conferences of the *Centesimus Annus – Pro Pontifice* Foundation, and of the Foundation itself. For this reason, I express my sincere wish that these activities may be carried forward with ever-greater effectiveness and positive ecclesial and social impact. Thank you for all that are so generously doing for the Church and for the good of human society.

THE HOLY SEE'S ACTION TO PROTECT CHRISTIANS
AND OTHER RELIGIOUS MINORITIES
IN DIFFERENT PARTS OF THE WORLD

PAUL R. GALLAGHER

Distinguished guests,
Dear Friends,

Following our meeting last year, it is a pleasure to be with you again this morning and to have the opportunity to present the Holy See's action to protect Christian and other religious minorities in different parts of the world. As you know, in the global turmoil, the fate of the Christians, particularly in their ancestral territories in the Middle East, where Christianity was born, is a priority for the Holy See. In presenting you the situation, I hope not only to update you with a vision of the Holy See's line of action, but above all, to encourage you to consider ways in which *you might* intervene, within your own spheres of activity and influence, to support and protect Christians and other religious minorities.

I would like to begin by recounting the recent meeting that I had here in the Vatican with **Nadia Murad Basee Taha**, the Yazidi survivor and United Nations Goodwill Ambassador for the victims of human trafficking. During our meeting, she recounted the barbarous evil that had been visited upon her family and the Yazidi people by the so-called Islamic State. After witnessing the murder of her six brothers and mother, she was, along with thousands of other Yazidi women and young girls, imprisoned and used as a sex-slave by ISIS terrorists. She came to the Vatican to meet Pope Francis, not only to seek his spiritual support for the suffering of her people, but also to thank him and the Holy See for having spoken out

about the atrocities, not just against Christians but also against the other ethnic and religious minorities, including the Yazidi, who were subjected to unspeakable and horrendous crimes after the invasion of the Nineveh plain, the heartland of Iraq's religious and ethnic minorities, by the so-called Islamic State in early August 2014. As you recall, within days of that invasion, the Holy Father wrote to the Secretary General of the United Nations appealing to the International Community to take urgent action to end the humanitarian tragedy and the Permanent Observer of the Holy See in Geneva raised those concerns with the Human Rights Council of the United Nations. In this, as in many other cases, the Holy See sought to be the voice of the voiceless. Last Sunday, at the Regina Coeli prayer, upon his return from Fatima, Pope Francis entrusted to Mary, the Queen of Peace, all those who have been afflicted by wars and conflicts, particularly in the Middle East, specifically mentioning Muslims, Christians and minorities, such as the Yazidi, who have suffered tragically from violence and discrimination. In expressing his solidarity and prayers for them, he gave thanks for all those who have helped those in need of humanitarian aid.

Over the past few years, there has been a growing concern from the International Community and from many Christians in the West about the fate of Christianity in the Middle East. Unfortunately, such concern has arisen because of the atrocities that had forced hundreds of thousands of Christians and other minorities to abandon their homes and flee for their lives, seeking refuge in precarious conditions and with much suffering, both physical and moral. Many have been killed and kidnapped because of their religious faith. What is at stake are fundamental principles such as the right to life, human dignity, religious freedom, and the peaceful and harmonious coexistence between persons and peoples.

We are well aware that Christians are not the only ones who suffer persecution in the world. There are many religious communities, including minority groups who experience per-

secution or repression, that may be state sponsored or societal in nature. There is a case, however, to focus on the persecution of Christians because, unfortunately, it seems to be on the rise. A number of studies have suggested that Christians are the victims of 80% of all acts of religious discrimination in the world¹.

However, given the existential threat to their continued survival, in dealing with our topic this morning, I would like to focus on the situation of Christians and other ethnic religious minorities in the Middle East. The very fact that several countries and international bodies have passed resolutions describing the threats against Christians and other ethnic religious minorities by the so-called Islamic State as genocide prioritises our attention and concern for the Middle East, particularly in Syria and Iraq, but not only. In Egypt, the recent terrorist attacks against Christians that were carried out by returning ISIS fighters underline the global reach and phenomenon of ISIS. Such events are a worrying indicator that the retaking of the principal cities under ISIS control, Raqqa in Syria and Mosul in Iraq, will not defeat terrorism but merely displace it as Islamic State 'foreign fighters' return to their countries of origin in Europe, Asia, Africa and elsewhere. Indeed, this is one of the challenges already facing the international community, particularly in light of the terrorism in Europe and elsewhere in the past few years.

In focussing on the Middle East region, I begin by stressing that the Holy See's efforts in that region are guided by the principle of defending the human rights of all people, regardless of race, religion or ethnic identity. While a particular concern and affinity for our Christian co-religionists is perfectly understandable and, indeed, is necessary for spiritual solidarity, it should not blind us to concern for the suffering

¹Cf. International Society for Human Rights and the Pew Research Center.

and persecution of other groups. Threats to one or another group are a threat to all ethnic and religious minorities. Thus, I want to speak **firstly** about Christians in the Middle East; **secondly**, about the actions of the Holy See, both diplomatic and humanitarian, and **thirdly**, on the challenges for the future of ethnic and religious minorities of the Middle East.

1. CHRISTIANS IN THE MIDDLE EAST

For centuries, Christians have lived side-by-side with various diverse ethnic and religious groups in the Middle East. This diversity has constituted a distinctive feature of the social fabric of the region – a mosaic of different peoples and religions – even if at times there were sporadic episodes of conflict and tensions between them. What we have seen in recent years, however, threatens the survival of a Middle East that is a place of peaceful coexistence of peoples with diverse religious and ethnic identities. The ideology unleashed by the so-called Islamic State seeks not only to change the borders of the Middle East but its very nature by eradicating Christians and other minorities who are an intrinsic part of its identity. Indeed, as Pope Benedict XVI wrote in the Post Synodal Apostolic Exhortation *Ecclesia in Medio Oriente*, “*a Middle East without Christians, or with only a few Christians, would no longer be the Middle East, since Christians, together with other believers, are part of the distinctive identity of the region*”². Indeed, Pope Benedict acknowledged that the distinctive identity of the region is formed by Christians *together with other believers*, thus acknowledging that religious pluralism is not something to be imported into or imposed on the Middle East from outside, but a reality that already has a millennial existence there and which is intrinsic to its identity. This is the truth, the reality of the Middle East. The atrocities of the past few years, however,

²Pope BENEDICT XVI, Post Synodal Apostolic Exhortation *Ecclesia in Medio Oriente*, n. 31.

underline the heroism and courage required to give witness to this truth. When I met with **Nadia Murad Basee Taha** recently I saw at first hand such heroism and courage but I have seen it also in countless others who, despite their suffering, remain steadfast in their desire to defend the ethnic and religious pluralism of the Middle East.

The situation of Christians in the Middle East has been particularly desperate since the proclamation of the Caliphate of the Islamic State in Mosul in June 2014. In his letter to the Secretary General of the United Nations, in August 2014, the Holy Father called upon the international community to help Christians and others who had fled the barbarism of ISIS to return safely "*to their cities and their homes*". Since last autumn, most of the territory in Northern Iraq occupied by ISIS has been retaken, including the Christian villages of the Nineveh plain. Unfortunately, despite their desire to return, very few Christians or other groups have been able to do so³. Homes, schools and churches that would receive them continue to lie in ruins. Although liberated from the enemy, much still needs to be done to help Christians and other minorities to return safely "*to their cities and their homes*". Constructing new buildings is perhaps the easier part; rebuilding Iraqi society and laying once again the foundations for harmonious and peaceful coexistence is the more difficult task.

An important and significant intervention of Pope Francis, motivated in part by the events of the summer of 2014, was his letter to the Christians in the Middle East shortly before Christmas 2014⁴. I think that it is worth reflecting a little on

³A recent survey conducted by the Chaldean Church noted that **1300 out of 1667 families, currently in Iraqi Kurdistan, wanted to return to their villages**, but their return continues to be delayed because the villages need to be de-mined, security measures need to be put in place as well as basic services such as water and electricity, as well as reconstruction.

⁴Letter of His Holiness Pope Francis to the Christians in the Middle East, Fourth Sunday of Advent, 21 December 2014.

this letter. On the one hand, the Holy Father writes as a religious leader to the Christian communities of the Middle East, while on the other, he also uses the letter to make an appeal to the international community to address the needs of Christians and *“those of other suffering minorities, above all by promoting peace through negotiation and diplomacy”*. Even though only one paragraph of the letter is explicitly addressed to the international community, the remaining paragraphs of the letter reflect the principles at the heart of the Holy See’s diplomacy in defending Christians and religious minorities in the Middle East by affirming that they are integral members of those societies who have the right, and the duty, to contribute to the common good. Thus, he reminds Christians of their unique and specific vocation to be the leaven in the dough of the societies and communities to which they belong: *“Your very presence is precious for the Middle East. You are a small flock, but one with a great responsibility in the land where Christianity was born and first spread. You are like leaven in the dough. Even more than the many contributions which the Church makes in the areas of education, healthcare and social services, which are esteemed by all, the greatest source of enrichment in the region is the presence of Christians themselves, your presence”*.

In his letter, the Holy Father described the unique role and vocation of Christians in the Middle East: *“Dear brothers and sisters, almost all of you are native citizens of your respective countries, and as such you have the duty and the right to take full part in the life and progress of your nations. Within the region you are called to be artisans of peace, reconciliation and development, to promote dialogue, to build bridges in the spirit of the Beatitudes (cf. Mt 5:3-12), and to proclaim the Gospel of peace, in a spirit of ready cooperation with all national and international authorities”*.

Although the letter was addressed to Christians, the Holy Father was not silent about the suffering of other religious and ethnic groups: *“Nor, in writing to you, can I remain silent about the members of other religions and ethnic groups who are also experiencing persecution and effects of these conflicts”*. This illus-

trates perfectly the unique character and voice of the Holy Father in the international forum as the Church's Supreme Pastor and Diplomat par excellence.

2. THE ACTIONS OF THE HOLY SEE: DIPLOMATIC AND HUMANITARIAN

The primary diplomatic actor of the Holy See is the **Holy Father**. It is to the Holy Father that the world turns to, and it is his words and actions that inspire and animate the diplomatic activity of the Holy See. The Holy Father has various means at his disposal to exercise his unique and diplomatic role in the world. It is unique, primarily because the Holy Father speaks not simply as a world leader, but primarily as a religious leader. Indeed, his principal interventions come in the context of his *Urbi et Orbi* Messages at Christmas and Easter, the Sunday Angelus and his weekly Wednesday audiences with pilgrims who come to Rome, where he regularly appeals to the international community on the most pressing issues of the day. The Message for the World Day of Peace, on 1st January, and the annual New Year's address of the Holy Father to the Diplomatic Corps accredited to the Holy See, are privileged occasions for the Holy Father to speak to the international community and set forth the Holy See's principal concerns and priorities.

The Holy Father's international trips abroad are also privileged moments of the diplomatic activity of the Holy See because they allow the Holy Father to speak to the world of politics and the leaders of civil society, which was particularly evident during his recent visit to Egypt. These are some of the primary means through which the Holy Father exercises his unique mission to the world. All other diplomatic activity of the Holy See flows from the ministry of the Holy Father and is exercised primarily by the **Secretariat of State** and the network of **Papal Representatives** throughout the world, some of whom are in countries at war and in conflict, literally

on the frontlines, giving witness to the Holy Father's concern for the suffering of peoples afflicted by wars. In recognition of such dedicated service, the Holy Father raised Archbishop Mario Zenari, the Apostolic Nuncio to Syria, to the rank of Cardinal.

2.1. Priorities and actions of the Holy See's diplomacy

The priorities of the Holy See, which are grounded in the dignity of the human person, include the common good of society, promoting peace and justice, so that the followers of different faiths may live together in peace and harmony. With regard to the protection of Christians and minorities in the Middle East, the Holy See's primary response **has been to raise awareness about the humanitarian emergencies** and crises that inevitably arise from wars and conflicts, including direct appeals to the parties of such conflicts to respect international humanitarian law by ensuring all necessary humanitarian relief is given to those who need it.

Similarly, the immediate appeals of the Holy See, in the summer of 2014, for example in the abovementioned letter of the Holy Father to the Secretary General of the United Nations, and constantly renewed since then, included calls to the international community to guarantee **the right of refugees and internally displaced persons to return in safety to their homes**. As I have already mentioned, the persons displaced by ISIS in the summer of 2014 are still waiting to return to their homes.

In these last few years, the gravest threat to Christians and to the survival of Christianity in the Middle East has been **terrorism, particularly, terrorism motivated by religious extremism**. Thus, the Holy See, in the various spheres of its diplomatic activity has not tired in highlighting this particular heinous evil and the specific responsibility of religious leaders to confront it and to affirm constantly that there can be no religious justification for any form of violence. Being

both religious leader and diplomatic actor par excellence, the Holy Father has a unique voice on the world's stage and thus he is singularly placed to bridge the gap between religious leaders and civil authorities on that stage.

During his meeting, on 9 January last, with the Diplomatic Corps accredited to the Holy See, Pope Francis devoted his speech to the theme of security and peace, underlining and renewing his personal firm conviction *"that every expression of religion is called to promote peace"*⁵. Unfortunately, in the times in which we live, there has been no shortage of religiously motivated acts of violence that have caused countless innocent victims in various parts of the world. When we consider the great number of religiously inspired works that contribute to the common good through education and social assistance, especially in areas of poverty and conflict, it is particularly repugnant and offensive to all sincere religious believers that religion can be used to foster hatred, violence and death. For this reason, Pope Francis renewed his appeal *"to all religious authorities to join in reaffirming unequivocally that one can never kill in God's name"*⁶. A message reaffirmed during his recent Apostolic Visit to Egypt and in his meeting with the Grand Imam of Al-Azhar, Dr Ahmed Al Tayyeb. On that occasion, he invited religious leaders: *"Let us say once more a firm and clear 'No!' to every form of violence, vengeance and hatred carried out in the name of religion or in the name of God"*⁷.

Understanding the motivations that lie at the root of terrorism and religiously motivated acts of violence is complex and requires careful reflection and analysis, all the more so when there is a religious dimension to it. Religious leaders are

⁵Cf. *Address of His Holiness Pope Francis to the Members of the Diplomatic Corps accredited to the Holy See for the traditional exchange of New Year greetings*, 9 January 2017.

⁶*Ibid.*

⁷Cf. *Address of His Holiness Pope Francis to the Participants in the International Peace Conference*, Al-Azhar Conference Centre, Cairo, 28 April 2017.

uniquely placed to offer such reflection. Pope Francis has helped to open up spaces for this reflection to occur so that religious leaders are able to contribute to the sensitive debate about religiously motivated terrorism. In this context, it is important to acknowledge the many initiatives and declarations of Muslim religious leaders to condemn those who use the teachings of Islam to justify violence and terrorism. For example, Sunni Islam's most prestigious centre of learning, the University of Al-Azhar, has on many occasions, organised seminars and conferences in which it has condemned the use of religion to justify violence. Some recent examples include the seminar in Cairo last February, at which the President of the Pontifical Council for Interreligious Dialogue, Cardinal Jean-Louis Tauran, participated and, more recently, the International Conference for Peace organised on the occasion of Pope Francis's visit to the University of Al-Azhar last month.

Acknowledging explicitly the religious dimension of violent extremism is fraught with danger, and we can understand the reluctance of governments and international bodies to do so. Thus, the most important contribution of religious leaders to this debate is to help people understand that acknowledging the religious dimension of violent extremism, or rather the manipulation of religion for violent ends, does not mean equating religion, or a particular religion, or an entire religious community, with violence.

An essential element of eradicating terrorism is addressing the root causes, whether they be social, political or economic. Indeed, social poverty has been identified as a driver of terrorism. However, there are many forms of poverty. Indeed, Pope Francis has noted that religiously motivated fundamentalist terrorism *"is the fruit of a profound spiritual poverty, and often is linked to significant social poverty. It can only be fully defeated with the joint contribution of religious and political leaders. The former are charged with transmitting those religious values which do not separate fear of God from love of neighbour. The latter are charged with guaranteeing in the public forum the right to reli-*

*gious freedom, while acknowledging religion's positive and constructive contribution to the building of a civil society that sees no opposition between social belonging, sanctioned by the principle of citizenship, and the spiritual dimension of life. Government leaders are also responsible for ensuring that conditions do not exist that can serve as fertile terrain for the spread of forms of fundamentalism. This calls for suitable social policies aimed at combating poverty; such policies cannot prescind from a clear appreciation of the importance of the family as the privileged place for growth in human maturity, and from a major investment in the areas of education and culture"*⁸.

In citing the aforementioned remarks of Pope Francis, I wish to underscore the importance that the Catholic Church gives to the role of religion and education in preventing radicalization that leads to terrorism and extremist violence in contributing to the debate about terrorism and how to confront it. A better understanding of the role of religion and education can bring about the authentic social harmony needed for coexistence in a multicultural society.

As I mentioned above, the diplomatic activity of the Holy See flows from the person of the Holy Father and it is exercised on a daily basis by the Secretariat of State through the network of papal representatives throughout the world. The Missions of the Holy See at the United Nations, particularly in New York and Geneva, are particularly engaged in the diplomatic efforts to support Christians and other persecuted minorities. The Holy See also participates in many international conferences. I mention just a few as a way of illustration.

Paris, 8 September 2015: International Conference on the Victims of ethnic and religious violence in the Middle East.

United Nations – Geneva, 7 March 2017: the Holy See Mission to the United Nations in Geneva organised a high

⁸ *Ibid.*

level parallel event on the occasion of the 34th Session of the Council for Human Rights. The event, entitled *“Mutual Respect and Peaceful Coexistence as a Condition of Interreligious Peace and Stability: Supporting Christians and other Communities”* was organised by the Holy See Mission, together with the Missions of the Russian Federation, Lebanon and Armenia and was co-sponsored by Brazil, Croatia, Cyprus, Greece, Hungary and Serbia. Moreover, numerous other delegations attended the event, including Saudi Arabia, Azerbaijan, Brunei, Egypt, Indonesia, Iraq, Pakistan, Palestine, Syria as well as the Organisation of Islamic Cooperation.

Brussels, 5 April 2017: The *“Supporting the future of Syria and the region”* Conference took place with its twofold aim to reconfirm the humanitarian commitments that the international community made in London in 2016 and to look at the best ways to support a lasting political solution to the Syrian crisis.

Madrid, 24 May 2017: Follow-up Conference to Paris Conference on the Victims on ethnic and religious violence in the Middle East: *“Protecting and promoting pluralism and diversity”*.

2.2. *Humanitarian activity of the Holy See*

From the very beginning of the humanitarian crises in Iraq and Syria, the Church, through its various structures and entities, has been playing its role in responding to the humanitarian needs of all the people affected. Dioceses, religious congregations and the various Catholic charitable agencies on the ground have distributed this humanitarian aid without regard to religious or ethnic background. This humanitarian assistance depends not just on the generosity of donors but also on the many volunteers who so generously give of their time. In support of this activity of the local church, I would like to mention the annual meetings on the humanitarian crisis in the Middle East, organised since the beginning of the conflict in Syria, and coordinated, up to last year, by the Pon-

tifical Council *Cor Unum*. In September 2014, the “*Catholic Aid Agencies Information Focal Point for the Iraqi-Syrian Humanitarian Crisis*” was established as a means to facilitate greater cooperation and exchange of information among the various Catholic agencies involved in delivering humanitarian assistance in Iraq and Syria.

This focal point has also enabled us to have a clearer and more comprehensive picture of the humanitarian response of the Holy See and the Catholic Church. In 2016, according to the most recent data compiled by *Cor Unum*, the Holy See and the Catholic Church, through its network of charitable agencies, contributed to providing USD 200 million of humanitarian assistance of direct benefit to more than 4.6 million people in Syria and the region. In distributing aid, Catholic agencies and entities make no distinction regarding the religious or ethnic identity of those requiring assistance, and seek always to give priority to the most vulnerable and to those most in need. This approach was demonstrated also through the opening in January of a Caritas point in the Muslim area of East Aleppo and the “*Open hospitals*” project that seeks to open the Catholic hospitals in Aleppo and Damascus and render them fully operative for the needs of the local populations, especially the poor and disadvantaged. Such an approach is essential to Catholic charitable giving but it also bears remembering that, for many people in need of assistance, their first contact with the Church and Christianity is through the humanitarian assistance that they receive.

3. CHALLENGES FOR THE FUTURE OF ETHNIC AND RELIGIOUS MINORITIES OF THE MIDDLE EAST.

At the diplomatic level, the Holy See has always insisted upon the fundamental right of Christians and other religious minorities to *be* in the Middle East. The conflicts, wars and extremist terrorism, however, have contributed to the mass

displacement and immigration of such minorities to other parts of the world for many decades. Indeed, it has been a constant preoccupation for the Holy See during all that time. The barbarity and cruelty of ISIS sponsored terrorism has only brought that worry into sharper relief. Can Christianity survive in the Middle East without Christians? We are facing a profound existential crisis and no effort must be spared in addressing this crisis. This crisis is not new; it existed long before a self-proclaimed Caliphate of the Islamic State installed itself in June 2014. Even though much of the ISIS-controlled territories in Iraq and Syria have been retaken, Christians and other minorities have yet to return, not least because their homes still lie in ruins or it is not yet safe to go back. And yet, even if those homes and towns were miraculously rebuilt overnight, given the traumatic experiences of these past three years, would Christians and other minorities, who genuinely fear that what has happened to them may happen again, return to those homes? Christians do desire to return to their homes and villages because their identity is deeply rooted in their ancestral lands. The greatest challenge, therefore, is creating the conditions – social, political, economic – that will bring about a new social cohesion that favours reconciliation and peace and give Christians and other minorities the confidence to overcome such fears. As I mentioned earlier, constructing new buildings is perhaps the easiest part; the more difficult task is rebuilding society and laying once again the foundations for harmonious and peaceful coexistence.

So what are the foundations necessary for guaranteeing the future of Christians and other minorities in the Middle East? In the west, we take such concepts of the ‘rule of law’, ‘law and order’, ‘peace and security’ for granted, but the experience of what has happened in Iraq and Syria, where a terrorist organisation succeeded in taking control of large swathes of territory and declaring itself to be State. In the coming weeks, it is expected that the so-called Islamic State

will be finally vanquished. But what will replace it? Will the root causes for its rise be addressed? The international community and diplomacy needs to help broken countries of the Middle East to answer these questions by insisting on some fundamental principles. Hand in hand with the 'rule of law' is the unequivocal respect of human rights, in particular freedom of religion and of conscience. In this regard, it is important to insist on religious freedom, including the right to follow one's conscience regarding religious matters. In many countries of the Middle East, there are limits on the right of religious freedom. In expanding religious freedom, members of the various religious communities, regardless of their relative size in the overall population, will be able to recognise themselves as equal partners with their fellow citizens contributing to the common good. Christians and other minorities do not want to be 'protected minorities' who are benevolently tolerated. They want to be equal citizens whose rights, including the right to religious freedom, are defended and guaranteed through guaranteeing and defending the rights of all citizens.

Some concerted State-building is required in the Middle East in cooperation with the populations of those countries concerned. A proper functioning State that works for the common good is the ultimate prerequisite for protecting Christians and minorities in the Middle East and guaranteeing them a future there. However, more than that is required. Given the theme of your meeting: *"Constructive alternatives in an era of global turmoil: Job creation and human integrity in the digital space – Incentives for solidarity and civic virtue"*, I would like to recall that one of the final conclusions of the last meeting on the humanitarian crisis in Syria and Iraq, held under the auspices of the Pontifical Council Cor Unum last September, concerned the urgent need to promote initiatives for job creation in the Christian communities throughout the Middle East.

In conclusion, I renew my opening invitation to you to consider ways in which *you might* intervene, within your own spheres of activity and influence, to support and protect Christians and other religious minorities who are in need of protection.

Thank you for your kind attention.

INCENTIVES FOR THE COMMON GOOD
IN A DIGITAL AGE.
IN SEARCH OF A COMMON THREAD

ALFREDO PASTOR

Three general concerns: the first two (youth unemployment and human smuggling and economic crime) seen as problems to solve, the third (Incentivizing solidarity and promoting civic virtue) seen as a goal to achieve, an expression of longing. What is the thread that links together these apparently disparate themes?

One could simply say, 'Achieve the third and the other two will disappear by themselves'. It may be better to proceed in the opposite direction, step by step, and see what can be learned on the way. What follows does not pretend to summarize, much less replace, the presentations to be given at the conference, but just to provide a common basis for a productive dialogue. In doing so we would follow Pope Francis' wish, expressed on May 13, 2016, that we "contribute to generating new models of economic progress more clearly directed to the universal common good, inclusion and integral development, the creation of labour and investment in human resources". In previous conferences, CAPP has addressed issues like consumerism, informal employment and displaced populations; to the extent that these issues have multiple facets, there is bound to be some overlap with them in what follows.

1. YOUTH UNEMPLOYMENT: OPPORTUNITIES AND EDUCATION
IN THE DIGITAL AGE

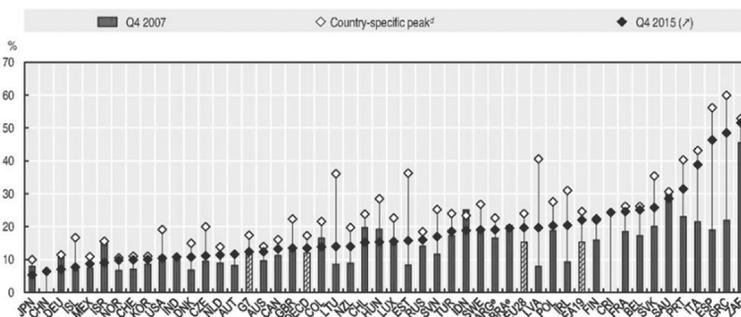
Unemployment of the young, often a problem in the past, has reached unprecedented levels in recent years, especially in advanced economies. In the Eurozone, it is now (2015)

22,5%; the figure hides enormous differences between countries, from 7,3% in Germany to 49% in Spain and Greece. It is strongly influenced by cyclical factors, rising sharply in downturns and abating somewhat in recoveries. Since 2009 it has remained very high in some countries (s. Fig. 1).

Youth unemployment shows only a part of the story: an even darker side is represented by the so-called NEETs (neither employed nor in education or training) where unemployment has reached an average of 14,6% in OECD countries in 2015. Furthermore, the rise in temporary and part-time contracts has tended to concentrate on the young. If the unemployed, and especially the NEETs, are at risk, those under temporary, or even part-time jobs are likely to remain under the poverty line: low income and uncertain job prospects make it difficult for them to achieve the minimum stability to afford independent housing and to form a family. The social and personal consequences are well known.

Youth unemployment has receded from its post-crisis peak, but remains very high in a few European countries

Percentage of the youth (aged 15-24^a) labour force, Q4 2007^b-Q4 2015^c



a) Youth aged 16-24 for China and the United States.

b) 2007-08 for India; 2008 for the Russian Federation; August 2007 for Indonesia; second semester of 2007 for Saudi Arabia; Q1 2008 for South Africa and Q2 2007 for Switzerland. No data available for China and Costa Rica.

c) 2010 for China; 2011-12 for India; 2015 for the Russian Federation; May 2014 for Indonesia; second semester of 2015 for Saudi Arabia; Q2 2015 for Argentina; Q3 2015 for Brazil; and Q1 2016 for Canada and the United States.

d) Country-specific peak is defined as the maximum value of the youth unemployment rate since the start of the crisis (Q4 2007).

e) Selected urban areas.

Source: OECD calculations based on the OECD Short-Term Labour Market Statistics Database and national labour force surveys.

Fig. 1: Youth unemployment during and after the crisis.

Source: OECD Employment Outlook, 2015

The causes of youth unemployment are multiple: the ups and downs of the economy (the demand side) are probably the main force behind aggregate unemployment, and the young tend to be more affected than the rest for at least two reasons: first, in some cases national legislation tends to protect older workers by imposing high severance costs for long-term employees, turning the young into the only buffer the firm has to adjust its workforce to cyclical downturns; second, their lack of work experience gives them a short shelf-life: the class of 2015 is left behind as soon as that of 2016 is out. The result is that they run a high risk of falling into exclusion, especially the NEETs. In response to the current crisis many initiatives, both public and private, have been put in place in many countries, centered on, but not limited to, education and training (S. on this OECD, *cit.*, p. 50).

So the young are a vulnerable part of a workforce that, in most OECD countries, has been the object of two adverse developments: first, throughout the last three decades, upturns in GDP have not been accompanied, as used to be the case, by similar increases in employment (jobless recoveries); second, weak employment and stagnant wages have been concentrated in the middle of the skill scale (polarisation). Two main factors behind these developments are thought to be globalisation – the entrance on the economic scene of large new players with an abundance of low-cost manpower- and digitalisation – the replacement of men by robots in manufacturing and by computers in services; this last is one of the subjects of the Conference¹.

When, towards the end of the past century, it was perceived that the digital revolution might put many jobs at risk, the first questions asked were ‘Which jobs?’ ‘How many?’ and ‘Why?’. The last question provided the starting point of re-

¹A good reference on the effect of globalisation on US employment is A. BLINDER, *How Many US Jobs Might Be Offshoreable?*, World Economics, 2008.

search: robots and computers should, sooner or later, replace men in those tasks which they could perform better. By dividing jobs into routine and non-routine, on the one hand, and manual and cognitive on the other, a 2x2 matrix was constructed by F. Levy and R. Murnane. The main result was that routine jobs, both manual, as assembly-line work, and cognitive, as most clerical jobs, were most vulnerable; non routine cognitive jobs –scientists, executives, but also kindergarten teachers- the least, and many middle-skilled jobs, both manual and cognitive, were more easily replaced by machines or computers². The best-known product of this line of research is the paper by C.B. Frey and M.A. Osborne³, who estimate that *'about 47 percent of total US employment is at risk'*. Separate figures are not provided for the young, but there is no reason to believe they would do better.

Frey and Osborne's results have made headlines and given rise to much research and discussion. Two other lines seem of particular interest here. The first starts from the notion of complementarity: machines, after all, often complement men by making them more productive. If higher productivity leads to lower product prices and hence to higher product demand, the net result of more digitalisation may be higher, not lower employment⁴. Forecasts of changes in employment due to digitalization must take into account changes in the general business climate.

The second line relevant here starts in a report by the McKinsey Global Institute (MGI). By decomposing jobs into activities and looking at these in the Levy-Murnane way, the authors show that *'while automation will eliminate very few occupations in the next decade, it will affect portions of almost all jobs*

²S. F. LEVY - R. MURNANE, *The New Division of Labor*, 2004.

³C.B. FREY - M.A. OSBORNE, *The future of employment: how susceptible are jobs to computerisation?*, Oct. 2013.

⁴J. BESSEN, *How computer automation affects occupations: technology, jobs and skills*, Boston University School of Law, WP 15-49, Jan 2016.

to a greater or lesser degree, depending on the type of work they entail⁵. Decomposing current jobs into activities and re-packaging these activities into different jobs will emerge, not necessarily fewer in number, but of different content; this, in turn, will lead to deep changes in the organisation of work and in the structure of firms. So little is known about what those changes will be that one should not give too much weight to exercises of counting jobs today and jobs tomorrow.

These changes will of course take time, and the approach that Dr. Bessen will present at the conference centres on the time dimension: how long has it taken in the past for major technological changes to penetrate the entire economy, and what has happened to employment throughout the process? Have more or fewer jobs disappeared than have been created? What has happened to wages? What to old and new skills? Bessen's approach enables one to put these questions in their proper context and on one very important point it links directly with the issue at hand at the conference, youth unemployment. The main policy recommendation to avoid mass unemployment that comes from the mainstream literature on the digital revolution is education. What sort of education? Here there is a bias towards higher education, especially in science and technology, under the banner of the "knowledge technology". Bessen's work shows clearly that the demand for skills changes with every phase of the unfolding of a technology, and this implies, since education policies are directed at the young, that misconceptions can seriously aggravate, rather than cure, the problem of youth unemployment⁶. Such biases have not arisen by chance: behind them one finds not only misconceptions, but also interests; fighting those interests for the sake of the common good becomes one

⁵S. M. CHUI & others, *4 Fundamentals of workplace automation*, in *McKinsey Quarterly*, November 2015, and *Where machines could replace humans and where they can't (yet)*, in *ibid.*, July 2016.

⁶S. J. BESSEN, *Learning by Doing* (2016), Chs. 8 and 9.

of our main tasks and sends us towards the third topic of the Conference.

Policies to address the effects of digitalisation on jobs look almost exclusively to the supply side: how to prepare workers so that they are more employable. What about the demand side? Can anything be done with those who will hire those workers? It has been known for some time that no technology completely determines the process of production; that, in particular, the manager has some choice concerning the types of labour that he will employ. Surely the same is true of digital technologies. By insisting on the evils of unemployment, particularly among the young, with the assistance perhaps of some economic incentives of the tax-and-subsidy kind, one can try to persuade managers to choose processes more employment-friendly within a given technology. Case studies show creating high-quality jobs, where machines and men cooperate, need not be a losing proposition⁷.

Lastly, technological change is not exogenous. This assumption may be convenient for reasons of analytical simplicity, but it is false nonetheless: innovation is the product of human activity, it is financed by human beings and institutions, often with public funds. The State and the citizenry are entitled to pass judgment on the results of their technology just as they can have an opinion on their health care or transportation systems. Needless to say, such an appraisal is very difficult and must be undertaken at several levels. But, on the other hand, the problem of youth unemployment is so serious the complexity cannot be an excuse for inaction. In particular it should be clear that it is legitimate to try to influence technological innovation for the sake of the common good; one cannot appeal either to academic freedom or to the progress of science to oppose such an influence, because innovation is applied technology undertaken chiefly with the purpose of

⁷S. E. APPLEBAUM et al (eds.), *Low-Wage America*, 2003.

making money, entirely legitimate but far from being the supreme goal of a healthy community⁸.

One last field of action remains: the consumer, for whose sake so much technology is developed and so many tech products are put on the market. This will be dealt with in 3.3. below⁹. It is enough to say here that if consumers were made aware of the effects of their choices on the common good, in the same way that they have been made aware of their effects on the environment, the youth unemployment problem would be on its way to a solution. This is, of course, the third topic of the Conference.

2. HUMAN SMUGGLING AND ECONOMIC CRIME

The second topic covers a great variety of activities and circumstances: economic crime, human trafficking and, partly overlapping with it, the many issues raised by the refugee question. Each of these may be addressed from many, not mutually exclusive viewpoints: the supply side – the smugglers –, the demand side – the customers – or the victims, chiefly women and children: too much ground to be covered in this note. Fortunately the speakers at the Conference are in measure to give first-hand accounts of the most important aspects of these issues: financial crime, the role of the law, the traffic of children and the emergencies caused by the refugee crisis. The quality of the speakers allows me to concentrate on two topics: the implications of financial crime insofar as it is an example of the erosion of a civic virtue, trust – remember, the third topic of

⁸Policy recommendations regarding the effects of technological change on unemployment are rare. S. A. ATKINSON, *After Piketty*, in *British Journal of Sociology* (2014) and *Inequality* (2016), p. 115 ff.

⁹The concept of efficiency in consumption was first put forth by H. KYRK, *The Theory of Consumption* (1913). See, on the criteria for 'good consumption', M. HIRSCHFELD, *From a theological to a secular frame*, in D.K. FINN (ed.), *The True Wealth of Nations* (2010).

the Conference – and on one aspect of human trafficking quantitatively the most important, prostitution, insofar as it highlights social ills which we must attempt to cure.

2.1. *Financial crime*

Economic crime, that is, crime committed in the course of economic transactions or having as its object a material good, is by no means limited to the financial sphere; for the purposes of this conference, however, it deserves special consideration, not only because of the well-deserved pre-eminence earned in the course of the last financial crisis.

The working of the financial system is, as we all know, based on trust. It so happens, however, that the banking systems of a few advanced countries have been near collapse, which has made everyone aware of how fragile the financial system really is, behind an appearance of solidity. Furthermore, the crisis has been so serious in part due to the emergence of financial products whose complexity made them opaque in practice; ill-informed customers – not only widows and orphans, but financial institutions themselves – have bought them, often under false pretences; others have trusted the seal of approval of a rating agency only to find themselves in possession of worthless paper. In this way, mistrust has spread far beyond the financial system to permeate the general public.

In the financial sector, the crisis has caused a flood of regulation for financial institutions, whose underlying premise seems to be that the promise of material gain will have more weight on our decisions than our given word, our sense of honour or even common decency. *'Man is not an angel'*, as stated by the Swedish Academy of Sciences in awarding the last Nobel prize in economics to two specialists of the theory of contracts. Starting from this premise, regulations attempt to describe what can and cannot be done in such minute detail as to make trust superfluous. This attempt is, in the end, doomed

to failure but meanwhile new regulations may have two undesirable consequences: first, the notion of what is ethical will tend to disappear, in our behaviour if not in our speeches: whatever is not expressly forbidden by regulation can be considered correct. Second, loopholes will always be found, and that in turn will erode people's respect for the rule of law. In this way, financial crime has caused a great erosion of trust, a civic virtue needed for the working of a good society. Needless to say, police and judiciary action against those aspects of financial activities that are downright criminal – blatant corruption, money laundering – must continue; in this respect, measures taken to improve money traceability, including experiments with cashless money, deserve some attention.

2.2. *Human trafficking: prostitution*

According to a 2009 report by the ILO, human trafficking reaches twenty million people, with an annual flow of six to eight hundred thousand people. Turnover is estimated at \$120 billion, making human trafficking the largest source of illegal income after drugs.

Of the yearly flow of people, 80 percent of them are women, prostitution the final destination of most of them. In Spain, the number of prostitutes is estimated at between two and three hundred thousand women, 90 percent of them migrants, which suggests that most of them have come to the country under false pretences, and case stories show that they live the life of slaves. Their sheer numbers, on the other hand, indicate that the nature of prostitution has suffered a drastic change, ceasing to be the oldest trade in the world to become a monumental business operating in a very large market. As is the case in every market, there is a supply and a demand side to it, with a third ingredient absent from other markets, the victims. Public attention has tended to concentrate, on the one hand, on the supply side through legislative, police and judicial action, the topic of Mr. Ratzel's speech; on the other,

on the victims, both through public institutions and through NGOs. Let it be said in passing that much remains to be done to help former victims to regain not only their health but also their dignity, and to find a place in society.

Little has been said, on the other hand, of the demand side of the market, the customers; yet, if we wish the market to disappear, influencing demand is as necessary as acting on supply, for, as long as the demand is there, legal and police action may simply raise prices and may do little to improve the condition of the victims. There are few data on the demand for sexual services; since it will somehow match the supply, however, it must be strong. There are some indications, moreover, that the average age of the customer is falling: this is not a market in danger of extinction. This is a source of worry, thinking not only of the victims, but also of the customers.

The decision to solicit what are called sexual services is of course a personal one, hopefully the result of an inner struggle; the environment, however, can influence the result of such a struggle. Unfortunately, we are subject to constant stimuli of an overt or implicit sexual nature: advertising uses sexual innuendo as bait to promote all sorts of products, thus contributing to its banalisation; some press carries ads offering sexual services, making these appear as normal businesses; films and TV series for teenagers give the sexual tensions that underlie adolescence what may be an excessive pre-eminence. Insofar as it is virtue that enables men to make good choices, the issue of prostitution calls for a strengthening of virtue. Insofar as everyone contributes to create the social environment, this is an issue that concerns everyone.

2.3. A framework for debate on the migrant question

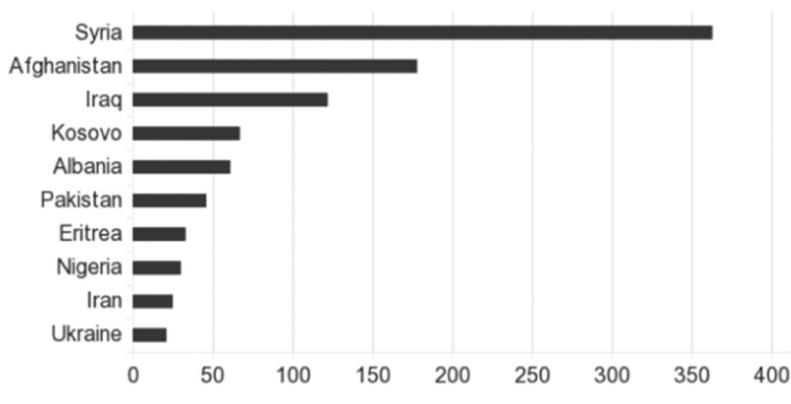
The flood of migrants (war refugees, asylum seekers and so-called economic migrants) having Europe as its destination has raised issues are too numerous and diverse to be summa-

rized here. They overlap with issues of human trafficking but cannot be reduced to them. It may be of interest, however, to present some data first and then to furnish a framework that may help a possible debate. Migration was one of the topics dealt with in the 2016 CAPP Conference; what follows is largely a reminder of some of the conclusions reached there together with some data that may be useful in a discussion.

In 2015, the flow of migrants to Europe reached 1.3 million people, judging from the number of asylum claims lodged in 2014-2015. The real number is certainly higher than that: Germany, the country receiving the most claims, estimates the number of people crossing its borders at more than a million; FRONTEX' estimate is 1.8 million. To put these numbers in perspective one may note, first, that the largest of them represents about 0,4% of a EU-28 population of 510 million; second, that the largest part of this flow has been caused by what one may hope are temporary phenomena: local wars (Fig. 2).

Top 10 origins of people applying for asylum in the EU

First-time applications in 2015, in thousands



Source: Eurostat

Fig. 2

Asylum applications have concentrated on a few countries; the largest recipient in absolute numbers has been Germany, followed by Sweden (Fig. 3).

Migrants – claims as a percentage of the local population the numbers give an indication of the pressure felt by the destination countries (Fig. 4). The picture is quite different.

Claims in only one year approach 2% of Hungary's population, 1,7% for Sweden, 1% for Austria. Clearly, if conflicts persist even for a few years, these numbers will put considerable pressure on the recipient countries; at the lower end, the number is 0,03% for Spain (not shown on the chart) and close to nil for other, smaller countries. This indicates that a relocation scheme, voluntary or not, must be put in place. However, the numbers some countries have agreed to relocate are well below needs (Fig. 5).



Fig. 3

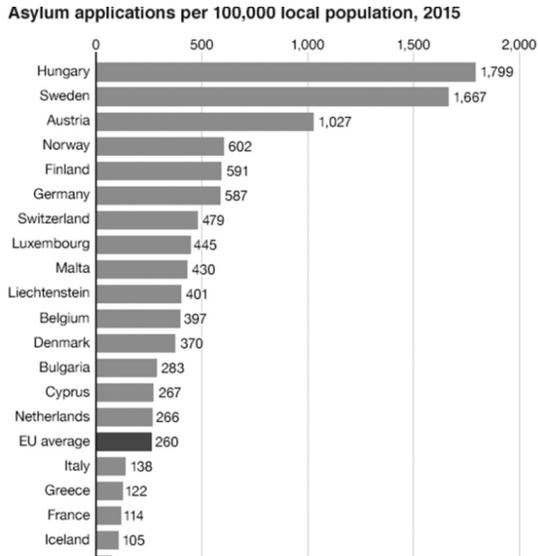


Fig. 4

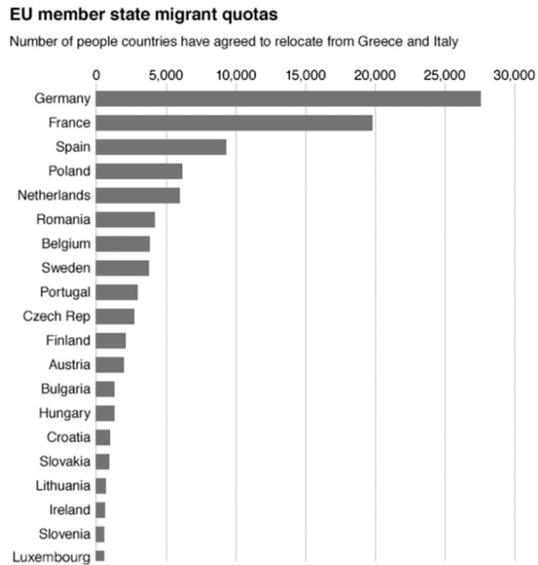


Fig. 5

The data above indicate that the migrant problem, through not untractable in the EU framework, has not been adequately addressed so far.

So as to provide some order into a possible debate on the migrants many issues, the following remarks may be of use. They were made by Dr. Jakob Kellenberger, a former Chairman of the Red Cross' International Committee at the 2016 CAPP international conference, and they are worth keeping in mind to continue our work:

a) *Migrants do not want to leave their home country, and try to stay as close to it as possible.*

This explains why the figure of asylum claims in Europe is much lower than that for Jordan, Lebanon and even Turkey. It also suggests that intervention at the origin is indispensable. Europe is powerless about the Middle East conflict, but perhaps nor so in Sub-Saharan Africa, source of the main flow of economic migrants¹⁰.

b) *It is our duty to provide shelter.*

No explanation needed.

c) *One should not promise something one cannot deliver.*

It is not likely that claimants' wishes as to the country of destination can be accommodated, as that would require undue pressure on some countries while others would not share in the burden. Perhaps it is time to state that refugees will be allocated on a fair basis among EU members, taking into account not mainly their preferences, but also other factors, starting from the premise that for most refugees their stay will be temporary. When an agreement is reached preparations for reception should be taken to avoid the undesirable consequences that have followed previous episodes.

¹⁰Efforts are being made by Europe in countries of origin, notably in Sub-Saharan Africa. For a rather skeptical view of the results s. *Migration: Reversing Africa's Exodus*, in FT, November 7, 2016.

3. INCENTIVIZING SOLIDARITY AND CIVIC VIRTUE

What demands do these problems – youth unemployment, human trafficking and financial crime – put on us? All these issues have multiple facets; we can attempt to order them under the headings of the last session of this conference, “solidarity” and “civic virtue”. To help focus the listeners’ attention it may be helpful to highlight some of the points which will no doubt be touched upon by the speakers in the session.

3.1. *Solidarity, forced and voluntary*

All the problems touched upon so far have a common trait: they are everybody’s problems. All members of society must cooperate if they are to be properly addressed. First, they concern us all: youth unemployment is no longer a marginal phenomenon, touching a few maladjusted or lazy youths; the victims of human trafficking are within our countries or at our doors; financial crime has been one cause of the economic crisis that has affected the lives of millions of people. All these problems contain an appeal to our solidarity. Second, however, the most common way in which solidarity is practised, that which most citizens practice by contributing with their taxes to finance social public expenditure will not suffice by itself to address these problems adequately. The usual way to redress gross inequities in our modern societies – to take as given market outcomes and correct them through taxes and subsidies – can be called “forced solidarity”, since ordinary citizens experience it as a legal, not necessarily a moral obligation; a system based on forced subsidiarity has been characterized as deficient not only in its results but in its very conception¹¹. The sense in which most understand the

¹¹ “A society with solidarity but without fraternity is a society from which everyone would try to escape” (S. ZAMAGNI, *Catholic Social Thought, Civil Economy and the Spirit of Capitalism*, in D.K. FINN [ed.], *The True Wealth of Na-*

meaning of “solidarity”, however, is as a virtue, whose acts are inspired by moral, not legal duty, and which one might call voluntary solidarity. One of the lines for action that CAPP is pursuing is the creation of a Voluntary Solidarity Fund, an idea launched in a CAPP conference in 2015 and pursued since.

The main cause of the deficiencies of our current system, however, is not economic: we could not be satisfied knowing that the tens of thousands of victims of human trafficking or of refugees had just been fed, clothed and given shelter by the State, even if that were actually done: they must be taken care of beyond their most immediate needs, they must be taken back by society, theirs if possible, ours if not. The task of accompanying them on their way back into normal life is measured in years and requires a strong personal commitment from those who undertake to perform it, something the State cannot provide: nothing short of the mobilization of an entire society can give an adequate response to our problems. Many examples of organisations active in the promotion of better conditions for the disadvantaged already exist; their numbers must increase, because all ordinary citizens should feel some responsibility for these problems. Those who already participate in humanitarian work would help by showing others see that their actions are not only the fulfilment of a moral duty but also a source of personal satisfaction and development.

A return to first principles is convenient before adequate action can be taken. It is possible to trace the source both of our indifference to the suffering of others and of the resistance faced by measures of income redistribution to several misconceptions: the first, that property is an absolute right, with no need of additional justification and with no corresponding obligation; the second, that in all human transaction only the

tions [2010], p. 84). Zamagni’s “solidarity” here is what we have called “forced solidarity”.

final outcome counts – what one gives and what one receives in return –, the relation itself being of no value. Much has been said about the proper limits of property rights, less on the value and nature of relations, due to one last misconception, the insidious habit of considering societies as mere aggregates of self-sufficient individuals. This misconception makes us forget that real people cannot be isolated from their relations.¹² Further, the textbook market relation, characterized by the principle of exchange of equivalents, is not the model of human relation towards which all other must tend, but only one element of a much wider set governed by the principle of reciprocity, which recognizes that the great majority of human transactions, even commercial ones, contain an element of gift. Lastly, relations based on reciprocity facilitate the exercise of solidarity and thus help address our problems adequately. This point will no doubt be touched upon by Professor Luigino Bruni, who has made reciprocity the object of his study.

Two suggestions, then, from the first part: that the problems mentioned concern us all, and that they require that we give of ourselves and not only of what is ours. This personal conversion is made easier if we realize that the happiness derived from good human relations is essential for the good life.

3.2. *Civic virtue*

The appeal to civic virtue is no weaker than that to solidarity. Civic virtue is needed, together with solidarity and compassion, to face the problems already mentioned, because civic virtue is needed to sustain a good society. The appeal comes out most strongly, however, when we consider the

¹²“La personne est une relation”, says the French philosopher Jean Borella.

market for drugs or that for so-called sexual services, and more specifically the demand side. The supply side is the province of regulation, the police and the courts, but the market will survive so long as the demand is there. In both markets it is hard to accept that the demand is the result of the free choice of rational individuals: the individuals do not act rationally, nor can their choice be called free when there is such a strong element of addiction in it. In the case of sexual services, the choice is strongly influenced by the social environment, and civic virtue can contribute to curbing the demand by opposing the torrent of stimuli of a sexual nature that assail all of us, not only exposing sex, but also making it appear as harmless and banal. To fight this torrent – in the media, in advertising – is a difficult fight from which one cannot expect visible returns in the short run; but if recognize the importance or the disease, if we honestly believe that disordered affections are bad for humans, then we should devote at least as much energy to fighting it as we do to fight obesity.

3.3. *Proper consumption*

Drugs, sexual services and high-tech gadgets are just consumption goods, the demand for them extreme symptoms of a more general disequilibrium in our spending habits. When we consider larger issues such as climate change or the availability of basic resources it is impossible not to face the issue of consumption: unless rich countries curtail their consumption habits and poorer ones curtail their expectations of future consumption, serious conflicts about natural resources are unavoidable.

How may one define “proper consumption”?¹³ True, in old times societies had standards of living strictly defined,

¹³The reader is referred to Dr. Mary Hirschfeld’s work, quoted above, n. 9.

according to income and to social class, but such social norms have largely disappeared today: a shopkeeper may dress like a prince if he can afford the same tailor. We have spent considerable time in defining poverty lines, minimum standards of living for the poor, but no wealth line exists, no notion of what would be an adequate standard of consumption for the rich. A first step in defining proper consumption would perhaps be through the usual notion of efficiency: a consumption choice would be called efficient if no more satisfaction could be obtained by making a different choice costing the same. It is to be noted that while we have devoted material and mental resources to the definition and calculation of efficiency in production, no such thing has been done with consumption, where the consumer is deemed sovereign. However, if one subjected one's consumption choices to the cold light of reason one would discover many inefficiencies: we buy things and services for which we have no real use, and one may suspect that we derive satisfaction from the act of buying itself. In fact, advertising seems to have made the same discovery, which is why a car is no longer advertised as a good, nor a hotel room as a service: both have become "experiences". Hence an appeal to reason as an exercise in civic virtue is not likely to produce visible results: consumers may simply not be interested in being reasonable, let alone rational.

As Christians we base the exercise of civic virtue on a higher dimension from which it may bring fruit. After all, consumption is a human action, and as such must have a purpose; hence consumption may be called proper if it conforms to the true purpose of human life. This is, in turn, the pursuit of happiness defined, not as the satisfaction of our whims and wishes, but as the pursuit and attainment of the highest good. In this perspective we find the old notion of material goods as instrumental goods, which are of value only insofar as they enable us to fulfil our life's purpose. Of course the application of this criterion results in a variety of consumption choices, since each of us has a personal way of

going after the highest good, but all these choices are proper choices. Application of this criterion is certainly an exercise in civic virtue in an important aspect of life, and it is beneficial not only to oneself but to others to whom it may serve as an example. As a rule of life it rests on a more solid foundation than those based on the desire to be in good physical form, to look thinner or even to live longer, and thus it gives one a stronger basis from which to act. Of course, Christians do not have a monopoly either of virtue, or of civic virtue; to strengthen civic virtue in society it is both possible and necessary to engage others who pursue the same interests and share the same concerns¹⁴.

Lastly, one may ask, 'Well and good, but how does one promote civic virtue?'. Economists will at once recall the motto of our trade: men respond to incentives. Unfortunately, in practice one thinks mostly of material incentives; if what one wants to achieve is a society less dependent on material goods, employing material incentives is a self-defeating exercise. Lord Skidelsky's speech will likely provide us with a broader perspective.

This is then the common thread linking together the themes of this conference: we are facing large problems which affect all mankind, and our Christian faith provides us with solid, dependable guidelines according to which we may shape our actions.

¹⁴S. On the subject of alliances A. PABST, *Coalitions for Change in an Age of Global Threats*, delivered at the 2016 Conference of CAPP, accessible on www.centesimusannus.org.

SUMMARY OF 2017 INTERNATIONAL CONFERENCE

Vatican City, 18-20 May 2017

CONSTRUCTIVE ALTERNATIVES IN AN ERA OF GLOBAL TURMOIL

Job Creation and Human Integrity in the Digital Space. Incentives for Solidarity and Civic Virtue

“Promotors of Catholic social teaching in the economic world”: in his introductory words and prayer, **Cardinal Domenico Calcagno** opened the conference by inviting the audience of 300 professionals, business executives, academics, public administrators and religious leaders from 25 countries to fully assume their commitment as supporters of the Centesimus Annus pro Pontifice (CAPP) Foundation, which was created in 1993 by St John Paul II. In his address during the Award ceremony of the third international prize for “Economy and Society” established by CAPP¹, **Cardinal Pietro Parolin**, Secretary of State, thanked the Foundation for issuing the CAPP 2017 Statement which “proposes a multidimensional and non-ideological approach to the social sciences, as well as to political and economic praxis, so that they may genuinely be at the service of the common good. Thank you for the replies to the teachings and exhortations of the Holy Father contained in the declaration. These replies demonstrate the vitality of the thought of Christian entrepreneurship”. In their opening speeches, **Domingo Sugranyes Bickel**, chairman of

¹The Jury is presided by *Cardinal Reinhard Marx*. The prize winners in 2017 were Markus Vogt for his book *Prinzip Nachhaltigkeit. Ein Entwurf aus theologisch-ethischer Perspektive*; Fr Dominique Greiner for his blog *La doctrine sociale sur le fil*; and Burkard Schäfers for his radio show on *Oswald von Nell-Breuning – Was von der katholische Soziallehre geliebt ist*.

the Foundation, and **Giovanni Marseguerra**, coordinator of its Scientific Committee, both expressed their hope to reach concrete conclusions in order to match such high expectations, especially remembering the Pope's words at the previous year CAPP annual conference, when he urged participants to generate "new models of economic progress more clearly directed to the universal common good, inclusion and integral development, the creation of labour and investment in human resources"². **Marseguerra** outlined a conceptual framework for this endeavour, based on participation and responsibility for inclusion as responses to injustice and growing inequalities, while **Sugranyes Bickel** emphasized the Foundation's choice of concrete areas which are at the heart of everybody's moral concern, like youth unemployment, human trafficking or financial crime, so as to reach concrete conclusions which lead to action.

1. CATHOLIC SOCIAL TEACHING IN A DIGITAL AGE

Each of us has a given perception of the "digital revolution". According to the journalist **Delia Gallagher**, the diagnosis is gloomy: the main fact is an overwhelming, never-ending stream of images, ads and distractions. Real news stories struggle to capture people's attention and the popularity of stories – which brings more advertising income – requires constant ethical decisions by editors who wish to respect newsworthiness. User-generated reports, fake news and machine generated "filter bubbles" make for ideologically closed audiences which only wish to reinforce their own opinions. The virtual world produces a dangerous demise of language: "The greatest challenge posed by the virtual world is not in any one particular ethical problem that it presents, it

²Pope Francis, address to the CAPP Foundation, May 13, 2016 (http://w2.vatican.va/content/francesco/en/speeches/2016/may/documents/papa-francesco_20160513_centesimus-annus-pro-pontifice.html).

is that we will no longer see them as problems". All this requires intensive discussions about Christian ethics in the technological age.

Helen Alford OP observed that Catholic social teaching (CST) started in another period of significant change when European countries were still coming to terms with the "industrial age" and struggling with its social impact: "CST emerged as both an attempt to re-interpret the moral and social vision of Christianity in terms of the new society, and as a form of resistance against the negative impacts of laissez-faire capitalism and industrialisation". CST is no stranger to tremendous change. It is essential in the first place to understand what are the main aspects of the current great upheaval: the essential role of processing information; the "info-sphere" where "what is real is informational and what is informational is real"; and the way we understand the human person in the midst of these changes "seeing ourselves, or seeing others, as no more than a [...] bundle of characteristics that puts us in a certain category [...] in a culture where proxies (linked-in profiles or 'likes') take the place of real things". What about CST in this digital age? According to **Sr Alford**, there are three ways in which we need to search for a new synthesis: (1) "engage with the situation promoting the use of the new means where they help human beings, as in the industrial period". This requires asking afresh certain classical questions which were essential to CST since its beginnings: how to deal with private property rights, now not of fixed capital but of information data? How to promote cooperative forms of organisation and business for the new corporate realities of the digital world? How can digital services be put to the use of the common good, for example mitigating climate change? (2) "Resist what is evil just as CST has done in the industrial age" which means questioning a purely "techno-centric" dominant paradigm, whereby technology instrumentalises every other good. And (3) "Be present in society where the voice from CST is needed. Our

industrial age has produced technologists who are capable of designing many technical resources, but it has not produced a similar level of ethical reflection". The challenges are great, but perhaps the present upheaval offers CST a chance to really come into its own.

2. IN SEARCH OF A COMMON THREAD

The conference discussed three different themes: youth unemployment, human smuggling and economic crime, incentivizing solidarity and promoting civic virtue. What is the common thread?

Alfredo Pastor explained that these three questions are intimately related to the aim of "generating new models of economic progress" requested by Pope Francis. Figures of youth unemployment and NEETs (neither employed nor in education nor training) are staggering. When there is unemployment, young people tend to be more affected than the rest because national legislation protects older workers and because the youth lack work experience. They are the most vulnerable part in a context where employment in rich countries is facing adverse developments due to globalisation and digitization. The current technological changes will eliminate a great portion of routine employment and repackage activities in different jobs, not necessarily fewer in number but of different contents. What sort of education is needed to accompany this transformation? Isn't there a bias towards higher education, supported by certain vested interests? How can workers be prepared so that they become more employable? We also need to question the way technological change is financed and supported, often with public funds, without considering the need and adaptability of innovation.

The second subject followed from last year's CAPP debate on migration and human trafficking: if one looks at the whole picture, and not only at the situation in Europe, the fact is that migrants try to stay as close to their country as possible; it is

our duty to provide shelter, but our countries should not make promises they cannot fulfil. Human smuggling reaches an annual flow close to one million people and a turnover estimated at 120 billion USD. Of the flow of people 80 per cent are women, prostitution being the fate for most of them. There is a supply and a demand side to this market, and too little is being said about the customers, whose number is growing in our societies.

The common thread among these problems is that they concern us all, they are not marginal facts, and they all appeal to our solidarity. Is “forced solidarity” through taxes enough? No, because our public systems are not set up to accompany people back into normal life. This requires a strong personal commitment which the State cannot provide. This is the reason why some CAPP members are setting up a network of Voluntary Solidarity Funds. But the search for alternative models also requires civic virtue to sustain a good society and a reflection on consumption and what is the true purpose of human life. This, **Pastor** concluded, makes it clear why the conference ended on a (purposely) provocative question: can solidarity and civic virtue be promoted by incentives? Employing material incentives for this may be a self-defeating exercise, but the question needs to be asked if, as in the economist’s profession motto, “humans respond to incentives”.

3. THE SCANDAL OF YOUTH UNEMPLOYMENT: SCARCE SKILLS, NOT SCARCE JOBS?

In the US, according to **James Bessen**, there were 500,000 jobs in the steel industry in 1958 and today there are fewer than 100,000. Three quarters of the loss are due to technological automation. These changes are the cause of growing inequality and affect the less well-established sectors of society in rich countries, such as the young and immigrants. The trend also applies to emerging countries affected by “premature deindustrialization”. And automation through “machine

learning” is only at the beginning. However, **Bessen** argues, “widespread fears about automation creating mass unemployment are misplaced for the near future. New technologies are, indeed, disrupting our societies, but new technologies are creating more jobs than they are destroying. The real challenge, instead, is that the new jobs require new skills, often learned on the job; these skills are difficult to acquire and the opportunities to learn are too limited”. It is important to look at past experience: 98% of the labour required to produce a yard of cloth in 1810 was taken over by machines in 1910, but jobs for textile workers during the 19th century grew dramatically because demand continued to increase for a number of decades. So far at least, computer automation has followed a similar pattern: electronic systems automated much of the work of supermarket cashiers, legal clerks, bank tellers... but employment grew in the same areas due to demand. Is the “machine learning” or “artificial intelligence” stage changing this trend? It is difficult to tell, but the point is that demand will continue to determine whether automation will increase or decrease employment. The problem is one of unequal distribution of skills: some people are given opportunities to work with the new technologies, whereas others are not. And the new skills are more difficult to acquire than just switching occupations, because new technologies change rapidly and they are not standardized. Is it possible for workers to become permanent learners? People must learn through experience on the job (“learning by doing”) and many workers find this difficult. There is a growing digital divide, a major problem especially for the young: many young people have early familiarity with computers, but it is less clear that they are gaining access to the critical workplace technologies. What can be done? (1) Encourage “learning by doing”, which means encouraging non-classroom education, including vocational training, firm job training programs, work-study programs and apprenticeships. Higher education is not the right solution for everyone. (2) Encourage strong labour mar-

kets by reducing obstacles to employee mobility and (3) Encourage wide acceptance of open standards and knowledge sharing: “A population that is skilled at working alongside advanced information technologies will best promote the development of future technologies that augment human capabilities rather than replace them”.

From the point of view of the data-gathering industries, according to **Carlo d’Asaro Biondo**, the internet offers an unprecedented chance to expand education, information and employment to everyone. Their mission is “organising the world’s information and making it useful and accessible to everyone”.

According to their findings, each high-tech job in a local economy creates more than four additional non-high-tech jobs in the same region: from lawyers to physicians, wait staff, taxi drivers, school teachers and so on. “Everyone deserves to benefit from technology so as to start a business or find opportunities to excel in what matters to you”. The worldwide web offers unprecedented possibilities to interact, the question is to make good use of it through respectful dialogue and searching for common ground. **Raúl González Fabre SJ** sounded a different note: “Whatever can be done by a machine will be done by a machine rather sooner than later” and thus the future of work is unpredictable. Demand is for functions, not for products, and technology can generate new “needs” for new functions, while a trend is developing of “customers’ hours” replacing employee working hours: traditional paid jobs are competing not only against machines, but also against customers’ self-imposed hours. While “learning by doing” is certainly the right solution for the next twenty years, long term education – schools and universities – should move in the opposite direction by concentrating on the basics and essentials rather than “updated” skills. In the end, it will be unavoidable to decouple consumption and social integration from paid jobs, either through some kind of universal income, or through “popular capitalism” where ownership of

the capital is still much widely dispersed than today. This means that the ways of ownership will have to be changed: it is a big challenge for CST, analogous to the one addressed by Leo XIII in *Rerum Novarum* when he examined the limits of the ownership of the means of production.

Oliver Roethig, from his standpoint as European trade union leader, stated that working life should provide “long-term stability, predictability and a career perspective [...]”. Employment for life with decent pay and decent working conditions remains the goal. We need a standard employment relationship 4.0. The European social model [...] relies, besides on business, on strong collective bargaining systems as well as a legal and regulatory framework that in the first place aims at forwarding the interest of citizens, not business”. A new equilibrium will not happen by itself, and traditional training does not work when no core competencies are lasting. Is it possible to make quicker choices with less knowledge of the future? Globalisation and the speed of change also reduce the utility for large companies to develop core competencies which they can find elsewhere at lower cost. The major negative impact is on mid-skilled, mid-salary jobs, and this is a source of polarisation and more inequality which also exacerbates the gender gap. In the extreme, digitization brings an employment model with “a global virtual labour exchange where people work without having an employer, colleagues, a workplace or a legal framework”. The way forward against such a dystopian work future lies in purpose education, vocational training and lifelong learning systems for all workers, based on enforceable rights, a proper funding system and the recognition of transferable skills. These reforms need to be supported by an appropriate legal framework, but the actual provision of training is best organized by social partners, employers and trade unions. The changing frontiers of company-level initiatives require an industry-wide approach, for which renewed social dialogue platforms are necessary: “We need a joint effort by governments,

employers, trade unions and society, including the churches, to reinforce these elements; they bring to life the principles of human dignity, solidarity and subsidiarity that should characterise a fair and just society”.

Panel chair **Paolo Garonna** had underlined at the beginning that the “scandal” of youth unemployment – a strong word often used by Pope Francis – implies not only a fact that has deeply negative effects on society in general, but also an outrage, an offense which erodes social capital and the future. He had asked speakers to go beyond analysis and to look precisely at what is wrong in what we are doing, and what we should do instead so as to reverse the trend and generate positive contagion. The debate that ensued, as well as the previous work of several local groups of the CAPP Foundation on the same subject³, showed the need for a commitment towards different approaches of education and vocational training and for renewed social dialogue to examine the use of technology and the search of a new social pact.

4. THE FIGHT AGAINST HUMAN STRUGGLING AND ECONOMIC CRIME

Before touching on this second subject, the conference participants received a special briefing by **René Brühlhart** about the reforms on the Vatican financial scene. Three institutional mandates to contain financial crime were issued internationally during the recent crisis: the Financial Action Taskforce to fight money laundering and the financing of terrorism; the Financial Stability Forum (later Financial Stability Board) to deal with supervision and regulatory needs; and the Global Forum for Transparency managed by OECD to act against tax evasion. The Vatican, in spite of being a very

³Their reports were presented in a special session chaired by **Alois Konstantin Prince of Löwenstein** and are available on the Foundation’s www.centesimusannus.org website.

small, basically non-commercial financial centre, was nevertheless classified as “high risk jurisdiction” because it had never undergone independent assessment. The necessary legislation was soon issued under Pope Benedict and the implementation was strongly executed under Pope Francis. The Vatican signed a 2009 monetary convention with the European Union regarding the use of the Euro as official tender, which required added prevention against money laundering. In 2012 the present team joined the Vatican Financial Information Authority (FIA) which has a double role of regulator and intelligence unit. The only institution carrying out financial activities for a now well-defined and limited circle of third parties is the IOR, which is supervised by the FIA. The Vatican being a sovereign jurisdiction, the cases of non-compliance discovered by FIA are brought before the Promoter of Justice and the Vatican Court. The number of dormant accounts at IOR and the conditions for being a client have been drastically reviewed and reduced. The number of suspicious activity reports has increased, which means that the system is working well and proper monitoring is in place. Step by step implementation will continue. As Vatican regulator Dr **Brühlhart** feels responsible not only to the Pope, but also to 1.2 billion Catholics worldwide.

Antonio Maria Costa, though recognizing the efforts made by international institutions after the 2008 financial crisis, stressed that much has still to be done to deal with the real dimension of organized crime, which has reached macro-economic significance. Drug trafficking alone is estimated by the UN to represent an annual turnover close to the value of the GDP of a country like Sweden. This is a necessary discussion about public bad and deadly sins.

Raymond Baker estimated that human trafficking generates 150 billion US\$ in annual profits. How can this happen in a hidden manner? By using the shadow financial system that Western capitalism itself has created “in its obsession with hiding profits”. Shifting and hiding income and wealth is

made possible by tax havens, secrecy jurisdictions, anonymous trust accounts and foundations, arranged trade invoicing and holes in tax legislations. All these routes may have been created for legitimate safety purposes, but they are being used by organized crime too. Some large transfers appear unrelated to legitimate purposes: the group Global Financial Integrity estimates on the basis of IMF figures that 1 trillion US\$ a year moves illicitly out of poor countries mainly into rich countries, which is more than the total of overseas development aid and foreign direct investment flowing into developing countries: “We have accumulated idle wealth beyond our capacity to utilize productively”, a thought which links up with the previous discussion on youth unemployment in rich countries. Part of this accumulation is connected with transnational organized crime which is growing in many related forms: human trafficking, arms, drugs, illegal organ trade, illicit cultural property trade, illegal wildlife trade, illegal fishing, logging, mining, oil theft and more. “We created a system that now facilitates the transfers of revenues and safe deposits of wealth arising from transnational crime. We created a system which we dubiously thought was to our advantage, and now we find that criminals the world over are using our system to their advantage [...]. The primary threat to peace and stability moving forward is coming from us, from our weakening of legal, ethical, moral practices in global economic affairs”.

Ernie Allen added another factor which has made the shadow economy even more significant: the so-called “dark internet” which has monstrously increased the effects of children abuse. “Prior to the internet, someone with sexual interest in children felt isolated, aberrant, alone. Today, he is part of a global community. He can interact online with people of identical interests worldwide. And they do it all with virtual anonymity”. According to estimates, there may be between 35 and 100 million people sexually attracted by children, and the practice of it generates criminal transactions using crypto-

currencies and other new vehicles. This global phenomenon requires global cooperation. Draconian regulation is often counter-productive and trying to curb new technologies is no answer. The central challenge is anonymity on internet, and this problem should be addressed. "I submit that our challenge is to maximize individual privacy and human rights while balancing them against the rights of children to be free from abuse and exploitation", **Allen** concluded.

What can be done against such an apocalyptic background? For **Max-Peter Ratzel**, organized crime in fact is not anonymous at all, it is very individualized and also happens every day close to each of us. To some extent, each of us can avoid becoming somehow involved in organized crime, each of us can dispute, resist and counteract it: "We have to do our utmost to assist clarifying the structures involved in smuggling of human beings [...]. We have to check our own behaviour and our business models or attitude as service providers for transportation, as car dealers, as sellers of vessels or life-vest, as owners of industrial or residential buildings, as bankers [...]. Many people in the past realized that some customers did launder their money via bank transfers and strange-looking companies but they did not inform the police [...]. If a responsible banker does report suspected money laundering to the Financial Intelligence Unit of his country, he risks losing a client. But moral and ethical standards do not allow him not to do it". It is a struggle where everyone needs to do their part.

But how can constructive action start? **Marco Impagliazzo** presented a case of proactive initiative entitled the "humanitarian corridors", promoted by the Community of Sant'Egidio together with other Christian organizations. The proposal tries to counteract human trafficking by offering people a guarantee of safe and regular access routes to the EU, in accordance with the European juridical framework. Article 25 of the EU Visa Regulation grants each member state the possibility of issuing visas with limited territorial validity for

humanitarian reasons, reasons of national interest, or existing international obligations. Thanks to this provision, an agreement was signed with Italian authorities to grant a group of 1,000 refugees from Lebanon, mostly Syrian nationals (Lebanon, with a population of 4,5 million, hosts approximately 1.2 million refugees: in proportional terms, Italy should host 13 million). The agreement grants legal entry and the possibility of filing asylum requests to vulnerable families, elderly and sick people, victims of persecution... selected in loco through representatives of the sponsoring organizations. Once safely in Italy, the people are settled in reception homes and helped to integrate into the local social and cultural fabric. This project, entirely financed by the sponsoring organizations at no cost to the State, is being followed by similar agreements in Italy and in several European countries. This is just the beginning of something, a drop in an ocean of anonymous crime and exploitation.

In the ensuing questions and answers session, other examples of positive action were mentioned. The Australian Ambassador to the Holy See **Melissa Hitchmann** explained how the Australian government is organizing concerted action for displaced people in partnership with Indonesia; she also mentioned the businessman Andrew Forrest's "Walk Free" Foundation whose aim is "to end modern slavery in our generation". As a provisional conclusion, asked to indicate just one essential measure to start reverting the trend, **Impagliazzo** proposed effectively ensuring children birth registration in Africa. Other panel members added an equally important simple rule: to know the beneficial ownership of every account or company you are doing business with.

5. INCENTIVIZING SOLIDARITY AND CIVIC VIRTUE?

Adrian Pabst introduced the third session by linking it to the previous one: are money transactions made for purposes which help the common good, or are they diverted for cor-

rupt and criminal use? If we can identify vice, it is because virtue is there before. Quoting St Augustine who said that the evil is privation of the Good (*privatio boni*), vice does not stand on its own; it is parasitic on virtue, it is the lack of virtue. If virtue is first, it can be encouraged and rewarded. However, as shown in the recent financial turmoil, arrangements are often made which incentivize greed, not virtue.

Reflecting on solidarity, **Luigino Bruni** pointed out that incentives tend to replace gift, which is “too dangerous and subversive to be compatible with the needs of businesses and institutions [...]”. The governments of the organizations need the creativity and freedom of the gift, but they want only the one that can stay within established boundaries [...]. The communities of civil society, even businesses, are in many cases born of passions, desires, overflow... that is, from our gratuitousness. Then ideals become practical, leaders emerge, rules are written. Hence contracts, regulations, and soon the inevitable hierarchy are formed [...]. Once our gratuitousness has generated organizations, the inherent dynamics of their government eventually denies the expression and practice of those free gifts. At the base of the progressive elimination of the free gift, a key role is played by the transformation of the gift into incentive [...]. The utopia of every organization is to be able to acquire the creativity, passion, energy and generosity of the *homo donator* without the inherent ambivalence, without bonds. And so they perform a genetic manipulation and turn it into *homo oeconomicus*”. But the truth is that the creativeness of people remains (“we cannot help giving gifts”) as long as they are alive. From **Bruni**’s point of view, incentivizing solidarity has no meaning. However, it is true that virtue can be rewarded. We tend to forget that people respond to many kinds of rewards, not just to incentives.

Luigi Gubitosi reckons that due to globalization and automation, Western societies are having a rough time with the “California Paradox”: a rich society, home to the internet revolution, with the highest true poverty rate in the US. There

are less stable jobs, social mobility has slowed down, and this generates uneasiness and despair. This explains why immigrants become the target of people's rage and populist politicians' success. And still, solidarity is growing, an impressive number of people do volunteering to help others, and this attitude can be spread and promoted. Globalization and protectionism will continue to fight each other, but it remains possible to underline the positive trends and promote constructive civic virtue. **Jean Sung** explained how social entrepreneurs are effectively using incentives and rewards to foster solidarity. It is perfectly possible to start a virtuous circle of growing co-operation among workers and management, with incentives working both ways, linking the brand to social purposes but also mobilizing those at the bottom of the pyramid. "If you sponsor ethical sources and the company is proud of it and you advertise it, then everyone who enters the company somehow absorbs the culture and virtue becomes part of the job description, it's part of the job [...] Financial support is just the beginning of any corporation doing good and improving civic responsibility. Once this aim permeates, it's really the employees who will be able to carry these values as ambassadors".

Lord Skidelsky's intention was "to open a conversation between economics and ethics. At present they speak largely incompatible languages, making conversation impossible". There is a "thin utilitarian bridge between the two, which links growth of GDP to the ethical aim of reducing suffering" but that is not sufficient. Whereas all economic choices are truly ethical choices about the means and the ends being pursued, whereas even natural scientists are increasingly aware that they need to understand the ethical implications of their work, this is not happening with economics. We need to reintegrate ethics, which had been banned from economic mainstream thinking by the "marginalist" revolution. Today surely economists would agree that the reduction of avoidable suffering is an ethical goal and that GNP growth is a

measure of success. But then economists argue that “scarcity will always be with us and there is therefore no further need to think about the ethics of growth”. But “drop the highly unrealistic assumption of insatiability and a torrent of ethical questions emerges”: are there “natural” limits to growth? Is off-shoring jobs an efficient way to reduce poverty in poor countries? Is it right to use robots to replace human labour? Is ethical consumption a sound economic idea, or is it just a private preference? Economists can’t avoid making ethical judgements about the private property system, relations between employers and employees, the value of self-interest, the ends of economic activity, the value of nature and the value of wants. **Skidelsky** argued that “economists are in tune with popular feeling in seeing growth of material prosperity as the royal road to a good life for all. But economists have also been struck by the fact that beyond a certain income level, people’s contentment seems not to increase [...] Growth should stop at the point when further growth no longer produces a net improvement in the quality of life”. But what is a happy life? Doesn’t that mean a redirection of spending towards “social goods” like education, health-care or public infrastructure? “Maximising happiness is interpreted as maximising the goods and services that people want. This is probably the best that economics can do”. And this definition can change, as shown for example by the Green movement’s influence on the general understanding of the value of nature, life and human flourishing. “The biggest barrier to economics taking ethics seriously is the failure, shared by the liberal tradition as a whole, to distinguish between wants and needs. Needs are absolute. This is the argument for poverty reduction. But wants are relative and in principle limitless. This is the basis of the economist’s assumption of insatiability. By failing to distinguish between the two economists find themselves trapped in the position of advocating economic growth without end to ensure the satisfaction of wants which will never be satisfied”.

Bishop Paul Tighe looked for answers to this in the encyclical *Laudato si'*. In it Pope Francis states that one cannot deal meaningfully with ecological dilemmas without asking deeper questions which relate to anthropology and philosophy. And this is something people are reluctant to do because of the deep influence of the myths of modernity, like the utilitarian "I have to do something for myself" or the fact of looking only at measurable, short-term predictable consequences while becoming blind to others. Even measurable things are not being measured correctly when environmental consequences and costs are not included in the calculation. Wants are different from needs, it is true, and wants are often produced for us by those who are then going to satisfy them. We tend to follow an image of a good life where beauty is used and perverted to sell us things. What then would be a more enlightened self-interest? We need a spirituality, a concept of flourishing, of fulfilment as human beings. Pope Francis thinks that change will not come so much from an intellectual argument around this, but rather from communities living a simpler life-style. Perhaps virtue cannot be incentivized, but at least disincentives can be fought, the exercise of virtue can be made less counter-cultural and vices, which in fact subvert the possibility of good living, can be penalised. "I think our Christian anthropology would like to say that if we're made in the image and likeness of God, if we find this truth in response to others, not privileging our own interests, then there is an inevitable goodness which I think will be accessible to people in different cultures". **Bishop Paul** concluded that we can't probably incentivize virtue, but we can set a standard, for example against corruption, and recognize that many people will need encouragement to behave in the way they know they should behave. And "we need to discover, first for ourselves, that the good life happens when we can begin to share it and to try and convince others of such ideas".

6. LIVING STONES

The conference title situated us in “an Era of Global Turmoil”. In his meditation, **Archbishop Claudio Maria Celli** quoted the words that Jesus spoke during the last supper: “Do not let your hearts be troubled. You trust in God, trust also in me. In my Father’s house there are many places to live in; otherwise I would have told you. I am going now to prepare a place for you, and after I have gone and prepared you a place, I shall return to take you to myself, so that you may be with me where I am” (*John* 14:1-4). With confidence in God’s tender love, we should assume our role in the construction of a just society as in Peter’s first letter: “He is the living stone, rejected by human beings but chosen by God and precious to Him; set yourselves close to Him so that you, too, may be living stones making a spiritual house as a holy priesthood to offer the spiritual sacrifices made acceptable to God through Jesus Christ” (*1Peter* 2:4-5). How close are we to Him? And what are those spiritual sacrifices? These are questions we should ask ourselves as Christians without letting our hearts be troubled.

The turmoil in the Middle East immediately comes to mind. In his presentation on the Holy See’s action to protect Christians and other religious minorities, **Archbishop Paul R. Gallagher** underlined how Pope Francis often expresses his concern, not only for Christians, but also for Muslim and other minorities such as the Yazidi: “The Holy See’s efforts in that region are guided by the principle of defending the human rights of all people, regardless of race, religion or ethnic identity”. Christians in the Middle East have been living side-by-side with different ethnic and religious groups for centuries. In a 2014 message, Pope Francis reminds them of their unique and specific vocation: “Your very presence is precious for the Middle East. You are a small flock, but one with a great responsibility in the land where Christianity was born and first spread. You are like leaven in the dough [...]. Almost all

of you are native citizens of your respective countries, and as such you have the duty and the right to take full part in the life and progress of your nations. Within the region you are called to be artisans of peace, reconciliation and development". Although this letter was addressed to Christians, the Holy Father was not silent about the suffering of other religious and ethnic groups: "Nor can I remain silent about the members of other religions and ethnic groups who are also experiencing persecution and effects of these conflicts"⁴. The Holy See has been actively involved in raising awareness about the humanitarian emergencies in the region. The Pope has also expressed deep concern about terrorism and often affirmed jointly with other Christian and Muslim religious leaders that there can be no religious justification for any form of violence. An essential element of eradicating terrorism is addressing the root causes, whether they are social, political or economic. In this regard it is important to insist on religious freedom and the limits that exist on religious freedom in the Middle East. On the field, the many humanitarian actions supported by the Holy See indicate a way for help and reconstruction. **Archbishop Gallagher** said the following: "Constructing new buildings is perhaps the easiest part; the more difficult task is rebuilding society and laying once again the foundations for harmonious and peaceful coexistence". This requires not only State-building; there is also an urgent need to promote initiatives for job creation in the Christian communities throughout the Middle East. There is space for everyone to intervene in this process.

On a similar note, extended to the world in general, **Cardinal Pietro Parolin** declared that: "We truly need the involvement of all social agents, especially entrepreneurs, not only to increase the commitment to charity, but also to ad-

⁴His Holiness Pope Francis. Letter to the Christians in the Middle East, 21 December 2014 (http://w2.vatican.va/content/francesco/en/letters/2014/documents/papa-francesco_20141221_lettera-cristiani-medio-oriente.html).

dress in a decisive manner the problem of inequality and disparity of income [...]. This leads to situations of vulnerability for many people and for families, even in developed countries. What is needed, above all, is a spirit of noble generosity [...]. For this reason it is important to encourage the **Voluntary Solidarity Funds** which are a tangible sign of the thorough dialogue within the Centesimus Annus Foundation”⁵.

7. A CHANGE OF ATTITUDES, OPINIONS AND LIFE-STYLES

At the end of the conference **Marcella Panucci** brought the support of Italian and European employers’ organizations to the idea of enriching social responsibility of business decisions. In a concluding address, **Archbishop Diarmuid Martin** asked: how do we encourage people to do what they know they should do? One possible answer is: public opinion. It can greatly influence the common ethics of business, of politics, of international affairs. Change in public opinion can actually surprise the pragmatic. You need men and women of intuition and conviction who are prepared to take a principled, uncompromising stand. Because an ethic which builds on compromise alone will always be weak. Of course, public opinion is a two-edged sword, it can be manipulated, it can be emotional rather than rational. To influence public opinion in the sense of the common good, ethics must have an independent foundation; it can’t be an ideology or just a pragmatic program. The very nature of ethics is that personal

⁵The VSF initiative is being developed separately but as a consequence of CAPP’s work. It was presented to the conference by *Pascal Duval*; the relevant information is accessible on the VSF International website (www.thevsfinternational.org). It represents an opportunity for all those who wish to contribute financially and through volunteering in existing projects and organizations which successfully help prevent further socio-economic decay and coaching people out of desperate poverty.

responsibility must be at the centre. Ethics also requires governance and enforcement: we live in a world of humans where corruption will always be found. One of the most common forms of corruption is inefficiency which robs people, especially the most vulnerable, of quality services which are their democratic due. In that sense there should be no conflict between ethics and effective leadership. And how can religious values influence economic and social affairs? The basic message of Christian churches is about the love of God, which is gratuity and superabundance. These values stand in contrast to a market-driven consumer society in which everything is precisely measured out. "If we truly lived in an environment like that, where you only got what you paid for and nothing beyond, none of us would be here today. We are all here because someone put enough trust in us to give us a chance, because people gave themselves for us. The world and an economy need the values that make you care about another person, even when the person is weak, and that motivate you to really make an investment in the God-given capacities of others, so we can all flourish together".

Pope Francis concluded his address to the conference with the following essential message: "Dear friends, I encourage you, I encourage your efforts to bring the light of the Gospel and the richness of the Church's social teaching to these pressing issues by contributing to informed discussion, dialogue and research, but also by committing yourselves for that change of attitudes, opinions and lifestyles which is essential for building a world of greater justice, freedom and harmony"⁶.

⁶His Holiness Pope Francis. Address to participants in the Centesimus Annus pro Pontifice Foundation, 20 May 2017 (http://w2.vatican.va/content/francesco/en/speeches/2017/may/documents/papa-francesco_20170520_centesimus-annus-pro-pontifice.html).

CONFERENCE INFORMATION

The annual international conference organized by the Centesimus Annus pro Pontifice (CAPP) Foundation was held at the Vatican from May 18th to 20th, 2017, under the title:

CONSTRUCTIVE ALTERNATIVES IN AN ERA OF GLOBAL TURMOIL

Job Creation and Human Integrity in the Digital Space. Incentives for Solidarity and Civic Virtue

The list of speakers, chairpersons and rapporteurs included:

Sister **HELEN ALFORD OP**, Vice Dean Faculty of Social Sciences, Pontifical University of St. Thomas Aquinas (Angelicum)

ERNIE ALLEN, former President, International Centre for Missing and Exploited Children

RAYMOND W. BAKER, Global Financial Integrity

JAMES BESSEN, entrepreneur and lecturer at Boston University Law School, Author of *Learning by Doing*

H.E. Cardinal DOMENICO CALCAGNO, President of APSA, Vatican

RENÉ BRÜLHART, President, Financial Information Authority, Vatican

LUIGINO BRUNI, Philosopher and Economist, LUMSA Rome and Sophia Institute, Loppiano

Archbishop **CLAUDIO MARIA CELLI**, International Assistant, CAPP Foundation

ANTONIO MARIA COSTA, Member of CAPP Foundation Scientific Committee

CARLO D'ASARO BIONDO, President, Google Europe-Middle East-Africa

PASCAL DUVAL, Chairman of VSF (Voluntary Solidarity Funds) Steering Committee

DELIA GALLAGHER, CNN Vatican correspondent

Archbishop **Paul R. Gallagher**, Secretary for Relations with States, Secretariat of State, Vatican

PAOLO GARONNA, Member of CAPP Foundation Scientific Committee

RAÚL GONZALEZ FABRE SJ, Universidad Pontificia Comillas, Madrid

LUIGI GUBITOSI, Extraordinary Commissioner – Alitalia S.p.A.
MARCO IMPAGLIAZZO, President of Sant'Egidio and promoter of humanitarian corridors
ALOIS KONSTANTIN Prince of Löwenstein, Member of CAPP Foundation Advisory Board
GIOVANNI MARSEGUERRA, Coordinator of the CAPP Foundation Scientific Committee
H.E. Mons. DIARMUID MARTIN, Archbishop of Dublin
Fr. Paul Mueller SJ, Vice Director, Vatican Observatory
H.E. Cardinal REINHARD MARX, President of International Award Jury Award
ADRIAN PABST, Member and Secretary of CAPP Scientific Committee
MARCELLA PANUCCI, General Director, Confindustria
H.E. Cardinal PIETRO PAROLIN, Secretary of State, Vatican
Alfredo Pastor, Member of CAPP Foundation Scientific Committee
MAX-PETER RATZEL, former Director of Europol
OLIVER RÖTHIG, European Regional Secretary, UNI Global Union
Lord ROBERT SKIDELSKY, Economist, author of *How Much is Enough?*
DOMINGO SUGRANYES BICKEL, Chairman of the Board, CAPP Foundation
JEAN SUNG, Head of The Philanthropy Centre, Asia J.P. Morgan Private Bank
ANNA MARIA TARANTOLA, CAPP Board member and Delegate of the Board for the Scientific Committee
Bishop PAUL TIGHE, Adjunct Secretary, Pontifical Council for Culture, Vatican

SHORT SUMMARY AND CONCLUSIONS OF THE CONSULTATION OF CONFERENCE

Madrid, 25-27 January 2017

DUBLIN PROCESS

THE MADRID CONCLUSIONS ON A DIGITAL ECONOMY FOR THE COMMON GOOD

Co-sponsored by the Centesimus Annus pro Pontifice (CAPP) Foundation, the Universidad Pontificia Comillas and the BBVA Group, the fourth 'Dublin Process' consultation was held in Madrid on January 25-27, 2017. As in previous meetings, the group included: specialists in Catholic social teaching, economists and other academics, and professionals from business, workers' organizations and politics. The present short summary includes points of consensus among participants¹.

1. DISRUPTIVE FACTS OF THE DIGITAL ECONOMY

At the time of hyper-connectivity, the number of interactions, information transmissions and the volume of information available for treatment are growing exponentially and this opens the way for a vast diversity of new products and services, and considerable potential benefits for society across the globe. The challenge for organisations and professionals is to see digital change, not as a threat, but as an opportunity to adapt, learn, evolve and progress. Companies need to take risky investment decisions in a new world of low cost, high volume information and new ways of understanding the behaviour of economic agents. In this revolutionary environment, where *information is the new oil of the economy*, the roles

¹List of participants attached.

of consumers and producers are mixed and traditional patterns of work can be profoundly changed.

The digital environment conditions our patterns of learning and even of reasoning. Speed of change leaves little time for evaluation and discernment. The strength and effects of the underlying *technology imperative* are sometimes difficult to detect: even if the theoretical distinction is clear enough, it is not always easy to distinguish technology as a means from the ends pursued. All of this raises well-known ethical issues with regard to consumer protection. But the new ethical issues also appear on other fronts.

The ambivalence of technological achievements is especially visible in some unresolved and sometimes growing divides of our world. For instance, artificial intelligence applied to medical progress does not so far prevent thousands of children and adults dying every day from curable diseases. But it is also true that working for inclusion against the 'great divide' may be more feasible, precisely thanks to digital technology: the possibilities of inclusive developments are exponentially increased through cheap communications, for instance through the availability of cell phones or the possibilities of distance education. And still, in our world, four billion people remain without access to internet.

'Work scares' are a recurrent feature of our market economy in the last two hundred years. The threat of 'robots and computers eating men' now appears more serious than in previous historical cycles because employment has lagged behind output growth in recent years, wages have stagnated in comparison to other factors' share in GDP, and the fall has affected mostly simple manufacturing, clerical and administrative jobs, leaving the higher and lower sections of the labour force less affected. However, a large majority of jobs existing today were not even imaginable 70 years ago: rather than the fact of jobs disappearing and others emerging, the real problems probably lie with the educational and institutional obstacles against change, and the lack of measures to

mitigate/promote necessary restructurings. Historical studies show that innovations take decades before they convert into consolidated, standardized technologies. The application of digitisation tends to be much faster than that of previous technologies, but the outcome is still difficult to foresee and does not provide yet a clear pattern for formalized specific professional training.

The effects of technological breakthrough also create new competition scenarios where some oligopolistic positions are based for a limited time upon provisionally exclusive technical advantage, and not only on size or market share. In some cases, the existence of a 'market price' determined by supply and demand may be at risk as a consequence of a very fine market segmentation and individualisation.

Digitization does not work alone. It is an aspect of globalization and combines with other driving forces: demographics and intergenerational tensions, the flexibilization and precariousness of jobs, shifts in income distribution from work to capital and, more generally, the often unacknowledged forms of relativism that characterize 'post-modern' culture. In the financial sector, it is also a combination of pressures that makes the transformation so big: the consequences and remaining threats of the recent crisis, new approaches to regulation, new business models only partly imposed by technology, overcapacity in banking and new consumer behaviour patterns all combine with digitization to the present transformation.

But digitization itself is profoundly changing payments and credit. Data self-reported by customers, combined with transactional data observed by the banks and publicly available information are already being treated and analysed, thus allowing improved knowledge of the customer's needs and credit scoring. Big data include call data patterns, web browsing history, social media activity, location data, utility payment records, mobile money transaction data and behavioural analytics. Although the original data are being

‘anonymised’ by law, technological advances and the possibilities of cross analysis are shifting the boundaries of the concept of personal data. The right to have data rectified or deleted has been recognized, as well as the right of portability. The new areas of ethical questions raised are extremely wide and can range from added new systemic risk to the limits of democracy.

More specifically, an intensive debate about consumer protection and the use of personal data in the new economy is developing everywhere and the question arises whether the ‘battle for privacy’ has not already been lost. Regulation is quickly adapting, for instance in the European Union, with the aim to ensure that the recently adopted laws on personal data protection will be applied in the new digital context, while at the same time enabling companies and the public sector to develop a fully productive digital economy. Regulation does not try to control technology, but rather to ensure that the principles developed in the framework of the modern social market economy can be maintained and applied in the new technological context.

Finally, a pattern of unstable identity has been observed many times in the past: the same individuals have different moral attitudes and behaviour characteristics when exposed to different situations. Values cultivated and applied in the family or in friendly communities are forgotten when the same persons drive a car or work at their desk in a company. This fact does not disappear with digitization, on the contrary: the *technology imperative* – everything technically possible is deemed legitimate – may prevail and make it even more difficult to unify moral values, behaviour and incentives.

2. ETHICAL INSIGHTS AND PROVISIONAL CONCLUSIONS

It may be too early to draw conclusions and judgements based on Catholic Social Thought (CST): these developments are very recent and still too new. The questions however are

very much in the Church's court: every ethical issue linked with digitization inevitably leads to cultural and communication matters, echoing questions about the person, community and moral assumptions. There is wide space for new ethical research and it is a necessity to have Church groups and communities dedicating their efforts to think on these problems.

2.1. *Key Insights from CST*

The Church offers some essential keys for this reflection. The *culture of encounter*, a term often used by Pope Francis, requires practices for the good use of technological resources as well as the cultivation of human relations. Regarding communications, the ethical responsibility of journalists and media, under the pressures of the so-called 'post-truth' era, is particularly magnified and threatened in the digital context: there is real danger that our cultural discourse becomes superficial. Against the prevailing utilitarian, positivistic, or emotive versions of ethical attitudes, CST traditionally draws attention to objective theories rooted in the conviction that the rightness or wrongness of human ethical choices can be discerned by reflection on what it means to be human. But moral thinking cannot be imposed, and thus we need to start new conversations: *"We are challenged to be people of depth, attentive to what is happening around us and spiritually alert. To dialogue means to believe that the 'other' has something worthwhile to say"*².

Regarding the new perspectives on jobs and work, *"once our human capacity for contemplation and reverence is impaired, it becomes easy for the meaning of work to be misunderstood. We need to remember that men and women have 'the capacity to improve their lot, to further their moral growth and to develop their spiritual endowments'. Work should be the setting for this rich personal growth, where many aspects of life enter into play: creativity, plan-*

²Pope FRANCIS, *World Communications Day Message*, 2014.

*ning for the future, developing our talents, living out our values, relating to others, giving glory to God. It follows that, in the reality of today's global society, it is essential that 'we continue to prioritize the goal of access to steady employment for everyone', no matter the limited interests of business and dubious economic reasoning"*³.

2.2. *Some provisional conclusions*

Based on these thoughts and trying to take into account the facts as well, consensus was reached among participants in the consultation on a few provisional conclusions.

– There is a risk of a moral vacuum whenever decisions are taken by machines and self-educating algorithms; there is no human responsibility in the absence of a moral agent, and this leads to unknown territory in human history.

– The *'technology imperative'* often implies a consequential moral judgement, where the ends tend to justify the means. This thinking seriously undermines a person-centred moral rule.

– If information is the main resource of the economy and has measurable monetary value, then data must be treated with the same care and under the same principles as third-party money. This applies not only to financial institutions but in every business activity. The same as there is an ethical universal code-book for dealing with goods, services and money, there should be one for data.

– Trust in financial institutions and business in general can be regained only based on proven facts. Doubts about data treatment make it more difficult for banks and business to regain trust and confidence.

– The new economy produces new kinds of contracts, cooperation and conflicts. Analysis and policy measures are

³FRANCIS, *Laudato si'*, n. 127.

needed so as to protect the weaker part in these new situations.

– The digital revolution, together with other causes of change, urgently requests that focus is shifted from protecting *jobs* to protecting *workers*, providing them with the necessary flexible social benefit and learning possibilities in a changing world. This can't be done without dialogue between employers and workers.

– A radical rethinking of education is needed, shifting away from the 'universal' secondary school/university curriculum towards more flexible alternatives which favour continuing life-long learning, employability and a capacity for moral judgement.

– Regulation is too slow to keep up with the pace of innovation, so society and the economy must rely on culture to govern company use of data, and on checks and balances to regulate company behaviour.

– More than ever, there is a need for examples of best practice of business enterprises which voluntarily put the human person in the centre of their strategy, a statement which might lead to a critical examination of still unconsolidated technological developments.

– More attention must be given to the demand side of these processes: what do consumers want? How can their true priorities be expressed and taken into account? What responsibility should they exercise? The Church has an important role in educating consumer choice.

– The conversation on ethics in the digital era should be more inclusive and involve all affected parties, especially young people, women, and people from the developing world.

3. SEVEN PRACTICAL PROPOSALS

This discussion will continue for the coming years. The following seven specific proposals emerged from the present consultation:

1. Regarding the future of work, responsible dialogue between employers and workers' organizations needs to start anew, far from the usual public debate and a somewhat sclerotic relationship. There is a need for trust-building meeting places for this purpose. One of them can be a platform based on Catholic Social Thought.

2. New ways of cooperation should be explored between public sector and private agents to design *transition projects* tending to mitigate risks on employment and to incentivize responsible leadership in the digital economy.

3. The ongoing debate on educational priorities must be revised in the light of findings on the future of work. The prestige of professional training and permanent learning opportunities need to be fostered against the obsolete idea of a university grade offering stable professional future for everyone. The uncertainties of technological development should also lead to the revaluation in education of arts, as well as slow and serene thinking.

4. Data gathering enterprises including financial institutions and technology firms could follow the example of the health professions to design simple, understandable and trustworthy forms of consent for data treatment.

5. Voluntary co-operative use of big data treatment potential could be promoted in the financial sector in order to improve risk management and protection against unknown risk accumulations like, for instance, OTC derivatives.

6. The use of big data treatment potential can also be promoted by banks and corporations, in collaboration with international organisations and universities, for common good

projects such as, for instance, natural disaster damage prevention, job market exchanges or data access on business opportunities for small companies in developing countries.

7. A continuous dialog among social ethics specialists, economists, politicians, workers' representatives and business practitioners should be encouraged with aim of developing an understanding of the new ethical issues and possible answers to the various challenging questions, always within the perspective of a *digital economy for the common good*.

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IBÁÑEZ Prof. JAVIER, Fintech Group, Universidad Pontificia Comillas
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RIVELLA Mgr. MAURO, Secretary APSA, Vatican
RÖTHIG OLIVER, European Regional Secretary, UNI Global Union
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TIGHE Bishop PAUL, Pontifical Council for Culture, Vatican
TILIACOS EUTIMIO, CAPP Foundation Secretary General
VANNI D'ARCHIRAFI FRANCESCO, CEO Citi Holdings, CAPPF Advisory Board member
ZAHRA JOSEPH F.X., Vice Chair Council for the Economy, Vatican; CAPPF Advisory Board member
BAJO SANJUÁN ANNA, Universidad Pontificia Comillas, Rapporteur

REPORT OF THE BERLIN CONFERENCE

Berlin, 15-16 November 2017

JUSTINUS C. PECH

CHRISTIAN SOCIAL ETHICS IN THE DIGITAL AGE¹

Under the auspices of H.E. Archbishop Heiner Koch and the Minister of State Prof. Monika Grütters, the congress was arranged by Dr. Thomas Rusche. The aim of the Berlin conference was to focus on related questions on the macro, meso and micro level and to develop some initial ideas for an ethical compass for the digital age.

The intensive day was structured in six different sections with the following topics and participants: **Christian Social Ethics in the Digital Age**; conference participants:

1) Conference – Opening

Mr. DOMINGO SUGRANYES BICKEL, Chairman of the Board of CAPP, Vatican

H.E. Dr. HEINER KOCH, Archbishop of Berlin

Dr. PASCAL DECKER, Executive Board of Stiftung Brandenburger Tor

Prof. GIOVANNI MARSEGUERRA, Università Cattolica del Sacro Cuore, Milano

2) Ready for the Change? Digital Transformation of our Economy and Society

Moderator: Dott. ELEONORA BONACOSSA, Executive Board of CAPP, Germany

¹The conference took place in November 2017 (15th-16th). The German section of CAPP organised this conference with the title: *Christian Social Ethics in the Digital Age*.

H.E. Dr. EVERARD J. DE JONG, Auxiliary Bishop, Roermond
 Prof. Dr. MICHAEL DECKER, Institut für Technologie (KIT),
 Karlsruhe
 Prof. Dr. GERRIT HEINEMANN, Head of eWeb Research Center,
 Hochschule Niederrhein
 Prof. Dr. ROBERTO V. ZICARI, Goethe University, Frankfurt
 Dr. NIKOLAUS VON BOMHARD, former chairman of MunichRe

3) Digitalization of Human Actions (Micro-Level of the Individual)

Moderator: Prof. Dr. PETER SCHALLENBERG, Head of Katholische Sozialwissenschaftliche Zentralstelle (KSZ), Mönchengladbach
 Prof. Dr. MICHAEL BONGARDT, University of Siegen
 Dr. ASTRID CAROLUS, media and organisational psychologist,
 University of Würzburg
 KAI WHITTAKER, Member of the German Parliament
 Dr. ERNY GILLEN, Executive shareholder, Moral Factory für
 Ethik & Leadership, Luxemburg
 Prof. Dr. URSULA NOTHELLE-WILDFEUER, University of Freiburg

4) Change in the Community (Macro-Level of Society)

Moderator: Prof. Dr. MICHAEL BONGARDT, University of Siegen
 Lord DANIEL JOSEPH BRENNAN QC, House of Lords, London
 PETER LIMBOURG, Director of Deutsche Welle, Berlin
 CASPAR CLEMENS MIERAU, Blogger and freelance journalist,
 Berlin
 Prof. Dr. PETER SCHALLENBERG, Head of Katholische Sozialwissenschaftliche Zentralstelle (KSZ), Mönchengladbach
 Prof. Dr. GESINE SCHWAN, Chairwoman and co-founder of
 HUMBOLDT-VIADRINA Governance Platform, Berlin

5) Disruption of the Company Organisation (Meso-Level of Companies)

Moderator: Dr. ULRICH SCHÜRENKÄMPER, Executive Board,
 CAPP, Germany
 Dr. STEFAN DREWES, Expert in data privacy laws
 Dr. FRANK MEIK, Executive shareholder, MW Verlag, Berlin

Prof. JÖRG ROCHOLL PhD, Chairman of ESMT-Business School, Berlin

Prof. Dr. JUSTINUS C. PECH OCist, Phil.-Theol. Hochschule Benedikt XVI. Heiligenkreuz, Austria

6) Ethical Compass for the Digital Age

Moderator: Mr. THOMAS RUSCHE, Executive Board, CAPP, Vatican

Prof. Dr. JUSTINUS C. PECH OCist, Phil.-Theol. Hochschule Benedikt XVI. Heiligenkreuz, Austria

LUDWIG RING-EIFEL, Editor-in-Chief, Katholische Nachrichten Agentur (KNA), Bonn

Dr. JÜRGEN SCHMIDHUBER, co-manager, IDSIA research institute for artificial intelligence, Switzerland

The aim of this article is to present some key-notes of the conference. There is no claim that these are complete. The author hopes to offer the reader an inkling of the important insights and points of interest for future discussion. The individual contributors will not always be named.

As an academic, it is a principle of working to understand a problem before discussing it. Gesine Schwan focused on a personal problem which is at the same time a general one. With these new upcoming technologies this working style is no longer possible for her. This is where uncertainty grows. This is not only an insecurity which seizes a scientist. It can be described as feeling which can also grip huge parts of the society. That means reflecting about this topic is helpful for many people. This was one aim and output of this conference.

Claude E. Shannon, the American mathematician, electrical engineer and cryptographer, who is also known as the "father of information theory", can be understood as the founder of the digital circuit design theory. Through the process of quantification of all areas of life, mankind can lose awareness of quality. Bishop de Jong pointed out the important distinction of "Es" and "you". You, a human being, cannot be a friend of a computer, even though the language of

younger intensive internet users at times indicates something else. As a matter of principle, there is a distinction between a machine and a human being. The outcome of this principal differentiation is that our brain is not a computer, and a human being cannot be reduced to a kind of computer. Even if in our days the general idea to explain the world might be the "0 and 1 matrix", philosophers should try to reflect on a meta level in order to see how the prevailing explanatory model dominates our understanding of the human being and the world. This topic was raised by different speakers at the conference and will be handled in different perspectives in this paper.

While reflecting about digitalization and Artificial intelligence, these two concepts should be defined briefly, even if most of the speakers took it for granted. Digitalization in general means the continuous process of converting analogue information, such as text, sound, image, voice and even objects into computer-readable, which means digital form, a binary code. The result is that an analogue signal is translated into a series of numbers. The digital representation the digital image (for an object) or the digital form (for a signal)) is the result of this process. The formal starting point of the digital age can be recognized as 2003: At the beginning of this year, it was possible to save more information on a digital than on an analogue level. Digitalization is the *conditio sine qua non* for any kind of data processing, transmission and storage. In process of digitalization, the humanity itself turns into a process of reduction. The underlying concept to explain humanity, our relations and transaction, is the idea of 1 and 0. Human dignity, as represented for example in the principle of Catholic social teaching, in those relations is no longer a key value.

Artificial intelligence is a part of informatics (dt: Informatik). The principal idea of AI (in contrast to natural intelligence) is to automatize intelligent behaviour of machines and to develop a kind of machine learning. AI is part of the digital

revolution. A machine, a computer should be able to solve problems by itself and develop a proper style of achieving goals. Therefore, understanding of human languages is the basis that already works well in smartphones and products like Alexa.

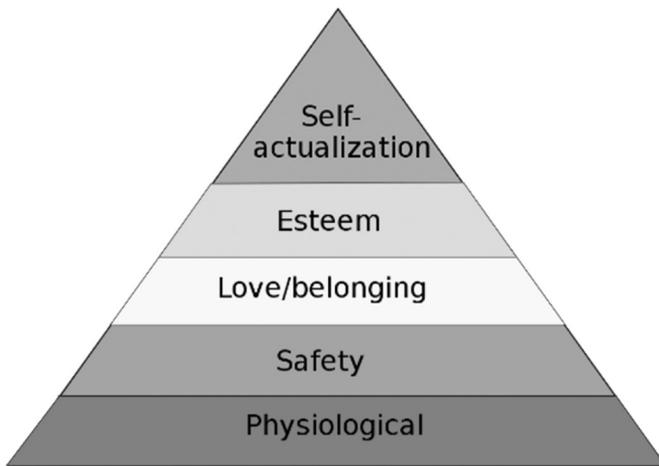
Looking at the topic of Artificial intelligence, it is important to distinguish between two dimensions of AI: General AI on the one hand and Specific AI on the other. General AI (the human being will be substituted also in highly developed jobs like judges, risk managers or in a complete production line) seems to be more 'dangerous' than Specific AI since in this dimension, there exists a reasonable risk the individual person will become an object rather than a subject. But also, Specific AI (where the human being will be substituted only in some jobs) is not problem-free: recently, the insurance business for example is discussing the question about the responsibility of drivers with autonomous vehicles in cases of accidents.

While discussing Artificial intelligence Juergen Schmidhuber is one of the most visionary scientists. His company is the innovator of long and short-term memories (lstm). This technique is the basis for Alexa and all other speech recognition software. He is one of those persons who believes in the progress of those new technologies which will change our society completely. His vision is even stronger than the General AI. He thinks that we will create an Artificial intelligence which can create its own future and will be able to leave the earth and find future living space in the universe.

Even if the Specific AI might be the more supposable at first sight, its impact on society cannot be undervalued. The ethical discussion has to start here. If, when and how should mankind decide in the future and how can they stop "the system". But the relevant question is: What are the opportunity costs. Will there a human being for taking the last decision or not. Humans are fallible and if there should be a point where a human being might still be in this position, then there

is still the possibility of human error. This is a tough consequence: If a human remains in the driving seat, then we have to accept incorrect decisions. So the final decision is: Do we still accept errors? And if not, a personal decision cannot be the last one. If we want to have decisions without mistakes than the final one is taken by technology. AI makes less errors.

The process of digitalization and the strong impact on society, can clearly be distinguished in all kinds of industrial revolution. Using the Maslow pyramid, the main difference can be explained in the following way:



Digitalization can be understood as a process which takes place on every level, while on the contrary, only one or two levels were involved in former technical revolutions. Now, all levels will be affected. If you just think of a smartphone it is easy to understand what is meant.

The self-definition of the single person changes. You are what you are on facebook if you are liked by anybody. Not only is privacy in a process of change; so also, is the form of defining yourself. It is no longer just your social community where you are living, it is rather the social community you have chosen, selected and developed. This new form of com-

munity building is connected to a new form of privacy. Everyone knows that the internet does not forget anything. Even our most stupid youthful folly will be remembered in virtual reality. That means that our understanding of what is private is passing through a change. Everyone who is using a mobile device changes his or her behaviour. Where can I be the one I am? At this point, the train of thought can be focussed on an engineering result assessment.

What are the future outcomes of this new technology? To start with a quote of Peter Schumpeter, "innovation itself is not good or bad, it is new" and with some upcoming innovations, there are winners and underdogs. One of the open questions is how to integrate a system of moral decision making into a robot. Therefore, we must know which kind of moral decision process we want to have. A reflection on the autonomous driving of cars might be very helpful.

Whatever a single person does, it never remains without consequences for a wider community: Every decision is at first personal but then always collective. It is important to have this in mind since Big Data is constantly raising its impact, as Roberto V. Zicardi pointed out. Data is getting its own economic value as companies like Facebook, Google and also Apple demonstrate: the companies have the data – and they have the power that is produced by the data. These concerns exert power over a single person as well as over a wider community and the whole of society and will change industry concepts in a very profound way. It should be clear that the use of data has ethical consequences, as data is affecting everyone.

However, Big Data and therewith Artificial intelligence (which is reaching a new dimension today as it can feed on data – that was not possible a few decades ago) are not necessarily to be rejected. Big Data and AI can be a great enrichment, but it is important to create and use a 'system' that contains ethical principles.

Speaking about ethical principles, it is clear that one of the most important values in such a system is responsibility: “Who is responsible?”. As Prof. Zicari pointed out, in this system we can find many responsible stakeholders: software developers, businessmen, politicians, spiritual leaders, and last but not least all of us. The Centre for Artificial Intelligence is convinced that the data is under control – the question is whether people are able to handle it. Every single person is responsible for an ethical use of data, meaning that data gets used in order to help people and not as an instrument of power over people and communities. At this point – a good impact as well as an ethical use of Big Data as Prof. Zicari shows – there is still an essential need for action.

Considering digitalization from an entrepreneurial perspective, it is clear that the usage of data is an opportunity, as Dr. Nikolaus von Bomhard explained. But in the same way, we have to see that digitalization is already changing and will change even more the way that people are thinking today: from a strictly linear thinking (as has been practised over many centuries) toward a more complex way of thinking – comparable to a form of neuronal networking.

That said, Dr. von Bomhard has focused on some problems that we are facing in the light of the process of digitalization. All these problems can be marked positively as well as negatively – here, Dr. von Bomhard is principally convinced by the positive perspective.

One of the classic topics of digitalization is the question about the future of jobs. In the end, digitalisation will lead to a growth of jobs, even though the amount of jobs might decrease in a first period. There are two theories. On the one hand there are some “catastrophic theories” that many people (workers and academics) will lose their jobs. On the other hand, there are more optimistic theories. Jörg Rocholl talked about this process of technological revolution and its economic impact. Automating has changed many industries already. In this process of automating the long-term unemployment

rate has not changed. The important question is: Is this relation still valid in this upcoming revolution? He emphasized Polanyi's Paradox which means: "We can know more than we can tell". One typical example of this paradox is: How to explain to another human being how we crack an egg. To describe this by words is very difficult and for a computer it seems not easy to handle. The interesting question is, if machines can develop a strategy to crack it and then to transfer this knowledge to other machines. When it can crack this paradox, the learning curve will sky-rocket. In the scientific community this is still in discussion and no clear answer available. All these problems might be diverse, but they can all be solved, as Dr. von Bomhard pointed out. In order to do so, it is important to have the right compass. Catholic social teaching can be this compass.

Digitalization is not from God and not from devil. The director of Deutsche Welle, Peter Limbourg, described the new technologies as a present of the gods, like fire. You can use it for good or bad. Here those technologies should be described as a human product made by human intelligence. It should be analysed with a SWOT analysis.

SWOT ANALYSIS

	Helpful to achieving the objective	Harmful to achieving the objective
Internal origin (attributes of the organization)	Strengths	Weaknesses
External origin (attributes of the environment)	Opportunities	Threats

With a rational approach it might be able to see clearly the strengths and weaknesses and also the opportunities and threats. There are risks and a lot of chances (as in every technical development in the past centuries). From a Catholic perspective it might be discussed with *Gaudium and Spes* it is a sign of the times (*Zeichen der Zeit*). Christians should interpret and configure this new development with the help of the gospel.

The juridical implication was analysed by Stefan Drewes. He underlined that all juridical regulations are *ex post*. First the relevant stake holders focus on and analyse a relevant question or problem. That means if we are waiting for regulations it will take too long. It might be a good possibility for Catholic Social Teaching to develop a future perspective: how a society can work together in the circumstances of digitalization and also focus on the relevant ethical questions.

A critical point is emphasized by Michael Bongardt: A technical system (computer) is using all information collected and develops a new form of analysing data. Here is the really new the system-changing point. A computer might become a self-acting and self-reflecting system. This is something we have never seen before in the assessment of techniques and their results. A computer will also decide and analyse the emotional categories of the person who is interacting with this technical system. That means the computer is no longer a tooling equipment it is a self-deciding system which decides over human beings.

It is important to have a compass (like Catholic Social Teaching) in order not to aggravate people in general and employees in special. The consequences for the labour market is discussed by Mrs. Nothelle-Wildfeuer. Catholic Social Teaching is based on the three steps: Seeing – deliver a judgement – act. Discussions about the process of digitalization and the implications on society should be based on this three-step approach.

The perspective of Catholic Social Teaching was underlined by Nothelle-Wildfeuer with three headlines:

– Digitalization must be accepted. We cannot turn time back. The chance of the Christians is to configure this technological development. A good example is autonomous driving. Mankind can delegate part of his autonomy to a machine which drives a car. The important question is what and how should the computer decide in a critical situation. Discussion on how we want to develop our future, should start here.

– A critical point is: how can a machine be a critical decision maker. Out of the perspective of the Catholic Social Teaching the human being cannot be replaced by a machine. Mankind as Gods creation cannot be replaced by technique.

– In the process of digitalization all people must have the possibility to participate. For those who lose their jobs, society must develop possibilities to give them a new perspective and integrate them actively into the new job market.

– Common ownership of data: A major ethical question raised by Lord Brennan is the ownership of everybody's aggregated personal data. He asked why big companies benefit from the data which belongs to the users. Here the interpreters of Catholic Social Teaching can start a very fruitful discussion about the profits big companies are earning with the data of the people.

– Every human mankind is a creation of God und needs to be loved. That means every single person has his place in society and has a right to live and work. Abel wanted to be loved by Cain and this form of intrapersonal love cannot be digitalized as Peter Schallenberg underlined.

But what can be shown are some important points Catholic Social Teaching must focus on. The upcoming questions to be answered are considerable. Catholic Social Teaching and its focus on the principles: personality, solidarity and subsidiarity. As we are creating the future of tomorrow with our al-

gorithms of today, we have to reflect and decide today how the society of tomorrow will look. It is more than urgent to start and influence the discussion already. It is the responsibility of all managers (Verantwortungsträger) in business and society. We need a new kind of answer. As Catholic Social Teaching is a kind of compass, we must use it.

CONCLUDING REMARKS OF THE 2017 CONFERENCE

Turin September 23, 2017

FRANCESCO PROFUMO

WORK CHANGES, COMPETITIVENESS AND INEQUALITIES

Thank you to the *Centesimus Annus* Foundation for organizing a conference on these issues and for the invitation to me to speak. This long day which undertook an in-depth analysis of the chosen issues developed with a certain uniformity. We started at 10.30 this morning with the first session dealing with the *digital* revolution. The other two words that became part of the day's mantra are *persons* and *businesses*. Then in the course of the day we recognized that we should talk about a community of persons rather than businesses and so it is *the person* who is at the centre of this entire process.

During the afternoon we continued with a topic that brought us face to face with the risks and fears associated with the digital revolution that probably we still don't know how to fully evaluate. Let us think of the car of the future, how many risks will we face with a system that basically works with autonomous car drivers subject to extreme cybernetic hazards. This is merely one example, but think also of large power plants and major infrastructures and the potential risks they could generate.

It has rightly been said that one should invest heavily in prevention rather than suffering the consequences. I am still of the idea that prevention is better than a cure and that even with an equal investment of time and resources, prevention merits the higher quality investment.

The next session dealt with the issue of inequality and was of great interest: it was then identified as gender inequality, but in reality the issue is much broader.

The culture of equality, not inequality, should be passed on to our new generations. So I am very grateful to Professor Tarantola who really pushed for this session, which I believe should be continued in future discussions.

In the last session we discussed industry 4.0. We used the English translation *industry*, but from what emerged we understand that in fact it is not just manufacturing and heavy industry that are affected by the change, but our entire system. Keep in mind that unlike previous industrial revolutions where the result was mainly concerned with the process factor, while in the case of Industry 4.0, the predominant issue is the profound change in terms of the process itself. The main focus of this session was rightly new jobs and new contractual and organizational models. So, I think that in this instance also we targeted the right topics.

During today's discussions there emerged two issues that I believe will probably be revived in the future with a more advanced outlook compared to today's. The first is the digital relationship: we have a world that is basically analogue and is rapidly moving toward digitization. Today the balance between the analogue and digital systems is at a particular point, but probably if we meet again at some time in the future, this balance will have changed. How far will we push ourselves along the digitization route? What will this mean for us?

The issues raised by many of you, in some cases with apprehension and rightly so, and by others with many expectations, would need people who are instinctively digital to enable us to have a more structured discussion.

The other big theme which emerged – though not as obviously as I am formulating it – is the space-time equation. How will labour, the school and the system of relationships evolve from this point of view. I think we need to investigate the

causes that have led to the failure of the space-time relationship.

So far, I have tried to outline the main topics that were touched on today, but the question is: who governs this kind of system? It is certainly not a local system, so it cannot be a local entity. I don't think it is even a national issue but is certainly a worldwide one. So here we have an explosive issue of overall governance.

How often we complain about Europe because we see it as being merely technocratic and detached from people. Instead, I believe that Europe is mature enough to take action on the major issues. Certainly, it can't be other countries even those much bigger than we are: they have neither the history nor the culture. Probably Europe is the right choice. Europe's greatest merit following that of not having had wars over the last sixty years, is the ability to hold together twenty-eight very different subjects. At times, it is true, they can obstruct, but they have created mediation skills and a way to work things out that is unequalled in the world. All of us can criticise and rightly so, but we must bear in mind the significance of this culture which cannot be invented, but is created and formed over time.

How does this entity operate? With long-term programmes. Over the past twenty years we have had seven-year programmes and are currently in one named HORIZON, an acronym for the "Eighth Framework Programme", basically a research programme. It is worth about eighty billion with another 20 left over from last year bringing it to a total of about 100 billion. Then there are about 400 billion for what are called "structural funds", and a further 400 billion for agriculture, a key issue. Overall this amounts to 900 billion with still about a hundred billion for backup administrative programmes and others.

So perhaps for the first time a framework programme has aged prematurely. The question is: was it not planned properly or was there an acceleration in topics, in innovation, or a

new request? I am almost certain that the latter is the answer and is in line with what has always occurred following industrial revolutions. We have said that this is the fourth, the other three were equally *disruptive* but had a wider time-frame.

Many of the subjects raised today, especially those linked to the reorganization of *work*, were cushioned by a longer time-frame during previous revolutions, thus making it possible to readjust different systems. Today we have a time factor that has radically changed and accelerated compared to the past.

What is Europe doing? In keeping with the more or less standard timetable, it is already thinking about the Ninth Framework Programme which begins in 2021 and will last seven years until 2027. In fact, this well-structured and complex process has already begun: it starts from the European Commission, which has proactive power; it then passes to the Competitiveness Council for its approval, then to the member states for theirs, then the European Parliament, and finally ends with the approval of our political representatives.

Today there is a framework programme; in December it will be approved by the Competitiveness Council, then there will be the first half of 2018 leading to the EU Austrian Presidency in the second half and probably towards the end of the year will see the presentation by the Commission to the Council. Then there will be a whole process to get us to September 2020, which will see the German Presidency; so we will start with the Austrian Presidency and close with the German one; two elements that are not exactly negligible in the overall scheme but by coincidence not by design. At the same time, we will have approval of the budget that naturally will identify the major issues.

Europe is asking itself this question. I think you know there is a Department dealing with digitization. Commissioner Oettinger was very far-sighted, very vigilant, first as Energy Commissioner then Commissioner for Digitization and

subsequently European Budget Commissioner. He is German so you can see that these things have some kind of connection.

There is an internal conflict between those who say that investments are needed particularly in long-term research, and those who stress the need for investment in innovation.

Carlos Moedas, European Commissioner for research, innovation and science says that resources for long-term research are still the same and will not change. Probably there will be a reduction because England accounts for 12% and with the Brexit effect there will be a drop from one thousand million on which it could rely, to having 110 to 120 billion less. Therefore the 80 billion set aside for the Horizon 2020 Framework Programme Nine, will now drop to about seventy billion.

On the subject of innovation, they are working on what is called the European Innovation Council, that is a European Council for innovation based on what we discussed today in holistic terms, that is, not strictly the issue of technology, since today's technology will almost certainly be different in the near future. If today's speech had been based on today's technology which is the fruit of research of ten to twenty years ago, then we would have been completely wrong. Instead, we must talk about culture, about formation, about tools that in the not too distant future will be completely different to the current ones.

Then we will begin to understand what is happening with these major issues; there will be a European-type trend, but it will be something more than this. For the first time Europe has recognized that the budget of around one billion must not be too fragmented, it must be kept intact. With large projects, there will be a common strand between the resources for research and structural, national, regional fund and private enterprise resources with the latter, for example, coming perhaps from foundations such as the Compagnia di San Paolo.

Finance is becoming much more organized with common regulations; this is because the 4.0 revolution involves major

issues such as research, infrastructure investments and agriculture.

I think the Germans probably came up with this system and they have an important role as they are far ahead of others regarding industry 4.0. I am glad that the Foundation's next conference will be organized in Germany, by which time I hope that some of the matters I have mentioned will have been approved, and will have begun their iter to finalise this epoch-making transformation with the analogue world, the digital world and the space-time equation as its elements.

Finally, I believe that our country should reflect seriously on the issue of education: these issues will have important implications for the new generations. They are exceptionally long term and are incompatible with politics which wants immediate results. What is needed is what has already been carried out in large and small countries in the North; a 20-year educational project independent of the changeover of Education Ministers and starting from what was said tonight - the formation of formators .

Let me again give you some numbers: the children who started primary school this year, will finish secondary school in 2025, high school in 2030, and university in 2035 (I hope many of them go to university), that is eighteen years from today.

You now understand why our country needs to view education of the new generations in the long-term and must consider it an investment priority.

Thank you and good evening.

SECTION 2
CATHOLIC SOCIAL TEACHING IN THE AGE
OF DIGITAL TRANSFORMATION

CATHOLIC SOCIAL TEACHING IN A DIGITAL AGE¹

HELEN ALFORD

Over the last couple of years, talk about artificial intelligence taking over from us, and of the “rise of the robots”, has moved from science fiction into the news and comment pages of major newspapers. Therefore, although we have all been experiencing to a greater or lesser extent the emergence of digitalization over the last 20-30 years, it is not a surprise that it is this year that the Centesimus Annus Foundation is thinking about CST in a digital age. We sense that digital technology, or “information and communication technologies”, (ICTs), are entering a new phase with a new level of impact on human life. The idea of a “digital age” captures this sense of an all-encompassing environment created by digital technology and to which we need to respond (as we always respond to our environment), and we will come back to that. But the idea of a “digital age” also has the sense of a historical period, and it is the invitation to look at things from an historical perspective with which I would like to start.

For the corpus of teaching to which we usually refer with the term CST starts in another period of significant change, a period when many European countries were still coming to terms with the “industrial age” and struggling with its social impacts. The previous social order, based on the mutual relations between landowners and peasants and an economy in which agricultural work predominated, had been breaking down for decades, with workers migrating to industrial areas

¹Third Edition International ‘Economy and Society’ Award Ceremony – città, May 18th 2017.

to find work and a new life. Here they found new opportunities – sometimes they started to earn income for the first time, for instance, and to experience the new possibilities that this offered them.

But they were also faced with new problems: social insecurity, poor housing and unsanitary conditions. The human cost of the industrial revolution was high, and strikes and industrial unrest in the period immediately before *Rerum Novarum* came out had brought the issue to a new level of consciousness. It is no surprise that when RN was promulgated, its main focus of concern was the worker.

When we are thinking about the kinds of social changes we are facing today as a result of digitalization and ICTs, therefore, it is worth remembering how great the social changes were during the process of industrialization when CST was born. The experience of time, for instance, went through a fundamental change. From natural and organic rhythms, with periods of intense work at certain times of the year and others when little work was done, ordinary people were moved to fixed shift times for a fixed number of days each week, partly with the help of much literature focused on “self-improvement” and great battles over “Saint Monday”. Basic habits were (had to be) transformed. The mentality of the general population was shifted towards much greater concern with precision, measurement, and the logical analysis of causes and effects. Production levels were measured precisely, and were due by certain specific dates; parts had to be made with tolerances of error measured in fractions of a millimetre. If a machine broke down on the shopfloor, people no longer necessarily looked for divine help, as they might have done if the crops were not growing well, nor did they beat the machine, as they would have beaten a recalcitrant donkey or mule. Instead, they would start to analyse the problem and to isolate its cause on which, then, they could act – change a part or redesign the machine. It was a time of tremendous change, giving rise to new bodies of thought like sociology, experi-

mental psychology and anthropology. New words were being coined too to deal with the new realities. Industrialisation, for instance, was a new word that spread out from Great Britain as the “industrial age” spread, and is common to most European languages today, whereas the much older word for “work” varies significantly from one language group to another. According to the Oxford Shorter English Dictionary, the word for “unemployment” is only coined in English in 1888, showing us that the concept as such did not emerge until well into the industrial period. It is difficult for us to imagine how great this change of mentality was, as we are so habituated to it.

In this situation of change, CST emerged as both an attempt to re-interpret the moral and social vision of Christianity in terms of the new society, and as a form of resistance against the negative impacts of laissez-faire capitalism and industrialisation. Leo focused on the need to defend the dignity of the worker, with private property and a just wage as key issues, and the need for solidarity between actors (employers and workers together, or workers alone) in order to confront problems. We see here the recognition of good elements within the industrial world, but also a prophetic voice raised against injustice, and both led to a whole series of movements aimed at both putting CST into practice and resisting the evils of the industrial world (Semaines sociales, Jeunesse Ouvrière Chrétienne, JOC, Christian trades unions, political parties of various kinds, and so on). Later in the 20th century, development emerged as a new foundational theme in *Populorum progressio*, celebrated in later documents by John Paul II and Benedict XVI as *Rerum Novarum* had been celebrated by popes after Leo. Again, we see a development within CST connected with the historical circumstances of the time – the growing awareness of the lack of development in many parts of the world and the possibilities presented by decolonisation. Perhaps *Laudato Si* will become seen as another of

these foundational moments, to be returned to and celebrated by subsequent popes.

So the historical development of CST as we have briefly outlined it here may suggest that it confronts the digital age from an interesting vantage point. In one sense, it is challenged by, and perhaps not entirely prepared for, the profound changes that are taking place with the rise of the “digital age”, rooted as it has been in a world formed primarily by industrial technology. And yet, it was born in a period of great upheaval, making it no stranger to tremendous change. In that sense, it has the capacity to deal with the changes of today.

So let us now look at three particularly important aspects of the digital age which could be of importance to CST, using the work of Luciano Floridi, Professor of the Philosophy of Information in Oxford, as our main resource.

The first issue is the fundamental role of information in today’s society. ICTs have been around since the dawn of history, indeed, they may be seen as having permitted that dawn to take place, since writing allowed the recording and transmitting of history itself. Writing is an amazingly powerful and flexible technology which spawned a whole range of others (clay tablet making, then later vellum, paper, pens, printing, not to mention the technology of the alphabet, a fundamental presupposition for the development of modern computer languages) and profoundly changed the way we experience the world. We only need think of the great impact that printing had on human culture when it was developed. Today, ICTs are taking a step further, not only recording and transmitting but also processing information; it is not a surprise therefore, that they are generating what we can call a new “age”. Whereas history begins with a kind of first ICT revolution with the advent of writing, so the processing power of current ICTs is taking us into a new phase of history, what Floridi calls “hyperhistory”, where information is a fundamental resource and our ICTs are integral to our well-

being, flourishing and development. Whereas in history, records are kept of those who are “important”, in hyperhistory data is created and shared by a much wider range of people – we could perhaps say that hyperhistory is history “on steroids” – so much data, so much interaction and connectivity. A hyperhistorical way of living will co-exist with what has gone before, just as prehistorical societies have coexisted with historical ones (and may still exist in some very remote parts of the Amazon). Rather than indicating what life is like in fixed places or periods of time, these words indicate more a way of living (they are more like adverbs, as Floridi says). Nevertheless, just as the industrial age has largely replaced the agricultural system that went before it in much of the world, and which we have inherited and which has deeply influenced our generation, so these new ICTs are likely, as their influence spreads, to bring to the fore a new phase of human existence, whether we call it hyperhistory or something else. We already have young people born after 2000 in many countries (sometimes called “Generation Z”) who only know life with smartphones and social media, and we are concerned about the “digital divide” and discuss whether there is a right to access to the web.

What kind of world is emerging from these changes? This is our second issue. Floridi calls it the “infosphere”, using a word coined in the seventies that plays on the idea of “biosphere”. It is a word with more than one definition and which is in evolution. At a minimum, it would indicate the “informational environment”, all that refers to information, including “properties, processes, interactions and mutual relations” (p. 41), covering information in all its senses, including all that is held “offline”, physically, and in non-digital formats. At a maximum, “it can be interpreted as synonymous with reality, once we interpret the latter informationally”. In reference to this second sense of infosphere, Floridi paraphrases Hegel in saying: “What is real is informational and what is informational is real” (p. 41). Not surprisingly, it is “in this equiva-

lence that lies the source of some of the most profound transformations and challenging problems that we will experience in the near future" (p. 41). So in the second sense, the infosphere is the world understood in terms of information, and in which the difference between offline and online will tend to become less clear so that the two start to interact in our way of understanding the world more and more. We already have Google Maps and Global Positioning Systems that we connect to in order to know where we are, fridges that identify what is in them and remind us when food needs using up, and wearable technology that tells us when to exercise or take medicine. These may sound like trivial things, but they have a great effect on the way people experience the world and think about it.

A third and final issue, the most important, is what is happening to the way we understand the human person in the midst of all these changes. Just as the industrial revolution caused us to start thinking about ourselves and our world more in terms of precision and cause and effect chains, so living in the infosphere will be likely to encourage us to see ourselves as informational beings, or "informational organisms" which Floridi abbreviates to "inforgs". We should not think about this as we think about a "cyborg", a kind of synthesis between the human being and technological components (a "bionic" man) but rather as a different way of understanding and developing because we are living in a different environment, one where ICTs are a crucial part, not merely enhancing or even augmenting our lives but providing us with "new spaces" and "gateways" into them. However, these spaces, as highly artificial, are also extremely malleable, and especially open to the purely commercial use of human beings. We may start to lose the real individuality of each person (which is a great achievement of the influence of Christianity on human culture, especially in the West), seeing ourselves, or seeing others, as no more than a "type", a bundle of characteristics that puts us in a certain category (a

type of customer, a type of worker), in a culture where proxies (linked-in profiles or likes) take the place of real things.

What about CST in this digital age, therefore? As Pope Francis says: “We need to develop a new synthesis... in fidelity to [our] own identity and the rich deposit of truth which [we have] received from Jesus Christ... reflect[ing] on these issues in fruitful dialogue with changing historical situations” (*Laudato Si'*, 121). I think in fidelity to the identity of CST there are three main ways in which we need to search for the new synthesis the Pope is calling us to:

1. Engage with the situation that we face, promoting the use of these new means where they help human beings, as in the industrial period.

Information is a new fundamental resource for us. What can we do with this? One area that is interesting is the way that attitudes to private property are influenced by these changes. Digital information and assets need to be “protected” if they are not to be shared, since they are “naturally” non-rivalrous, non-excludable and can be reproduced at practically zero cost; information has many of the aspects of a “public” good. As assets become more and more digital, therefore, people are finding it harder to recognise property rights in them, even if legal systems protecting intellectual property may still make it illegal to copy or use them without permission or payment. Although there may be a problem here of inadequate respect for laws, the main issue is that it is harder to recognise private property in something that is so easily sharable. On the one hand, private property is a particularly important issue for CST, a key issue for *Rerum Novarum* especially as it is connected with working people having the security to support a family. This document also rightly identified the threat of Communism on this point as the subsequent history of the 20th century demonstrated in a terrible way. However, private property has a “social mortgage”, and is ultimately oriented to the universal destination

of goods, or to the common good as *Laudato Si* has recently forcefully pointed out (93-95). Indeed, in the society of today the more immediate problems we face, often emphasised by Pope Francis, are the enormous inequalities that lead to the exclusion of the poor from access to the goods they need. The experience of dealing with assets that are so easily shared creates the possibility for the social aspect of private property to be more easily seen, and for new relationships between private property and the shared use of goods to emerge.

Another issue that might follow on here, and which is mentioned in a different way in *Laudato Si'* (112), is the promotion of cooperative forms of organisation and business. Coops have been a form of socioeconomic organisation that CST has favoured throughout its history, and today digital systems could favour coops and collaborative forms of working. Yet, as Margaret Heffernan in the FT recently wrote "the so-called sharing economy has not shared anything"². Trebor Scholtz, a professor at the New School in New York, in his 2016 book entitled *Uberworked and Underpaid* provides examples of taxi cooperatives in Europe and the US that have designed their own apps to provide work for the drivers who own the coop. In a world where the big name among such services is Uber, which has been fighting court cases around the world to argue that its drivers are not its employees, these examples are particularly important and worthy of our interest. A few days from now, Twitter shareholders will vote on whether to transform the company into a coop owned by its users, and even if it does not seem likely that the motion will pass, the fact that it is on the agenda of the annual general meeting is significant.

A final issue on this point would be the use of digital services to mitigate climate change. This is a tricky point because

²www.ft.com/content/beb85bdc-1f8e-11e7-b7d3-163f5a7f229c?segmentId=7d033110-c776-45bf-e9f2-7c3a03d2dd26

these services themselves create emissions which are already more than those of the aviation industry and are set to increase. However, the Climate Change group's report "Smart 2020" indicates that by 2020, if used properly (a "big if" of course), ICTs could reduce emissions many times more than they produce. As the Climate Change group says, the information that ICTs can give us "will make climate change visible. It will help us monitor our impacts and emissions. It will help us optimize systems in all sectors for energy and resource efficiency".

2. Resist what is evil, just as CST has done in the industrial age. The fundamental issues here are very much what they have always been: upholding the dignity of the person in the face of new challenges to that dignity coming from the way our society is changing, or the way the infosphere is developing.

Laudato si' in its section on the technocratic mindset would be a case in point (106-114); indeed, it specifically refers to "resistance to the technocratic paradigm" that is so often dominant (111). The same drives towards productivity and accumulation of wealth that drove the industrial age are still very present today, and in which technology becomes a tool in the instrumentalisation of every other good.

In the face of the developments of the new infosphere we need to protect the idea of the human person as a unique, embodied individual. Here the results of neuroscience and genetics are an ally, reinforcing what CST has to say. These sciences, for instance, help us to understand more about the physical and neurological basis of moral behaviour. Results from them support an ethics of virtue rather than other ethical alternatives (Kantian, say), since they indicate that we are born with innate structures or "moral modules" that are malleable, that is, can be formed by the person themselves and the circumstances around them.

3. Be present in society, as interest in religion is rising in areas where it was not present even ten years ago and the voice from CST is needed. The background to this new interest includes research like that of the Pew Research Trust in 2012 that showed that 84% of the global population identify with a religious group. The business world, which has not always had much interest in what CST had to say, is gradually waking up to this. Business research centres are producing studies on issues like faith and leadership³. Blueprint for Better Business, a movement that has attracted significant number of large corporations in the UK, is quite open about its starting point in CST, which it is gradually widening to incorporate an interreligious perspective⁴.

CST may appear very challenged by the changes that the digital age is ushering in, but it contains within it the capacity to deal with them. Indeed, many of the articles today on AI and robots are concerned just as much about the ethics, meaning and purpose of these technologies as they are with their technical prowess. Our industrial age has produced technologists who are capable of producing many technical resources, but it has not produced a similar level of ethical reflection. There are gaps in our systems of education and in our public discourse and people are looking for bodies of thought and voices that can fill them. Although the challenges to CST are great, we may find that it is in the digital age that it really comes into its own. The need at this time for what it has to offer may mean that its impact turns out to be just as great, if not greater, in future than it has been up to now.

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THE SOCIAL DOCTRINE OF THE CHURCH IN THE DIGITAL AGE¹

JULIO L. MARTÍNEZ

1. INTRODUCTION

For decades, after World War II, part of the world, and particularly Western Europe, lived through a period of time when economics, politics and society seemed to have found adequate mechanisms to attain lasting progress and well-being, which in turn would provide security and a feeling of certainty for its citizens. It is true that the Social Doctrine of the Church was never complacent with what was achieved and did not cease to express its critical reflections from the perspective of ethics. Social life appeared as something orderly, predictable, and controllable according to perfectly defined variables: a market economy, a social and democratic state based on the rule of Law, an intergenerational pact based on full employment... the responsibility of informing us was delegated to the Media; to technicians to say what was happening and to politicians to decide on the issues that affect us as a Society. In recent decades, we have witnessed very profound changes in all areas: economic and social globalization, growing inequality, convulsive multi-culturalism, demographic aging, environmental unsustainability, redefinition of work in a technological society, radical transformation of the foundations of social and cultural life, etc. All of these changes are disrupting the simple order of yesteryear and submerging us directly into a perplexed situation.

¹Consultation jointly organized with Universidad Pontificia Comillas ICAI-ICADE and BBVA Group. Madrid, 25-27 January 2017.

2. A GREAT AND RISKY AMBIVALENCE

We are a part of a technological civilization capable of producing unbelievable advances in artificial intelligence, for instance, to help doctors diagnose and cure diseases, or to make cars safe to ride without a driver, or to put a space station in orbit, or to achieve “synthetic life” in a laboratory, even to develop a “big red button” that can be used to interrupt artificial intelligence and to stop it from causing harm, but it seems that we are not capable to prevent thousands of children from dying each day from malnutrition or from curable diseases, or to prevent millions of refugees from living in sub-human conditions. We can achieve greatness, but we do not know – o do not wish to know – how to solve basic questions of human dignity. What is happening does not only refer to relative inequality, whereby the number of the opulent super-rich is increasing, but rather to inequality which reduces vital options and prevents access for many to basic social goods, as well as the minimum for active participation in society, essential for *human development*, which places the person at the center and the focus on increasing opportunities for developing human capacities. This puts us in the position of creatively combining the concern and attention to social justice, facing socio-economic conditions head-on, without abandoning the challenges of cultural and religious diversity, within the framework of a powerful digital culture.

3. THE DIGITAL CULTURE OF “REAL VIRTUALITY”

Throughout history, as Manuel Castells explained in detail, cultures have been generated by peoples sharing space and time, under conditions determined by the relations of production, power and experience, fighting each other to impose their values and objectives on society. Thus, spatio-temporal configurations were decisive for the meaning and evolution of each culture. With the informational paradigm, a new culture of the substitution of places for the space of flows

and the annihilation of time by timeless time has emerged: the “culture of real virtuality”². It is not just a technological revolution: it goes much deeper. This is a new world view, across frontiers, societies, generations and faiths³.

Changes in the relations in production, power and experience converge towards the transformation of the material foundations of social life: space and time. The material base which explains – according to M. Castells – why “real virtuality seizes the imagination and the systems of representation of individuals is their existence in the space of flows and timeless time”. The “overcoming” of time by technology overrides the logic of clock time of the industrial age. Technology compresses time into a few random moments, which loses the sense of sequence and history, dissolving into the culture of the ephemeral; the network of society completely transforms social relations. Almost all economic and financial activities, as well political, cultural or communicative ones revolves around flows of exchanges between selected and distant localities, which escape from the experience embodied somewhere (simultaneity without contiguity), while fragmented experience remains confined to concrete places. The result is the mixture of all expressions, all spaces and all times in the same hypertext, constantly restructured and communicated at all times and places, depending on the interests of the emitters and the mood of the receptors.

The Catholic Social Teaching describes a number of striking features that Internet has, in a way that deserves to be remembered⁴: “It is instantaneous, immediate, worldwide,

²Cf. M. CASTELLS, *La era de la información I*, cap. 5°. An interesting debate in: “A propósito de la obra de Manuel Castells *La era de la información. Economía, sociedad y cultura*”, *Reis* 86 (1999), 367-371.

³Christmas Message from His Majesty the King of Spain, 24 December 2016.

⁴PONTIFICAL COUNCIL FOR SOCIAL COMMUNICATIONS, *Ethics in Internet* (2002), n. 7.

decentralized, interactive, endlessly expandable in contents and outreach, flexible and adaptable to a remarkable degree. It is egalitarian, in the sense that anyone with the necessary equipment and modest technical skill can be an active presence in cyberspace, declare his or her message to the world, and demand a hearing. It allows individuals to indulge in anonymity, role-playing, and fantasizing and also to enter into community with others and engage in sharing. According to users' tastes, it lends itself equally well to active participation and to passive absorption into "a narcissistic, self-referential world of stimuli with near-narcotic effects"⁵. It can be used to break down the isolation of individuals and groups or to deepen it".

The whole picture speaks of strong ambivalence, and not only for the use that people can do but for the reality which technology creates. That goes beyond "virtual reality" to what Castells has called "real virtuality". One might reasonably say that there are two sides of the same coin and that *the Metaphysics of Virtual Reality*⁶ has to be completed by *The Metaphysics of Real Virtuality*. "Real virtuality" means that reality itself (that is, the symbolic material existence of people) is fully immersed in a scenario of virtual images, in a world of representation, in which symbols are not just metaphors, but constitute real experience. It is *virtual* because the materials received arrive via computer systems, through computer games, by means of television or cinema. It is *real* because it shapes the culture (ideas, values, behaviors) of those who access it. It is interesting to bear in mind that virtuality is not the consequence of electronic means, although these are the indispensable instruments for the expression of the new culture. This virtuality is part of our reality because it is within the structure of these symbolic systems, timeless and without

⁵Cf. PONTIFICAL COUNCIL FOR SOCIAL COMMUNICATIONS, *Ethics in Communications* (2000), n. 5.

⁶M. HEIM, *The Metaphysics of Virtual Reality*, Oxford 1993.

place, where we construct the categories and evoke the images that determine behavior, shape character, induce politics (not only providing channels of participation, but also favoring the politics of *post-truth*), while at the same time expanding the forms of human experience.

4. THE “DIGITAL DIVIDE”

The graphic expression “digital divide” names and denounces the increasing inequality and growing polarization that is occurring among individuals as well between groups and nations regarding the access and use of new technologies, with important consequences in terms of participation in the benefits of globalization and development. We remain unshaken by the deepening of inequality and discrimination in the “global village”. According to figures of UN in 2015, the “digital divide” is still huge: only 6,7% of households in the least development countries had Internet access compared with 46% of households worldwide and 81,3% households in development countries. The report also reveals that, globally, 46% of men and 41% of women are Internet users. 27 out of 37 African countries are in the bottom quartile of the overall distribution, including the 11 countries with the lowest overall Index rankings⁷.

Neo-liberal logic has dictated that the solution would come from allowing the market to solve in itself the problems of inequality in the access to technologies. But with the passage of time, this perspective has been shown as a self-interested deception, which is already and will be increasingly intense and visibly a more important cause of global social injustice. In contraposition, for others, in order to fight against this supposedly unstoppable tendency, a policy of active intervention to correct the imbalances is imposed.

⁷ITU (2015), *Measuring the Information Society Report*. Available in <http://www.itu.int/net4/ITU-D/idi/2015/>

In addition to the huge gap between rich and poor countries, gaps are also being opened within these countries, not only those which are developing countries, but also in those with a high level of development. One of these gaps is that which is being created between the “interacting” and the “interacted”, that is, those capable of selecting multi-directional communication circuits and those that are provided with a limited number of pre-packaged options, which are very limited in their ability to take advantage of the functionality of new devices and digital media, not to mention the gap that is opening for those who are completely marginalized or excluded from this technology. This gap affects the closest personal relations, for example, the relationships within families affected by the irruption of these absorbing (and alienating?) electronic devices, but also affects, as well, the workplace, where we are only beginning to notice the initial effects of the transformations which the digital economy is bringing, which is possible thanks to the recent wave of globalization, itself reliant on advances in information and communication technologies.

5. PARTICIPATION IN THE SOCIETY OF DIGITAL COMMUNICATION: “THE CULTURE OF ENCOUNTER” (POPE FRANCIS)

There is no participation without possibilities of communication, and nowadays this occurs through channels and networks that have reached unprecedented levels of development which require our efforts in connection. Real difficulties and gray areas should not prevent us from recognizing the qualitative improvements brought about by digital innovations for both economic activities and the new possibilities for participative governance, culture and expression of diversity, or, in general, the *mobility* of goods or people, one of the signs of our times. Along with the immense possibilities for the creation of a dense fabric of relations, with enormous possibilities for relationships, there are huge intrapersonal and

social distortions on many levels, and there is great ambivalence, not only in the use being made of these different means. Most certainly it is not enough to move on digital “streets”, that is to say, to be connected; it is necessary for the connection to be accompanied by a true encounter, and this is almost impossible without time and without the capacity for silence to listen. Being interconnected in itself does not solve the challenge of communication which continues to be “a more human than technological conquest”⁸. The “culture of encounter”⁹ requires practices for the good use of technological resources together with the cultivation of human relations. Here there is much to do, above all, in educational terms, as we will see later on.

6. DIGITAL ECONOMY AND EMPLOYMENT

Digital innovations are remaking our industries, economy and society just as steam, electricity and internal combustion did before them¹⁰. It is difficult not to recognize that they increase efficiency and productivity. Progress with hardware, software and networks is improving our lives in countless ways and creating immense value. Digitalization reduces dramatically the cost of production of great part of economic activities which generate social wealth. Even more, in most of the digitalized activities machines will be imposed on the human beings. In many cases, marginal cost of these activities will be close to zero. And the effects of the digital economy are only in their beginnings. Moreover, experts say that we are on the verge of experiencing an acceleration of the impact of the technology in our lives. The computers start making things till

⁸ FRANCISCO, *Mensaje para la 48ª Jornada Mundial de las Comunicaciones Sociales* (23/1/2014).

⁹ FRANCISCO, *Angelus*, 9 de noviembre de 2014.

¹⁰ E. BRYNJOLFSSON, “Open Letter on Digital Economy” (June 4, 2015) www.technologyreview.com/s/538091/open-letter-on-the-digital-economy

now only possible for the human beings: they are capable of generating artificial intelligence with practical applications.

In the digital era, economy grows and consumers are benefited because items are cheaper, but which impacts will technological change have on labor? The disturbing question that some are asking is whether the robots “eat” our jobs. We are facing a “productivity paradox”: Up to the present, more capital and more productivity meant normally more salary, but we are in a time when more capital it is starting using increasingly not only not to raise wages but to replace workers. In other words: “if progress in productivity is so rampant, we should see healthy productivity improvements; however across advanced economies, labor productivity growth has slowed from 4% in 1965-1975 to about 2% from 1975-2005 and further lower to 1% from 2005-2014”¹¹. For example, the majority of U.S. households have seen little if any income growth for over 20 years and the American middle class is being hollowed out. (This fact seems to have played an important role in the victory of Donald Trump).

In an ever more digital and interlinked world where we are living, the technological changes are clearly ambivalent and have uneven implications. Regarding employment, those workers who know to work with machines and manage complex processes will have a strong demand. Those who have capital will be benefited in a special manner, because the nature of digitalization, due to the network effect, favors enormously concentration of property. But there will be severe difficulties for sustaining jobs and for wage growth. The big data revolution and improvements in machine learning, including tasks one thought quintessentially human such as navigating a car or deciphering handwriting, can do things unthinkable so far. The data from the World Bank shows that

¹¹Citi GPS, *Technology at Work v. 2.0. The Future is Not What It Used to Be* (January 2016) (accesso 29 december 2016 www.oxfordmartin.ox.ac.uk/downloads/reports/Citit_GPS_Technology_Work_2).

the risks of automation are on average 57% of jobs are susceptible to automation in the OECD, but 85% in Ethiopia, 77% in China, 69% in India, 67% in South Africa, 65% in Argentina, 47% in US. (With US gaining the biggest advantage from this development and China having the most to lose. A growing concern of “premature desindustrialisation” in emerging and developing countries could require new growth models and a need to upskill the workforce)¹². We can imagine big segments of population useless to produce and therefore outcast of the new economic system characterized by digitalization. However, these numbers must be relativized, it can be said that they are very bold projections. For instance, very respectable experts point out that if automation, software and services based on artificial intelligence do eliminate huge numbers of jobs someday, the same developments will probably give a tremendous boost to wealth creation and prosperity. In any case, we lack information to make reliable projections.

In addition, the study of Citi GPS at Oxford University points out that 76% of respondents were techno-optimists on the outlook for productivity and profits, with policy adapting to share increasing abundance, and only 21% were techno-pessimists on the outlook for growth, employment, inequality, and disruption of company profit pools.

All these things considered, it seems that the right strategy for the current situation is to prepare people for those new tasks and to start a conversation about the deeper changes that will be necessary over the long term in basic public policy changes in education, infrastructure, entrepreneurship, trade, immigration, research, taxes, transfer system... or even democratic participation. Do we need a multilateral and profound conversation that takes ethics seriously? And if so, does the Catholic Social Teaching have anything valuable to offer? I think it does have it. Let's see.

¹² *Ibid.*, p. 8.

7. THE QUESTION FOR WORK REFERS ULTIMATELY TO ANTHROPOLOGY

From the first social encyclical *Rerum novarum* (RN, 1891) until the latest *Laudato si'* (LS, 2015) passing through *Laborem exercens* (LE, 1981), the work issues have been a deep concern in Church Social Teaching. This document of Leo XIII usually referred to as the beginning of Catholic Social Teaching argues at length on behalf of factory workers' rights. Rejecting the materialism and presumption of class conflict in Marxism, the Pope who founded the Pontifical University of Comillas (almost at the same time that wrote RN) did teach that workers could not be treated as commodities, as mere "labor power", rather as persons contributing to the common good of all, and as such, they have rights related to their duties (RN, nn. 40-50).

As the report of the Oxford Martin School points out¹³, today it is important to recognize that technological progress does not just affect the occupational structure in terms of numbers of different types of jobs, but can also change the nature of work within these occupations.

What we see is the explosion of the new social question in this time of technological post-Fordism. However this social question is nowadays essentially an anthropological question, as *Caritas in veritate* (CV, 2009) insisted that the social question today "has become a radically anthropological question" (CV, n. 75). Or *Laudato si'*: "there can be no ecology without an adequate anthropology" (LS, n. 118). Probably there is no matter clearer than human work (even more than ecology) to verify this fundamental affirmation.

In the theological perspective¹⁴, such defense for work has high meaning and value, founding in the human dignity as

¹³ *Ibid.*, p. 10.

¹⁴ Among the Studies of Catholic Theology on work I want to mention: E.E. GASDA, *Fe cristiana y sentido del trabajo*, Madrid 2011. This book is the result of a doctoral thesis defended at the Universidad Pontificia Comillas.

the image of God. In work humans beings participate in God's creativity. *Imago Dei* should be understood not only individually but socially and ecologically. Because social characteristics and human nature are part of the universe as God's creation, human co-creativity should be performed with other people and with nature. In the interconnectedness of life, we find our entire meaning of life and work and express the deepest sense of our dignity in co-creativity with God's own acts of creation.

Human dignity must be flourished and protected in community, because human beings are social. Love for other human beings has either individual or social dimensions for the sake of common welfare¹⁵. The yardstick of economic life for Catholic teaching is whether it sets person as "the source, the focus and the aim of all economic and social life" (GS, n. 63) and it elevates or threatens the common life as a community. Every individual has the right to participate in communal economic life. Basic justice requires a guarantee for the minimum level of people to participate in economic life¹⁶. In this line, human rights are minimum conditions for participating in communal living, and they include not only civil and political rights but economic and cultural ones. It cannot be morally justified that an individual or a group be prohibited from participation or abandoned in unemployment. And from this perspective of social justice as the minimum level of participation in communal living, all community members have an

¹⁵The society as a whole acting through private and public institutions has a moral responsibility to defense human dignity and to favor human rights.

¹⁶Probably the Magisterial document that better develops this matter is: UNITED STATE CONFERENCE OF CATHOLIC BISHOPS, *Economic Justice for All* (1986) following the path of *Justice in the World*, document of the Synod of Bishops, 1971. On these ideas and others it can be read: D. HOLLENBACH, *The Common Good and Christian Ethics*, Cambridge 2002. I was lucky and honored to write my Thesis of Moral Theology under the direction of Fr. Hollenbach SJ.

ethical obligation towards the poor and the most vulnerable. The preferential option for the poor means that the rights of the poor to participate should receive priority above the rights of the rich to multiply their opportunities or wealth.

Thus, the condition of work is not only an individual issue but a structural one supported by social and cultural transformations as well as ideological concepts and group interest. John Paul II realized this in his encyclical on human work *Laborem exercens* and called this group of structural factors “indirect employers”, under this name is included “both persons and institutions of various kinds” and also “collective labor contracts and the principles of conduct which are laid by these persons and institutions and which determine the whole socio-economic system or are its result” (LE, n. 17). He distinguished work in the objective and subjective senses. The objective sense refers to what is produced by human work, as revealed in culture and civilization throughout the centuries with the necessary tools and technology (LE, n. 5). The subjective sense means individuals who are the subjects of work and those who are called to it; the foundation and those who give dignity to work are human beings, not productivity or progress. Paraphrasing Jesus’ evangelical saying on Saturday, work is for human beings and not human beings for work (LE, n. 6). This means that they cannot be treated as mere means nor seen as production tools. Economy which treats human beings as objects cannot be accepted. The primacy of persons over products and technology and the primacy of human labor over capital are underlined (LE, n. 13).

Therefore, only an adequate anthropology can set the ethical values we need for a more sound and fruitful development of individuals and society, and for a right understanding of the relationship between human beings and between human beings and technology, as well as human beings and the rest of creatures.

Let us read two texts of *Laudato si’* in which is presented the anthropological meaning:

“If we reflect on the proper relationship between human beings and the world around us, we see the need for a correct understanding of work; if we talk about the relationship between human beings and things, the question arises as to the meaning and purpose of all human activity. This has to do not only with manual or agricultural labor but with any activity involving a modification of existing reality, from producing a social report to the design of a technological development. Underlying every form of work is a concept of the relationship which we can and must have with what is other than ourselves. Together with the awe-filled contemplation of creation which we find in Saint Francis of Assisi, the Christian spiritual tradition has also developed a rich and balanced understanding of the meaning of work...” (LS, n. 125).

“...Once our human capacity for contemplation and reverence is impaired, it becomes easy for the meaning of work to be misunderstood. We need to remember that men and women have “the capacity to improve their lot, to further their moral growth and to develop their spiritual endowments”. Work should be the setting for this rich personal growth, where many aspects of life enter into play: creativity, planning for the future, developing our talents, living out our values, relating to others, giving glory to God. It follows that, in the reality of today’s global society, it is essential that “we continue to prioritize the goal of access to steady employment for everyone”, no matter the limited interests of business and dubious economic reasoning” (LS, n. 127).

8. THE IDEA OF ADDRESSING JOBLESS WITH MONEY: SOME ETHICAL CONSIDERATIONS

In the case of disruptive technological changes, the issues we are likely to encounter include the potential loss of jobs in many industries, the inadequacy of skills of some of the workforce to find equally good jobs, and the winner-take-all nature of much competition. Some of these issues may manifest themselves in high unemployment and are likely to be associated with even greater inequality of income and wealth than

we see today¹⁷. According to a survey undertaken by the European Parliament Eurobarometer, concerns about unemployment, social inequalities and access to jobs for young people are considered some of the main challenges facing the EU and its Member States.

In USA, the basic-income concept (i.e.: income that is sufficient to guarantee a minimum standard of living) is gaining renewed interest because a number of observers, including a number of leaders in the technology industry¹⁸ are talking it up, especially in Silicon Valley and San Francisco Bay Area. It is surprising that 'basic income', which was thought to support the people universally, want to become a subsidy for those who lose their job. The prime motivation is a concern that automation has been displacing jobs and that increasingly sophisticated artificial-intelligence applications could accelerate the trend. Another motivation would be that many people are struggling economically. In USA, the top 0.1 percent of Americans now account for more than 20 percent of the country's wealth. As D.H. Freeman comments: "It is hard to live in Silicon Valley without sensing the growing of inequality"¹⁹.

There also are worries about the social and cultural impact of taking so many people out of the workforce. It is always present the question for how to pay for it, particularly at a time when public purses feel rather stretched. One can say: if productivity growth is likely to be high, those who are benefited by this should pay, but things are never so easy²⁰. How-

¹⁷ *Technology at Work v. 2.0...*, 97.

¹⁸ Vid, e.g. E. BRYNJOLFSSON et al, "Open Letter to the Digital Economy", 2015.

¹⁹ D.H. FREEMAN, "Basic Income: A Sellout of the American Dream", *MIT Technology Review* (July/August 2016), 51.

²⁰ The need for public spending may be even larger because such spending may need to be higher on structural basis, rather than only during downturns. The taxes could be through an increase in top marginal income

ever, even more important than the question of how pay for this, the two main downsides of a basic income are: that it may blunt incentives to contribute productively to society and that it may be an inadequate substitute for gainful employment even for the recipient. Job loss can mean much more than a missing paycheck, deeply depressing self-esteem and overall outlook. Job is fundamental part of the social basis for self-respect, and it can be reasonable thought that for the majority of people money cannot substitute job. “The idea of addressing joblessness with money instead of jobs is an ironic one for the tech crowd to embrace. They want this supposedly great solution for others, not themselves”²¹.

Catholic teaching emphasizes the goodness and joy of creative labor: Humans are creative, and human dignity includes the power to do good work. Therefore a successful business not only makes a profit, creativity of its workers, allowing them to participate as persons rather than as mere “labor”. The aim of effectively producing goods (the objective aspect of work) should not override the aim of honoring and cultivating human activity (the subjective aspect of work). It is not a question of reducing effective production, but of reorganizing that any organization of work that reduces humans to mindless cogs or mere units of production is harming, rather than contributing to the common good. The pope Benedict XVI insists in *Caritas in veritate* that economics cannot resolve social problems simply through the application of commercial logic, but “needs to be directed towards the pursuit of the common good, for which the political community in particular must also take responsibility” (CV, n. 36)²². And

tax rates, increasing capital income tax rates, raising corporate income taxes, some form of wealth taxes or taxing goods or services more heavily that are consumed primarily by the wealthy, vid. Citi GPS, *o.c.*, 101-103.

²¹ *Ibid.*, 52, quoting San Jose State’s Darrah.

²² The principle of gratuitousness and the logic of gift as an expression of fraternity can and must find their place within normal economic activity, as

the pope Francis assures that “business is a noble vocation, directed to producing wealth and improving our world. It can be a fruitful source of prosperity for the areas in which it operates, especially if it sees the creation of jobs as an essential part of its service to the common good [...] In order to continue providing employment, it is imperative to promote an economy which favors productive diversity and business creativity” (LS, n. 129).

And addressing directly the issues related to the impact of technological innovations, *Laudato si'* affirms *strongly the need to protect employment*. “We were created with a vocation to work. The goal should not be that technological progress increasingly replaces human work, for this would be detrimental to humanity. Work is a necessity, part of the meaning of life on this earth, a path to growth, human development and personal fulfilment. Helping the poor financially must always be a provisional solution in the face of pressing needs. The broader objective should always be to allow them a dignified life through work. Yet the orientation of the economy has favored a kind of technological progress in which the costs of production are reduced by laying off workers and replacing them with machines. This is yet another way in which we can end up working against ourselves. The loss of jobs also has a negative impact on the economy “through the progressive erosion of social capital: the network of relationships of trust, dependability, and respect for rules, all of which are indispensable for any form of civil coexistence”. In other words, “human costs always include economic costs, and economic dysfunctions always involve human costs”. To stop investing in people, in order to gain greater short – term financial gain, is bad business for society” (LS, n. 128). It can be said in different words but not clearer.

expressed in commercial relationships (CV, 36).

9. THE TECHNOCRATIC PARADIGM

Pope Francis makes a resounding criticism in his Encyclical *Laudato si'*, from the paradigm of “integral ecology” to the technocracy that dominates the economy and politics (LS, n. 109). Besides that, to claim “economic freedom while real conditions bar many people from actual access to it, and while possibilities for employment continue to shrink, is to practice a doublespeak which brings politics into disrepute” (LS, n. 129).

The technocratic paradigm, hither and thither, does not refer to the application of technical methods to the solution of definite problems, nor does it criticize that some experts place their knowledge and experience at the service of society in political actions²³, but rather refers to an penetrating *ethos*, a vision of the world which puts techno-science at the service of interests (usually camouflaged as neutral) in which factors such as mere utility, efficiency and functionality are prioritized. Science and technology are “not neutral; from the beginning to the end of a process, various intentions and possibilities are in play and can take on distinct shapes” (LS, n. 114). This criticism of technocracy does not at all go against a sincere appreciation of the great benefits of scientific and technological progress.

When an elite uses scientific-technical rationality for its own purposes, it can end up converting reality, and also human beings, into an object of experimentation or business under criteria purely marked by efficiency or profitability. Many political decisions, both in the economic arena as well as in human dramas such as that of the refugees, are not alien to this technocratic way of proceeding. Safeguarding itself

²³“Tecnócratas con corazón” (“Technocrats with heart”) is the title of an interesting article written by University Professor Salomé Adroher in ABC 5/5/2016, who has been General Director of Family and Minors in the Government of Spain.

under apparent technical reasons, some aspects in which human lives are being played with are deprived of a moral dimension. Thus it seems that injustice and alienation would be hidden behind the mask of purely technical decisions which would escape from being thought or discerned.

The underlying latent conviction is that not everything we can do by means of our capacity or physical, psychological, or scientific-technological capacity or power can be done “morally”. To illustrate it, see the following reasoning: “It has never occurred that an efficient and useful technology capable of bringing about disruptive change is no longer used by social consideration. And the advantages of automation are so obvious that it would be absurd to try to combat it with attitudes of resistance”²⁴. Those who think so, they are not soulless beings or people devoid of ethical sense. They are representatives of a fairly common sense, and are concerned about the subsistence of those left without jobs. Such concern is clear in this case: “If there is no work for everyone, how can we guarantee a minimum of income for a decent subsistence?”. The answer follows in terms that I summarize here: It is expected that the technological leap will involve an increase in productivity and wealth, but will not be distributed through labor, as has been happening in the other industrial revolutions. In order to promote the distribution, two ways are being put on the table at the moment: reducing the working day (Sweden is testing the 6 hours) and a basic income in charge of taxes on the wealth generated (Finland will test in 2000 people).

I would like to point out that, in an ethical perspective, power (capacity or ability) to do something is not necessarily a duty to do it. In other words, not all that can be done should be done. The Falling into what has been termed “the techno-

²⁴M. PEREZ OLIVA, “Una renta básica en la sociedad de la inteligencia”, *El País*, 2 de enero de 2017.

logical imperative”, which rests on an instrumental conception that supports the neutrality of techno-science, and at the same time, its unquestionable power of progress, when impediments are put in its path to advancement. Proceeding by following such an imperative is still a flight forward (usually due to very powerful interests), whose consequences can be irreversibly disastrous to the whole of Humankind. There is “a growing awareness that scientific and technological progress cannot be equated with the progress of humanity and history, a growing sense that the way to a better future lies elsewhere. This is not to reject the possibilities which technology continues to offer us. But humanity has changed profoundly, and the accumulation of constant novelties exalts a superficiality which pulls us in one direction. It becomes difficult to pause and recover depth in life” (LS, n. 113).

I see that this kind of technological imperative logic has a lot to do with the technocracy. Both logics are very closely connected.

I share the reflection by M. Castells, one of the most lucid interpreters of globalization, when he wrote, “genetic Engineering shows the error that would imply giving value to any extraordinary technological revolution without taking into account its social context, its social use, and its social result. I cannot imagine a more fundamental technological revolution than having the capacity to manipulate the codes of living organisms. Nor can I think of a more dangerous and potentially destructive technology if it is dissociated from our collective ability to control technological development in cultural, ethical and institutional terms”²⁵.

And I also like a reflection of the philosopher of Harvard, Michael J. Sandel, when he writes on the dignity of work and the necessity to open a serious political debate: “New technol-

²⁵Cf. M. CASTELLS, “Epílogo” a P. HIMANEN, *La ética del hacker y el espíritu de la era de la información*, Barcelona 2002, 179.

ogies can erode even more the dignity of work. If it is necessary to receive or resist the arrival of such a new world is a question which will be fundamental for politics in the coming years. To be able to think on this situation, political parties have to fight with the meaning of the work and the place that the work has in a good life”²⁶.

I fundamentally agree with him, because we should reflect upon the future, not to stop scientific and technological progress but to *discern* how to be human in the new and unknown scenarios. For the goal of *inclusive* prosperity or prosperity that does not “rule out anyone”²⁷ is needed a deep conversation among business leaders, politicians, representatives of workers and of diverse groups of civil society, educators, researches and thinkers in order to develop new organizational models and approaches that not only enhance productivity and generate wealth but also create broad-based opportunity and think upon the excluded. It has to be an interdisciplinary conversation, because to seek only a technical remedy to each social problem²⁸ “which comes up is to separate what is in reality interconnected and to mask the true and deepest problems of the global system (LS, n. 111). Instead of waiting passively that this new reality to force on us, let us to have enough strength and initiative to look ahead and assume an active and determined leadership.

We need also an interdisciplinary conversation within the Social Doctrine of the Church to *rethink the anthropologic meaning of the work* in the new parameters of the digital and global culture. This way we will be able to do a contribution more

²⁶M.J. SANDEL, “Lecciones de una revuelta populista”, *Expansión* suplemento especial: “Así será el 2017”, <http://www.expansion.com/especiales/2016/asi-sera-el-anio/lecciones-revuelta-populista.html>

²⁷Ours is “a throwaway culture which affects the excluded just as it quickly reduces things to rubbish”, LS, n. 22.

²⁸Here I take the license to change “environmental” for “social” from the original text of *Laudato si’*.

adapted to relations, needs and liberties in which the dignity of the work is played, taking into account “the new things” (*rerum novarum*) of the today human experience to the light of the Gospel and the Church’s Tradition. I truly believe that all the texts of the social doctrine considered in this paper are valid and valuable to make suggestive contributions to the debate on the meaning of work, but it does not mean that we must not open and look for new ways from them. Precisely in that is the true respect to the Tradition, which is non- static but dynamic growth in the Spirit.

10. A BRIEF NOTE ON THE LOGIC OF THE COMMON GOOD: ETHICS, POLITICS AND ECONOMICS

Regarding the phrase quoted before: “It has never occurred that an efficient and useful technology capable of bringing about disruptive change is no longer used by social consideration”, I believe that some point about the meaning of common good according to the Catholic view point are worthy. In some way an identity is established between efficiency and good or between utility and good that is, at least, problematic. Questions like who and how efficiency is determined and what is its scope and who benefits cannot be avoided, otherwise we fall into the gross technocracy. When these questions are not taken into account, any talk about ethics is nothing more than an ornament.

The interest for the common good does not conform to the utilitarian principle of “the greatest good (or welfare) for the greatest number”, but rather, it goes beyond this: it requires that no one be forgotten (the centrality and value of each person), that we recognize and take care of minorities and the assets of the community, as a valuable part of the diversity of the society of all. And, in a world in which “there are so many inequities and more and more people are disposable, deprived of their basic human rights”, striving for the common good means taking decisions based on solidarity as “a prefer-

ential option for the poorest" (LS, n. 158) within in confines of justice/solidarity, both intra-generational as well as inter-generational, and also, of course, global. The paradigm of an integral ecology, which by definition does not exclude human beings, needs to take account of the value of labor" (LS, n. 124), and not only for human dignity in a deontological sense, but even because "to stop investing in people, in order to gain greater short-term financial gain, is bad business for society" (LS, n. 128).

When we demand that politics not be subordinated to the economy, and that it seek the common good by placing people at the center, we call for a *humanism* that cultivates an ethical (not "cosmetic") dimension of life and profession, a sapiential horizon where analyses and decisions, as well as scientific and technological achievements, go hand in hand with philosophical and ethical values. This distances itself from any type of narrow and counter-productive *specialism*, which goes well with technocracy, but not with the pursuit of wisdom and the common good.

Politics, the art of living together and thinking about common life together, should make us more human²⁹. Its center must be the human being, and its purpose must be the integral development of everyone and the social conditions for that everyone can respect him or herself³⁰. To support this development, we must start from an authentic vision of the human, of a new humanism. Thus, in a plural society of free people, politics should not attempt to organize the lives of all, but rather to create the conditions so that each person can fulfill his or her legitimate aspirations in freedom. This set of conditions for the coexistence of all in freedom is what consti-

²⁹This is the understanding of the common good which the Jesuits Universities in Spain have, vid: UNIJES, *Por la regeneración democrática de la vida pública* (11 de julio de 2013), in which writing I took part.

³⁰The social basis of Self-respect is the main social primary good according to John Rawls in *A Theory of Justice* (1971) and other works.

tutes the common good, which is the responsibility of all, but more directly of those who legitimately exercise political power.

Several actors on the world stage, including the Catholic Church, have expressed the need for politics to regain space over the economy. This statement, which becomes more urgent in the context of a crisis where markets seem to impose their law on governments and on people, does not imply rejection of the economy or its actors. Economic activity – with companies, businesspeople and entrepreneurs as a key social asset – is the source of the creation of wealth and the channel for the production of goods and services for all; in it, each person is guided according to his or her legitimate aspirations. If politics is to be above the economy, it is only to frame these particular activities within the common good, in the general interests of society: and it does so by channeling the economic activity of many, correcting the dysfunctions that the game of freedom inevitably generates, paying special attention to the most vulnerable. In these matters the Pope Francisco is being very forceful.

11. SOME EDUCATIONAL IMPLICATIONS

With careers likely to be more disrupted than at any other point in the past, individuals should anticipate the need to retrain in the future. A talent mismatch already exists in many countries, with many well-educated workers finding employment in lower-skilled jobs. To combat this, greater coordination will be needed between educational, training and employment sectors.

in this context, the smart is – as King Philip VI wisely said in his last Christmas Message – while I was written this essay – “to adapt to this new and unstoppable reality, and develop our skills to the limit so that we can seek success in the sciences, economy, culture, industry and security; but always preserving the human values that identify and define us”. We

need either to adapt or to maintain values, and these have to do always with the good of people and the common good of societies without renouncing humanly oriented scientific and technological innovation.

And in this task, as the same message follows, “education is the key factor, and undoubtedly will continue to be. An education which strengthens our knowledge and keeps it constantly updated, but which also teaches us languages and culture, citizenship and values; which prepares our young people to be citizens in this new world, with more freedom and more skills, and able to use and learn from the experience of older generations. An education which encourages research, fosters innovation, promotes creativity and the spirit of enterprise, as demanded by the society of the future, which is the society we are already living in”. I subscribe one by one all the words.

The Oxford Martin Group deals with the question on how should the education and training system respond to some of these potential transformations?³¹ It is clear that more information & communication technology (ICT) skills will be needed, but also an increase on Science, Technology, Engineering and Mathematics skills (STEM skills)³², increase in soft skills, a move away from rote to active learning, increase in apprenticeships and corporate based training and increase in investment in teachers.

This is why it is said that just as important as cognitive skills are non-cognitive skills, that is, the behavioral traits and characteristics that young people possess, such as motivation, perseverance, resilience, self-control, effort capacity, ability for team work or socially interact, leadership, ..., as well moral integrity and the rest of ethical values. The question here is on the malleability of these skills: some are clearly got by

³¹ I follow in this point to Citi GPS, *Technology at Work v. 2.0...*, 121-124.

³² It is interesting to know how Intermediate level skills in STEM seems to be riskier educational investment.

education, others are not so clear, rather there are doubts that can be taught in academic institutions. The university institutions always have something valuable to contribute in that respect but it is certainly not only matter of them.

Moreover, the effect of technology not only changes what the education sector needs to do in order to supply the labor market with necessary skills, it has the potential to also change the way this education and training is delivered³³. At this stage, the biggest unanswered issue is whether the use of new technology offers a genuine like-for-like substitute in terms of educational quality, or whether the development of certain skills or aspects of knowledge require face-to-face interaction, demonstration and feedback. In this respect my opinion as a professor currently leading a university institution is that technology is already helping a lot and will have to help even more teaching and learning, but education will never cease to be an act of human relationship which will always require face-to-face interaction at some level and in, at least, some phases of the processes. And educators must be more and more process activators than space controllers, as pope Francis likes to say.

12. DEPTH AND UNIVERSALITY IN ETHICAL THINKING

We have never had so much knowledge, but so useless, if we think of how badly we have solved fundamental problems. We need to go beyond the surface of what we do and see, thanks to and through new technologies, because these are not, by any means, purely neutral instruments with respect to human life. On the contrary, they involve a definite ordering of space and time, of social relations, and shape new ways of thinking, living and being. Of course, they affect pol-

³³ Various models exist, from incorporating technologies into a traditional education setting to moving entirely out of the classroom through massive open online courses (MOOCs) and similar, in *Technology at Work v. 2.0...*, 124.

itics and implications for building a better world. Pope Francis is very concerned about this: "We cannot think about the future without offering them real participation as agents of change and transformation [...] But how can we make them participants in this construction if we deprive them of work, of decent employment that allows them to develop themselves with their hands, their intelligence and their energies?"³⁴.

The result of the British referendum on whether or not to remain in the European Union demonstrates perfectly the passivity of young people in matters that now concern them, but whose consequences they will suffer in the future. Only some 40% of those aged thirty years or less voted, and 77% of them voted in favor of remaining in the European Union, but we know that the result was that of *Brexit*, that is to say, leaving the Union, and consequently, the solution goes against the majority opinion of young people who did not feel motivated to vote, but who subsequently protested the result which will have an effect on them.

In a world where the digital culture in relationships and in everything is so alive, it is becoming more urgent to recover spaces of vital experience, encounter and interpersonal service. Pedagogical action must be able to guide individuals to know themselves internally (depth) and to understand the world (universality) in which we live and in which we are called to situate ourselves and learn. This is why it is rightly said that so important as the cognitive skills are non-cognitive ones.

We need a realistic education, which opens and confronts people to reality, and which puts people in touch with their own inner-self, not for them to stare at their own navel, but rather to become *conscious, competent, compassionate and committed people*. We need an entire program of comprehensive

³⁴ FRANCISCO, *Discurso en la recepción del Premio Carlomagno* (6/5/2016).

training that calls out to educators, willing to give the best of themselves with intelligence and mercy. So expressive was Pope Benedict XVI in saying that “There is no intelligence and then love: there exists a love rich in intelligence and intelligence full of love” (CV 30).

On internet, there are many good things and many harmful contents at the reach of any user, but the most serious thing is that the continuous non-digestion or assimilation of materials that are collected or received, together with the endless and virtually instantaneous nature of this process, causes dispersion, extraversion of consciousness and a concept of experience as continuous acquisition, which punctures the user from within.

Although today we may lack effective social practices to manage ourselves in the cultural scene of our times, it must be possible to imagine and implement good practices to change and improve people. And this in the cultivation of spaces to contemplate the unstoppable flow of the culture of “real virtuality”, to control and not to be controlled by instruments, to cultivate in a practical manner the freedom to value and actively choose what we want to do with new technologies and their incalculable and ambivalent possibilities. It is certainly difficult but it has to be possible.

Disclaimer

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CATHOLIC SOCIAL TEACHING IN THE DIGITAL AGE¹

PAUL TIGHE

The relationship between Catholic Social Teaching (CST) and the 'so-called' Digital Age is a complex one. It is clear that digitalization and the associated technological developments and applications raise issues that will become part of the content of CST. Perhaps the most obvious of these are questions concerning the future of employment in a world where increased mechanization and developments in the area of artificial intelligence and machine learning are already impacting employment and where the arrival of the 'gig economy' is obliging us to rethink many of our traditional models for reflecting on relationships between employees and employers. Existing reflection on the role of finance has been complicated by the emergence of new forms of electronic currencies and 'fintech' in general. The business models of the social media companies which focus on the harvesting of data from consumers, often without their full awareness, and on competition for their attention, with a 'race to the bottom' in terms of the production of content that attracts and retains their interest, pose particular difficulties for those concerned about corporate social responsibility. The global nature and the economic power of these companies further stresses already fragile structures for trans-national regulation and governance. I would not wish to underestimate the importance of examining these and other emerging issues, nor would I wish to suggest that they are amenable to easy solutions, but I am

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relatively confident we will find within the established insights, values and reflections that constitute CST the intellectual and ethical resources that will allow us to address them intelligently and coherently. The more radical problems become evident, however, when we consider the cultural context within which those who might wish to develop and promote CST are called to operate.

1. CULTURAL TRANSFORMATION

It is necessary that we recognise the significance of the changes through which we are living. The digital age is not just an epoch of technological revolution but also, and perhaps more profoundly, a time of cultural transformation. The last twenty five years have seen an exponential rate of development in the capacities of the technologies available to support and facilitate human communication and social interaction. The combination of these developments in mobile telephony, computer technology, fibre-optics and satellites mean that many of us now carry with us devices that allow us instant access to an extra-ordinary range of information, news and opinion from around the globe and that enable us to communicate by word, text or the sharing of images with people and institutions in every corner of the world. This revolution in information and communication technologies, however, cannot be adequately understood merely in instrumental terms: it is not simply a question of communication, connectivity and the exchange of information growing in terms of volume, speed, efficiency and accessibility but rather that we are also witnessing concomitant changes in the ways in which people use, and are conditioned by, these technologies in their efforts to communicate, form opinion, engage in politics and ultimately live together. CST is challenged to reflect on these cultural changes which have social, philosophical and anthropological resonances and which require a critical re-evaluation of the environment in which civil and political discourse must take place.

2. BEYOND OPTIMISM

Political and social developments in the last year have probably served to disabuse us of any naïve optimism concerning the capacity of digital technologies to make our world a better place. It is important to remember, however, that only 4 years ago, Eric Schmidt and Jared Cohen, concluded that *'the best thing anyone can do to improve the quality of life around the world is to drive connectivity and technological opportunity. When given the access, the people will do the rest'*². To be fair, they recognized problems and difficulties but they remained unrelentingly and, from today's perspective, unrealistically upbeat – *'We will continue to encounter challenges in the physical world, but the expansion of the virtual world and what is possible online – as well as the inclusion of five billion more minds – means we will have new ways of getting information and moving resources to solve these problems, even if the solutions are imperfect'*³. Already in 2009, Pope Benedict had sought to warn that *'Just because social communications increase the possibilities of interconnection and the dissemination of ideas, it does not follow that they promote freedom or internationalize development and democracy for all. To achieve goals of this kind, they need to focus on promoting the dignity of persons and peoples, they need to be clearly inspired by charity and placed at the service of truth, of the good, and of natural and supernatural fraternity'*⁴. In his encyclical, *Laudato si'*, Pope Francis takes this argument even further and reminds us that it not a simply a question of seeking to ensure that technology is used for the right purposes but that there is a risk that our very ways of reasoning and reflecting have been conditioned by our increasing exposure to technology. *It can be said that many problems of today's world stem from the tendency, at times unconscious, to make the method and aims of science and technology an*

²*The New Digital Age: Transforming Nations, Business, and Our Lives*, p. 158.

³*Ibid.*, p. 31.

⁴*Caritas in veritate*, 73.

*epistemological paradigm which shapes the lives of individuals and the workings of society. The effects of imposing this model on reality as a whole, human and social, are seen in the deterioration of the environment, but this is just one sign of a reductionism which affects every aspect of human and social life*⁵. Notwithstanding his seeming pessimism about the possibility of freeing ourselves from the this way of thinking, *the idea of promoting a different cultural paradigm and employing technology as a mere instrument is nowadays inconceivable. The technological paradigm has become so dominant that it would be difficult to do without its resources and even more difficult to utilize them without being dominated by their internal logic*⁶; he proposes that *there needs to be a distinctive way of looking at things, a way of thinking, policies, an educational programme, a lifestyle and a spirituality which together generate resistance to the assault of the technocratic paradigm*⁷. In particular he challenges believers to foster this new way of seeing and understanding our world and our social structures: *We need to develop a new synthesis capable of overcoming the false arguments of recent centuries. Christianity, in fidelity to its own identity and the rich deposit of truth which it has received from Jesus Christ, continues to reflect on these issues in fruitful dialogue with changing historical situations. In doing so, it reveals its eternal newness*⁸.

Although Pope Francis developed his reflection on the need for a new paradigm in the context of his reflection on the environment, it is clear that such a shift in thinking is necessary if we are to contribute to the healing of the cultural deformations which have rendered civic and political discourse more shrill and problematic and consequently less effective in helping individuals and societies to reason together and to find ways of cohabiting peacefully and with mutual respect. Many of the greatest threats to our future from climate change

⁵ *Laudato si'*, 107.

⁶ *Ibid.*, 108.

⁷ *Ibid.*, 111.

⁸ *Ibid.*, 121.

to food insecurity, and from war and terrorism to criminality, can only be addressed by shared refection and agreed forms of action. I would like to indicate some of the dynamics of contemporary discourse which I believe may render more difficult the types of conversations that are necessary to promote individual and social well-being⁹.

3. RECOVERING A COMMITMENT TO TRUTH

The most obvious, and probably least controversial, need is to encourage all those involved in the dissemination of news and information to be attentive to the destructive legacy of 'fake news' in what some commentators are now calling a 'post-truth' era. The commitment to truth that should be the hall-mark of the activities of those who work professionally in this area is obvious. In the area of professional ethics, the attempt to articulate ethical responsibilities usually proceeds from an analysis of the fundamental human needs that the profession strives to serve. Even the most superficial reflection will reveal that a concern for truth should be a core ethical value for communicators. This intuition was articulated by Pope Benedict in May 2008: *It is self-evident that at the heart of any serious reflection on the nature and purpose of human communications there must be an engagement with questions of truth. A communicator can attempt to inform, to educate, to entertain, to convince, to comfort; but the final worth of any communication lies in its truthfulness... The art of communication is by its nature linked to an ethical value, to the virtues that are the foundation of morality*¹⁰. This fundamental commitment to truth in the dissemination and sharing of information and knowledge is necessary to

⁹WHILE SHERRY TURKLE, *Reclaiming Conversation: The Power of Talk in a Digital Age* (2015), has highlighted the sociological and psychological necessity of recovering the art of 'face to face' conversation, my concern in this speech is to examine the broader necessity to rehabilitate public discourse.

¹⁰Pope BENEDICT, *Address to School and Faculties of Communications*, 2008.

enable individuals make responsible choices and societies to flourish. *The media are called to serve human dignity by helping people live well and function as persons in community. Media do this by encouraging men and women to be conscious of their dignity, enter into the thoughts and feelings of others, cultivate a sense of mutual responsibility, and grow in personal freedom, in respect for others' freedom, and in the capacity for dialogue*¹¹. Good media are indispensable for democratic societies: they provide information about events and important policy issues, about politicians and other public figures. They enable leaders to communicate quickly and directly about matters of significant public concern. Ultimately, they provide the public with the information they will use to make intelligent judgements and to determine their choices in elections. Alan Rusbridger (the former Editor of the *Guardian*) has pointed out that: *As journalists we would like it to be self-evident that what we do is as crucial to democracy as a clean water supply or a fire service*¹². Given the importance of media for the functioning of democracy, it is obvious that certain responsibilities follow. Already in 2002, in one of the most interesting and indeed prophetic reflections on the issue of media ethics and responsibility, the British philosopher Onora O'Neill highlighted the importance of trust in enabling social life to flourish. She spoke of the important role of the media in holding various interest groups to account and in scrutinizing their trust-worthiness but she stressed the resultant responsibility on it to exercise this role responsibly: *If the media mislead, or if readers cannot assess their reporting, the wells of public discourse and public life are poisoned. The new information technologies may be anti-authoritarian, but curiously they are often used in ways that are also anti-democratic. They undermine our capacities to judge others' claims and to place our trust*¹³.

¹¹ PONTIFICAL COUNCIL FOR SOCIAL COMMUNICATIONS, *Ethics in Communications*, 2000.

¹² *Guardian*, 6/9/2011.

¹³ *A Question of Trust: Reith Lectures 2002*.

In the context of digital media, it is worth noting that the ethical responsibility of individual journalists, and of the media as a whole, is both magnified and threatened. A particular result of the changes in the structures of journalism is that increasingly smaller numbers of professional journalists are expected to handle ever greater volumes of information. There is an ever present danger that the journalists will not be in a position to deal critically and in depth with this so-called “information overload”. There is real danger that our cultural discourse becomes superficial. One commentator has expressed this risk succinctly: *Visual and electronic media, today’s dominant media, need a certain kind of content. They thrive on brevity, speed, change, urgency, variety and feelings. But thinking requires the opposite. Thinking takes time. It needs silence and the methodical skills of logic*¹⁴.

4. CHALLENGING THE TENETS OF UNARTICULATED POST-MODERNISM

Good thinking clearly takes time and it is necessary if, as individuals and societies, we are to make good decisions. I think it is also necessary, but perhaps less obvious, that we must be attentive to some intellectual and philosophical presuppositions that have become embodied in our culture and that have adversely impacted the human capacity to make good decisions both as individuals and collectively. The current crisis concerning ‘truth’ cannot, I believe, be blamed only on digitalization and new media but also has roots in post-modernity. *Digitalization may be considered as the technical foundation of social-cultural developments. Culture was already developing in a postmodern direction. Digitalization, however, works like a catalyst. It makes that some processes that are considered as*

¹⁴ Archbishop CHARLES CHAPUT, <http://www.archden.org/index.cfm/ID/2417>

*typically postmodern become visible and unavoidable swifter... think of individualization, the predominance of particularities over unity, the failure of metanarratives, and, consequently, the absence of a shared view of the past and a shared hope for the future, the preference for experience and emotion*¹⁵. I think CST must challenge some of the often unarticulated, and unacknowledged, forms of relativism that characterize contemporary culture. Even the so-called mainstream media, and public intellectuals in general, must be willing to ask themselves whether that methodological scepticism, particularly in matters affecting the public interest, which is a feature of much reporting and commentary (and which is not without its benefits in society), has not become distorted to the extent that we are often confronted with a type of cynicism in which all claims to truth and beauty are routinely rejected, ignored or regarded disdainfully.

Within academic schools of philosophy it is common to distinguish between fundamental or foundational ethics and special or applied ethics. While the attention of the latter focuses on specific issues and disciplines, the former tends to be concerned with more basic questions about what it means to talk of good and evil or right and wrong and how it is possible to make ethical judgments. Even though CST clearly belongs to the realm of applied ethics; it would be a great mistake not to attend to some of the material that would normally be associated with fundamental ethics. In particular, it is important that the public would be encouraged to study the different ethical theories and to engage critically with the, often implicit, influence of these theories on contemporary debates about ethics and on their own ethical reasoning. Without even being aware of it, many people in their approach to ethics are guided by insights that are rooted in utilitarianism (the end justifies the means), positivism (what is legal is ethical), emotivism

¹⁵HENK WITTE, *Is Catholicity still an appropriate concept in a postmodern world?*, 2014

(our feelings can tell us what is right and wrong) or relativism (there are no absolutes in the area of ethics). There is a real value in asking the people to study these theories, and to become more aware of their limitations, so that they can begin to examine explicitly and critically their own, often unacknowledged, criteria for judging right and wrong. One is reminded of the observation of Maynard Keynes concerning academic economic theories: *The ideas of economists and political philosophers, both when they are right and when they are wrong, are more powerful than is commonly understood. Indeed the world is ruled by little else. Practical men, who believe themselves to be quite exempt from any intellectual influence, are usually the slaves of some defunct economist. Madmen in authority, who hear voices in the air, are distilling their frenzy from some academic scribbler of a few years back. I am sure that the power of vested interests is vastly exaggerated compared with the gradual encroachment of ideas*¹⁶. Similarly in the area of ethics and ethical reflection, people may be operating with ideas that they have assimilated from the general cultural milieu and which they presume to be normative and trustworthy even though said ideas may have been critiqued and their inadequacies exposed by subsequent academic reflection.

CST needs to draw attention to those objective ethical theories, such as the natural moral law tradition, which are rooted in the conviction that the rightness or wrongness of human ethical choices can be discerned by a process of reflection on what it means to be human. Choices which, by their very nature, promote the human flourishing of individuals and society are judged to be good; while those that are intrinsically damaging to the well-being of persons and of human community are judged to be bad. These objective theories, which are best understood as involving a commitment to a method of moral reasoning rather than as providing a shortcut to truth,

¹⁶ *The General Theory of Employment, Interest and Money*, 1936.

require that humans work together to decide which choices and practises are to be encouraged and which should be discouraged. This discernment requires a careful consideration of all the relevant perspectives that are brought to ethical debates by different protagonists so that our human efforts to work out what is ethical are as objective as possible. These theories promote a dialogical approach to ethics, that is accessible to all human beings notwithstanding their religious or ideological differences, and provide a theoretical underpinning for the possibility of the genuine public debating of ethical issues. It is a shared commitment to searching for truth, rooted in the conviction of the ultimate objectivity of truth, which gives such debates their ultimate value – otherwise they become exercises in coercion and manipulation in which each seeks to assert his or her own view without any reference to the claims of truth. Pope Francis highlighted the dangers of what he calls ‘practical relativism’ which he argues is even more dangerous than doctrinal relativism. *In the absence of objective truths or sound principles other than the satisfaction of our own desires and immediate needs, what limits can be placed on human trafficking, organized crime, the drug trade, commerce in blood diamonds and the fur of endangered species?... when the culture itself is corrupt and objective truth and universally valid principles are no longer upheld, then laws can only be seen as arbitrary impositions or obstacles to be avoided*¹⁷.

5. HUMANIZING CIVIC AND POLITICAL DISCOURSE

Although much of my attention has been focussed on the need for professional communicators and public commentators to be attentive to their privileged responsibility for fostering public discourse; it is important to address a wider public, and to invite all believers, and indeed people of good will generally, to be attentive to their own practises in order to

¹⁷ *Laudato si'*, 123.

foster good and constructive habits which will promote discourse. This is particularly important in the context of social media where the traditional distinctions between the consumers and the producers of content are not so clear. Commentators frequently speak of *user generated content* with reference to the social networks but it is important to recognise that the very *culture* of the social networks is user generated. If the networks are to be spaces where good positive communications can help to promote individual and social well-being then the users, the people who make up the networks, need to be attentive to the type of content they are creating and sharing. Research has pointed to the increasing importance of the social networks in forming human identity¹⁸; in this context it is ever more urgent that we are attentive to ensure that these environments are safe and humanly enriching.

Good discourse is a human rather than a technical achievement; those attitudes and commitments which facilitate meaningful engagement between people and peoples must be nourished and encouraged. It is self-obvious that the networks can only be truly social if users avoid all forms of anti-social behaviour and expression. If networks are to realize their potential to be a forum to help people grow in understanding and appreciation of each other, then we should seek to be respectful in our modes of expression. Human discourse will only be fruitful when aggressive forms of expression are avoided. People will only express themselves fully when they are confident that their views are welcomed and not merely tolerated. As a community we can only grow in knowledge and insight if all feel free to contribute with honesty and authenticity. A particular sense of personal responsibility is especially required from those who engage anonymously in discussions and debates.

¹⁸GOVERNMENT OFFICE FOR SCIENCE, *Foresight Future Identities*, London 2013.

Although social media often offer greater visibility to those who are most provocative or strident in their style of presentation, true understanding is best nourished by reasoned debate, logical argumentation and gentle persuasion. CST must remind Catholic schools and Universities in particular of the need to form students in these skills and habits.

If people are not encouraged to engage intelligently with different views, the risk is that they will become closed in by their own pre-established world view and that they will be confirmed in their own opinions and prejudices rather than helped to search for truth and understanding. In the political arena, there is the risk that people will only engage with media that they know to support their particular views and they will not be exposed to alternative positions or to reasoned debate or discussion. They become trapped in 'echo chambers' or 'cocoon', hearing only the voices of those who agree with them¹⁹. This in turn will create increasingly polarized and confrontational forms of politics where there is little room for the voices of moderation or consensus. If the digital networks are to achieve their potential in promoting human solidarity, the art of dialogue must be recovered. When people listen to the 'other' and allow his or her voice to breach their defensiveness, they open themselves to growth in understanding. If they are willing to listen to others, they will learn to see the world with different eyes and will grow in appreciation of the richness of the human experience as revealed in other cultures and traditions. The more people grow in knowledge of others, the more they grow also in self-knowledge. *We have to be able to dialogue with the men and women of today... We are challenged to be people of depth, attentive to what is happening around us and spiritually alert. To dialogue means to believe that the "other" has something worthwhile to say, and to entertain his or her point of view and perspective*²⁰. Engagement with others alerts people to

¹⁹ CASS SUNSTEIN, *Going to Extremes: How like minds unite and divide*, 2009.

²⁰ POPE FRANCIS, *World Communications Day Message*, 2014.

those basic desires to love and be loved, for protection and security, for meaning and purpose that are shared by all humans. Attentiveness to the human condition, and to the one world which all share, highlights the truth that these desires can only be satisfied fully if people construct a society that is committed to a shared concern for the well-being of all rather than to an ethos of unbridled competition where the happiness of some can only be achieved at the expense of others.

6. CONCLUSION

Pope Francis has spoken of the need to start a new conversation, for a new form of dialogue. *“I urgently appeal, then, for a new dialogue about how we are shaping the future of our planet. We need a conversation that includes everyone, since the environment challenge we are undergoing, and its human roots, concern and affect us all”*²¹. If CST is not attentive to the need to promote such dialogue and to establish the conditions that are necessary for it to prosper, its own valuable insights and contributions will , at worst, be lost in a cacophony of voices speaking at cross purposes which only serve to consolidate division and polarization or, at best, find an audience only among those who already share its conclusions.

Disclaimer

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²¹ *Laudato si’*, 14.

DIGITAL TRANSFORMATION OF OUR (ECONOMIC) SOCIETY¹

THOMAS RUSCHE

In the decades before Pope Leo XIII composed the encyclical *Rerum Novarum* in the year 1891, a technological process of change driven by the Industrial Revolution had set in which has molded our society up to today. A needy working class arose that, initially, saw no advocate. Wrong prophets were heeded and with their socialist pamphlets promised a classless paradise on earth. In the Industrial Revolution Pope Leo XIII recognized the degraded workers and the socialist promises of redemption as a challenge in the world's history. He responded to this in his *Rerum Novarum*, the mother of all social encyclicals.

More than 125 years later, the world again finds itself with the 'new things' of the digital transformation in an upheaval whose only constant factor is the increasing dynamics of change. An uneasy population fears for its wealth, populist nationalists find unexpected acclaim and win elections with their slogans that deride Christian and democratic basic values such as liberty, equality and justice.

1. ASPECTS OF DIGITAL TRANSFORMATION

The dynamics of digitalization owes its technological breakthrough to the coded transmission of information with an exponential increase of the computing power².

¹Berlin Conference, 15-16 November 2017.

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Today's smartphone, for example, wields a mightier computing power than all NASA computers combined which made possible the first landing on the moon in 1969. This explosive performance will lead to more grave changes in the next 5 years than in the past 50 years.

1.1. *Digitalization of Human Acting*

Man is born as a deficient being in need of other people's concern in order to survive. In analogous relationships, children learn the alphabet of life. Talking and laughing with one another, playing and crying, emotional eye contact and feeling human closeness are of a molding importance for the mental and physical development of the human being. However, parents, even at home, are more and more often busy online. They follow their Instagram-Accounts (photo-online-service) check their Facebook-news and, digitally distracted, do not hear their crying babies. Children experience their parents permanently busy with their digital devices. At the dinner table, members of the family are connected via online. Personal talks are interrupted when a cell phone text pops up. Even in prams, grown-ups leave their three-year-old offspring with a smartphone to go shopping undisturbed. Before children learn the traditional cultural skills such as arithmetic, reading and writing, they acquire an electronic user competence in a playful way. In their parents' home, they experience a merging of analogous and digital worlds. In this manner, a digital chat with the son studying abroad via Skype is experienced as real likewise as an analogous table discussion with the daughter living at home.

The sexual integrity of the human being is threatened by multifarious infringements in the digital cyber world. Children watch and experience on the Internet uncontrolled hardcore pornography and extreme representations of violence. Peer-to-peer-violence such as the shameless publication of intimate pictures of peers which previously were exchanged

unsuspectingly (sexting) is also widely spread as is cyber-grooming in which adults prepare sexual offline-meetings targeting and conditioning minors online by shameless materials. To hide their identity users do not use their real name but adopt a virtual second identity for the cyber world. These FNRP (Fake Not Real Person) are to be kept apart from computer bots which, on the Net, are programmed machines which create the illusion of a human identity.

Just in view of the anthropological difference to machine intelligence, the developmental boosts of Artificial Intelligence (AI) are remarkable. Therein brain research has become a 'provider' for the development of artificial neuronal nets. Supported by large computing capacities, they solve problems by means of learning algorithms quasi independently.

Contrary to humans, the computer enters the world without a brain. Thanks to neurologically processed sensual impressions, infants can abstract and refer from e.g. toy cars to a real automobile on a road. For a comparable learning process, electronic computers would have to be fed with large quantities of data before they could recognize patterns. In so doing, they initially make mistakes. However, each corrected mistake reduces just this error in the following interpretation of patterns. AI technology conquers from street traffic to preventive health care all areas of life of a human being: thus computers differentiate malign moles from benign ones with greater precision than a qualified medical specialist.

Digitalization of the health system is in full sweep. Man will have to learn to trust the computer. When? Whenever the machine is better at recognizing patterns because of its greater computing power.

With his/her smartphone in his trousers pocket or her handbag, the user always bears the mobile Internet on himself or herself. Electronic providers gain increasing importance correspondingly. For humans, Google becomes a life assistant that helps finding directions, petrol stations and restaurants. Google Scholar opens permanent access to international top

research and opens up the most comprehensive library to the world's body of knowledge.

On the Net we can have everything and instantly. Digital providers link the things which Man needs for living and sketch a world map of all possibilities. The computer knows the consumer's profile, knows where the user lives and works, the friends s/he has, where s/he buys what, what music, texts and films s/he consumes, where s/he likes going out for dinner and on holiday.

This data makes possible service providers on the Internet for everybody that discloses themselves and life habits online and enables them to set up a life-world index comprising not only basal data such as year of birth, gender, education, marital status and employer but also relationships with friends, habits of consumption and most intimate preferences all represented in a behavioral grid. This highly personal information is traded as precious data material to provide the consumer with e.g. digital newsletters and recommendations for products the same way as with analogous serial letters and mail circulars.

1.2. *Disruption of the Entrepreneurial Organization*

Every business process of a company can be rendered into digitalized programs. This requires large data quantities. For digitally transformed enterprises, data turn into claims for prospecting gold. By means of gathering data, management make decisions precisely to the point, in retailing chances for higher turnover are used, and in the production line costs are minimized.

As large computing capacities become available at cheaper and cheaper rates, digitalized start-ups see mostly a lower barrier of entry, especially so, as the demand for capital for warehouses, hardware, 'brick and mortar' is little. As commonly known, Alibaba, the world's biggest retailer, owns no

inventory, Airbnb, the biggest provider of overnight stays, no hotel estates, big taxi company Uber no taxis &c.

The winners of the disruption build platforms and link-up demand and supply without themselves providing nor possessing the goods offered and demanded.

Platforms make use of the trend of the *Sharing Economy*, the systematic providing and reciprocal borrowing and lending of goods and resources. The automobile as a status symbol increasingly loses its meaning. Owning one, two or even three cars, which, in case of doubt, are parked at the wrong place, is less desirable than falling back on a 'car to go' anytime and anywhere.

Platforms help themselves to the cloud-computing and reach their audience via software nets which they do not have to set up themselves at considerable costs, but which they use via interface without financing hardware and IT-development. For cloud clients, this is efficient as only the service actually used is charged for. When software nets link up with electronic production structures, industry 4.0 can jump on this bandwagon in which the individual production of products is cost-efficiently possible leading to strategic advantages of specialization.

In the netted designing of thoroughly digitalized services of product and performance, start-ups in most cases act in a more agile fashion than enterprises established in pre-digitalization times, which, organized by a rigid linear hierarchy, leave little room for creatively organizing projects in which digital concepts are bred and realized. Such incubators are the nuclei of a new digital wave of founders which, within the framework of a creative process of destruction, push analogous, encrusted enterprises out of the market.

Due to digital network effects, digital providers relentlessly grow and, like monopolies, take over pool positions.

Digital transformation provides working people with an ever – increasing flexibility³, the time – clock loses its meaning. Home office and annual work accounts are spreading not only among start-ups but also in traditional enterprises and make better a better balance between private and job lifetime. However, this is not always successful. The company cell phone becomes an electronic chain if permanent availability is expected. Someone who can do his/her work digitally any time and any place must be able to act self-responsibly.

Efficiency precedes presence. Measuring efficiency, however, is also revolutionized by digitalization. Digitalized ticket-systems furnish co-workers continuously with standardized work-tasks whose processing speed is checked IT-supported. Close-meshed electronic reporting on performance is to stimulate humans for high achievement. Standardized tasks such as typing dictations and feeding in cash register data, however, are done by computers.

In view of this digital transformation, do not only secretaries and cashiers lose their jobs but other job profiles also disappear in all income brackets. Besides readers of utility meters and travel agents, highly qualified tax consultants, jurists and managers will not be needed anymore if they lack digital literacy in executing their profession and cannot furnish a qualitative, emotional additional value.

1.3. *Upheaval of the Community*

From 2014 to 2019, the load of data transmitted on the digital Net in Germany will have almost tripled: From 720 billion Gigabytes to 2 trillion; for this impact the digital infrastructure is not prepared. The technological deficit in digitalization manifests itself in digital roads full of 'potholes', fragmentary broadband and only few glass fiber connections.

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Someone who is travelling in Europe knows how often one ends up in no signal areas, be it in the car, train or hotel⁴. There is lack of a highly functioning digital infrastructure.

– In view of an ever-increasing acceleration of technological development, the deficit of legal regulation, and with it of a lawless realm, also grows; in general terms, this applies to the completely unregulated Dark Net. Comparable to analogous No-Go-Areas in derelict parts of cities, trading arms, drugs and human trafficking are digitalized here and used for financing international terrorism. But on the 'official' Internet it is difficult to prosecute criminals. As an example, unclear penal punishment is mentioned which (does not) threaten(s) adults targeting minors for social contact on the Internet. The Children and Young Persons Act, which, in the analogous world, becomes effective in the censorship of (cinema) films, magazines and restricted admission to bars and nightclubs, fails in the digital world.

– Though shared reading and storing WhatsApp-news require the legal approval of the user, this duty of seeking authorization, however, is circumvented in many different ways. If the user does not agree, there is threat of exclusion from digital media.

– The lack of a digital educational structure poses a special challenge. Occasionally, Germany's grammar school students are trained for 'Powerpoint' and 'Word' but often there is no competent IT-class instruction. In analogously structured school lessons, digitalization is taught only from the perspective of the consumer, without imparting skills of programming or processing which are of greatest relevance for shaping the digital transformation.

– The digital permeation of global politics impacts parts of the population as unprepared as it does politicians. Social

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media offer all users, also political activists and conspirators unheard communicative chances of multiplication. The global community is threatened by radical messages on the Internet which often are full of hatred and untrue. Populists, secret services and professional propagandists program chatbots that spread their abstruse messages on the social networks. These self-teaching autonomous machines equipped by artificial intelligence leave other participants of communication in the dark that they are no humans but computers spreading pre-programmed messages. They canvass for candidates, political parties or products denounce these and spread false news about alleged rapes and arson.

– Despite the principal openness of social networks, individuals inform themselves in the echo chambers of their own prejudices and pseudo truths. Filter balloons bubble up which lead to a segregation of different worlds of meaning and make possible a *de-reality* (Hannah Arendt) of information which, as fake news, enhanced by algorithms, influence political processes. Cyberattacks and hacker assaults stall utility networks (electricity and water), telephone services, enterprises and government authorities. The citizens' trust in the stability of democratically legitimized political institutions is jeopardized, the legitimacy of free elections influenced and, thereby, put in question. Democracy itself is put at risk which is attacked by totalitarian systems by means of digital warfare worldwide.

2. DIGITAL TRANSFORMATION IN THE LIGHT OF SOCIAL ETHICAL PRINCIPLES

Social ethical principles provide for the “social processes, structures and institutions an obligatory framework of order”⁵. This order of ethics has been developed for an analo-

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gously structured industrialized economic society. Are these principles still relevant in a digitally transformed world? Factually, this moral sphere of the digital world seems to decouple itself from the analogous culture. In view of the technologically driven societal upheavals, how can principles and values rationally be grounded and applied to situations adequately – offline as well as online? Seen from the perspective of the deficit of legal regulations and digital failure of political decision – makes the social ethical question arises the more urgently so that the moral vacuum in the cyber world does not escalate into a menace to the analogous habitat of humans.

Reflected in terms of social ethics and democratically legitimized, the digital transformation can foster a global cooperation of politics and media, economy and technology, strengthening environmental protection as well as improving social standards. How? Through a worldwide exchange of information, internationalization of law and an adjustment of living conditions of all people who unite on social networks.

2.1. *Personality and Sociality*

Man is more than a data profile that can be put into algorithms. As an image of God, s/he is endowed with a self-evident, unalienable dignity. The human person is an end in itself. Never must Man be turned means for other purposes. This unconditional respect of Man is valid, as is Jesus statement from his court speech, in the analogous world as well as in the digital world: “Verily I say unto you, inasmuch as ye have done it unto one of the least of these my brethren , ye have done it unto me” (*Mt 25:40*). Virtual encounters in cyber space are experienced mostly in a more detached way than analogous face-to-face situations. Merely the spatial difference robs the interaction its immediacy.

In www looms an aloofness threatening the integrity of Man who is seemingly only mobbed or sexually molested

virtually. Though no immediate physical consequences pose threats, the psycho-physical stress of virtual attacks is immense, especially so with minors. “Where human compassion is violated, God’s Contract is broken”⁶. Man is in need of fellow-Man to become a personality. The human person finds its “fulfillment only when touching others. It is open, can be spoken to and is set for dialogue”⁷. The social ethical double principle of personality and sociality expresses that Man through encounter becomes Man and that social interactions are the condition for the development of his moral and personality development.

Obviously, social media enlarge these spaces of encounter. Everywhere and at any time people of all races and nations, occupations, genders, and social classes form relationships by means of Facebook, Instagram, Skype, Snapchat, Twitter or Whatsapp as a universal Network. The Internet provides the human being as a community being set for dialogue with far-reaching possibilities of communication beyond family, friends and professional colleagues. Everybody has a right of access to the Internet for communicating in free social interaction. These digital possibilities of interactions are to be supported by the state. At the same time, enterprises and legislature are to prioritize data security and guarantee the right to self-determination for personal data.

Digitalization is no value in itself but rather a technical means to help socially unfold personality through communicative networking. Ultimate end is above all humaneness. Every technological progress – judged social ethically – makes sense only when serving (worldwide) realization of humaneness.

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2.2. *Solidarity and subsidiarity*

Christian Social Teaching in the age of digitalization studies the dramatically changing framework of conditions governing living life among humans. How can this technologically driven process of change be shaped so that, against the backdrop of Christian compassion and empathy, it leads to strong solidarity among people and nations? The Christian message of love fulfills itself in perfect human mutuality. Discovering oneself in the mirror of fellow-man means, at the same time, to stand by his side and understand all his wishes and anxieties and offering one's help.

Though digital technology makes possible universal communication, it often seduces to a total social isolation of the individual. The individual is thrown back to his/her own devices in view of the virtually many but in concrete terms not really binding communications and feels left alone. In addition, the digital spaces of resonance can lead to an overestimation of individualized attitudes and foster a Me-culture that seduces, among other things, to an excessive production of selfies. It appears I am constantly being asked, are to assess everything from my perspective, send tweets, like others or exclude them. Social networks, in contrast to an extreme individualization, can lead to a collective behavior in which the individual in a communicative surge of shit storm (avalanche-like negative criticism) and bashing (severe insults) is captured, sharing messages without second thought fomenting wanted or unwanted populist propaganda machinery.

In the digital world, too, there is need for preparedness of reliable social intercourse which offers everybody large areas of freedom and secures necessary support. In a solidary community, i.e. staunch community, the stronger helps the weaker. At the same time, the principle of subsidiarity allows the individual to regulate and achieve what s/he can do him/herself without being patronized by other individuals, organizations or state authorities. This subsidiary ranking and dif-

ferentiation of individual micro level, entrepreneurial meso level and state macro level simultaneously make clear a far-reaching responsibility of the individual for society at large. How can the individual contribute to the development of the community and e.g. as a user of the Internet protectively shield mobbed colleagues, denounced politicians and scandalized political institutions?

Lacking or available financial means and social relationships, poverty or wealth, as well as (lacking) education decide on the access to the digital world. This *digital divide* of our society deserves the active solidarity and subsidiarity: somebody born into this digital world enjoying respective resources helps the pre-digitally socialized human beings who, on their part, oblige themselves to a continuous digital education. Digital natives prepare pre-digital fellow-men for coming technological changes. Everybody seeks to learn, within his/her means, responsibly handling new technologies.

This corresponds to the social ethical motto that the human being gains perfection by his activities (*omne agens agendo perficitur*). Responsibly handling personal data is also imparted. Enterprises open internal digital spaces of communication (Intranet) and make possible for their co-workers the electronic linking with their stakeholders (e.g. suppliers and clients). Co-workers are digitally qualified and put to work adequate to their competence. For unfolding digital potentials for development, each co-worker is entrusted with a space of decision-making as large as possible and secured the necessary technological support. Enterprises protect co-workers from electronic mobbing and technological over-exertion at the workplace. Responsible enterprises leave their sorted out computers to aid organizations such as Digital Helpers⁸, which refurbish the devices and distribute them for free use

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by socially-digitally under-privileged people, e.g. destitute immigrants.

In the digital era, the social-ethical responsibility of enterprises does not only comprise the humane shaping of the processes of change in enterprises but also the order of the framework itself. It is enterprises that push the process of digitalization globally because of an economic interest. How can the formation of monopolies (the winner takes it all) and cartels be prevented? What are possibilities to set up fair digital conditions for competition?

2.3. *Justice and Mercy*

In the former Federal Republic, Catholic Social Teaching essentially contributed to the development of the social market economy and today asks for a more just alternative to the Anglo-Saxon capitalism marked by Utilitarianism. Taking part in the digital process of transformation of society on the grounds of unevenly distributed chances and individual skills, one must demand with the principle of justice that "human beings despite all other differences must be recognized as basically equal and, therefore, despite all possible inequality, at least be given the same chances to unfold their potentials"⁹. Christian ethics of binding human compassion therefore turns against ethics of optimizing fomented by digital technologies at the expense of ostracized minorities due to their lack of digital qualifications. The world is more and more dominated by digital technology. Therefore, the right to analogous free spaces must be secured. Digital non-users are to be protected from discrimination. Analogous products and systems of distribution such as books, newspa-

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pers, magazines and bookshops among others are to be promoted on the grounds of a diversity of opinions¹⁰.

Technological changes and feared fault lines challenge the firm and constant will to give one's dues (*firma et constans voluntas suum cuique tribuendum*). For this, there is a need on the (inter-) national level for a Charter of Basic Rights that secures the right to an access to the Internet and protects the general free digital expression of opinion. Analogously formed legal regulations such as the protection of consumers and copyright are to be added corresponding to their digital development; legal institutes for data protection against data crime &c is to be newly created.

Influencing politicians by bots is to be prevented, (national) security, in view of challenging cyberattacks, to be secured. Criminality on the Dark Net is to be prosecuted relentlessly. Internet services are to be obligated not to create lawless spaces or to condone them. The increasing possibilities of Big-Data-Analyses¹¹, e.g. the assessment of individual disease risks to fix insurance policies challenge the protection of data. State institutions and digital technological enterprises can jointly check and secure online compliance with legal standards on the Internet e.g. protection of juveniles. Realization of *iustitia legalis*, i.e. of the legal justice for creating international common weal requires an architecture of effective sanctions whose analogous elements are supplemented by law institutes.

On the Net, too, there must be fair fee regulations for digital services. How is justice of contract and terms of trade (*iustitia commutativa*) to be guaranteed so that these also lead to just prices on the Internet? As in the analogous business world, this requires that the services to be exchanged deal with real values that do not represent a fictitious value.

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Achievement and counter-achievement must reciprocate in value (tantum-quantum) and yield a mutual benefit. Thereby, the common weal of future generations must be heeded. Today the environmental costs for the logistics of goods in the Internet trade are as alarming as the enormous consumption of energy of digital systems and their hardware at the end. Therefore, there is need of not only a social but also ecological organization of the process of digital transformation (green IT).

Justice is the least measure of love we humans owe each other, mercy its superior measure. In the first place, "love and mercy have their place in close human relationships. But they are also a basic condition for people living together and among peoples"¹². Especially in a digitally transformed society is there a need for mercy which e.g. manifests itself in the right to oblivion and deleting digital unpleasant digital traces that people leave on the Net. In the digital world, too, mercy can become an "innovative and motivating source of social justice"¹³ and becomes concrete, among other things, in an understanding, helpful handling with digitally demented people who have partially lost their sense of orientation in the analogous world and with pre-digital people who feel excluded from technological progress. In social-ethical terms, one should strive for seeking a well-balanced equilibrium between analogous and digital abilities which enable each human being to live a rewarding life in the real as well as in the virtual worlds.

How can "responsible imparting"¹⁴ of social-ethical principles succeed under changing societal conditions? Wilhelm Weber (1925-1983) already postulated "Catholic Social Teaching capable of dialogue"¹⁵. How can personality and sociality,

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solidarity and subsidiarity, justice and mercy be brought into the play of the protagonists? In order to judge and act, it is not only necessary to watch but also to listen to people¹⁶. In an intellectual dialogue of people concerned and involved with the process of digital transformation, 'new things' can be evaluated and principles adequate for the situations and different fields of actions be put in concrete terms (cf. Fig. 1) to make possible the *permanence of genuine human life* (Hans Jonas) worldwide.

This requires not only a theological education and the digital specialist's knowledge but also heeding the imperative for discourse: argue sensibly, be trustworthy, seek consensus and improve chances for dialogue.

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Social-Ethical Principles	LEVEL OF ACTING		
	Micro Level of the Individual	Meso Level of Enterprises	Macro Level of the State
Personality and Sociality	<ul style="list-style-type: none"> - Unalienable dignity of Man as an image of God more than a data profile of algorithm - Right to access Internet for free social interaction - Reduction of digital communication barriers 	<ul style="list-style-type: none"> - Prioritize data security - Improvement of communication conditions in company 	<ul style="list-style-type: none"> - Right to self-determination on personal data to be anchored in law - Secure personal human rights on Net
Solidarity and Subsidiarity	<ul style="list-style-type: none"> - Digital natives help the digital left behind - Obligatory continuous digital education - Responsible handling of personal data - Show and support fellow-men about digital changes 	<ul style="list-style-type: none"> - Protection against digital over exertion - Open digital spaces for communication in company (Intranet) - Link up stakeholders (e.g. suppliers & clients) - Support Digital Helpers - Protect workers from mobbing and shit storms - Continuous digital education - The digitally unqualified put to work intelligently 	<ul style="list-style-type: none"> - Set up digital infrastructure - Prevent formation of monopolies and cartels - Promote diversity of digital competition - Secure right to analogous world - No discrimination of digital non-users - Promote digital education at schools - Build an innovation-friendly framework
Justice and Mercy	<ul style="list-style-type: none"> - Fair fees for digital services - Equal pay for same work - Right to self-determination concerning personal data - Right to oblivion - Right to deleting digital traces - Protect users sharing intimate details on the Net - Lower digital energy consumption 	<ul style="list-style-type: none"> - Respect copyright - Net services respect protection of juveniles - Tatum-quantum - No offering of fictitious goods - Justice of price and trade - Protection of consumers - Use Green IT 	<ul style="list-style-type: none"> - Elaborate a digital Basic Law Charter - Overcome digital divide of world society - Secure data protection with effective sanctions - Protect free digital expression of opinions - Ban censorship, secure free access to sources of information - Secure right to access to Net - Fight criminality on the Dark Net - Environment-friendly goods logistics - Energy-saving electronics - Iustitia legalis

Fig. 1
Social-Ethical Reflections on the Action Fields 'Digital Transformation'

SECTION 3
JOBS AND WAGES IN THE DIGITAL AGE

SCARCE SKILLS, NOT SCARCE JOBS

JAMES BESSEN

1. TECHNOLOGY AND THE FUTURE OF WORK

New technologies are disrupting societies around the globe. Since the middle of the 20th century, developed nations have seen the share of employment in manufacturing decline dramatically. In the US in 1958, for instance, there were 300 thousand production workers in the broadwoven textile industry and 500 thousand production workers in the steel industry; today there are only 16,000 in the broadwoven textile industry and 100,000 in steel.

Although some of those jobs have been lost to globalization, most – about three-quarters by my estimates – have been lost to technological automation.

These losses place a heavy burden on our societies. The manufacturing sector has long been a major source of well-paying jobs for people who do not have a university education. The loss of these jobs has reduced economic opportunity for many and made it harder for less-educated workers to earn middle-class incomes. In the US, this trend has contributed to growing economic inequality; in Europe, it has contributed to growing unemployment. And in both, it has contributed to political instability. The burden of reduced opportunity falls most heavily on the less well-established sectors of society, such as the young and immigrants.

Nor is this strictly a problem of the developed world. “Premature deindustrialization” is affecting lesser developed nations (Rodrik 2016). The effect is to limit growth opportunities, to limit urbanization and the associated trend toward democracy. In effect, many developing nations can no longer look toward manufacturing exports as a path to economic growth.

And now a whole new set of information technologies is rapidly emerging that use “artificial intelligence” and “machine learning”. These increasingly promise to give computers the ability to automate tasks performed by all sorts of white collar and professional workers. Some people predict that these technologies will cause massive job losses across a broad range of occupations and industries over the next 10 or 20 years. Frey and Osborne (2013) write that these new technologies put “a substantial share of employment, across a wide range of occupations, at risk in the near future”.

Are we about to witness even greater social disruption brought on by mass unemployment? Are we approaching the “End of Work”? Not in the next 10 or 20 years. I argue that widespread fears about automation creating mass unemployment are misplaced for the near future. New technologies are, indeed, disrupting our societies, but new technologies are creating more jobs than they are destroying. The real challenge, instead, is that the new jobs require new skills, often learned on the job; these skills are difficult to acquire and the opportunities to learn are too limited. The result is that new technologies are exacerbating economic inequality, giving opportunity to some, but leaving many behind, including many young workers.

It is critical that we correctly identify the challenge posed by these new technologies. Our only hope of meeting that challenge depends on having the right policy remedies targeting a correct diagnosis.

2. AUTOMATION CAN CREATE JOBS

Technology has been automating work since ancient times and has raised concern about employment since ancient times as well. During the Industrial Revolution, many commentators, including Marx, predicted that automation would impoverish the working classes. Keynes raised the specter of technological unemployment during the 1930s. In the US,

politicians were concerned about computer automation during the 1960s. Yet repeatedly, predictions of imminent doom have proven premature.

Of course, this time the predictions might be right; past performance is no guarantee. Nevertheless, it is important to understand the mistake that past observers made in order to make sure we are not repeating it. Indeed, what people perennially misunderstand is that automation occurs in a dynamic economy. While automation reduces the amount of labor needed to, say, produce a yard of cloth, the effect is also to lower the price of cloth.

This, in turn, increases demand for cloth; if demand increases enough, employment of textile workers will rise despite the labor-reducing effect of automation.

To be concrete, consider textile workers of 100 years ago. The most advanced textile mills of that time in the US had very many machines and very few workers relatively speaking: they had 24 looms for each weaver employed. Over the course of the 19th century, the mills had already become highly automated. In fact, 98% of the labor that had been required to produce a yard of cloth in 1810 was taken over by machines by 1910.

Now you might think that it is obvious that such automation would have eliminated jobs for weavers. You would be wrong, however. Although jobs for textile workers have declined sharply since 1958, during the 19th century jobs for textile workers generally and for weavers in particular *grew dramatically*, confounding the predictions of Marx and others.

What happened to make this so? Demand increased. Two hundred years ago, cloth was very expensive and most people had little of it. A typical person had only one set of clothing, often made of wool or linen. Automation reduced the price of cloth sharply and so people bought more, much more. By 1910 in the US, people were consuming 10 times as much cloth per capita as in 1810 and total demand, accounting for the growing population, grew 100-fold. This meant

that the growth of demand outstripped the labor-saving effect of the automation and total employment grew in textiles. And this is what the doomsayers failed to anticipate.

But demand growth was not so robust forever. By the middle of the twentieth century, people had closets full of clothing and they had cloth draperies, upholstery, etc. Since then, a further decrease in the price of cloth has only had a very modest effect; people today simply do not buy much more cloth in response to a price decrease. Demand is satiated. In this case, automation is no longer offset by rapid demand growth and employment decreases, sharply so after the 1950s.

So automation can produce rapid job growth or rapid job losses or something in between in the affected industry. Employment will grow when there is large unmet demand in the product market; employment will shrink when the market is saturated.

But what is the story for the markets affected by computer automation? In order to understand the impact of the new technologies, the first thing to understand is the nature of demand in the relevant markets. And the evidence suggests that these technologies are addressing large unmet needs, so that computer automation is, overall, leading to job growth, not declines. In the 1980s, bar code scanners automated much of the work of cashiers in the US, but the number of cashiers increased. Electronic document discovery automated much of the work of paralegals, but employment of paralegals grew. The automated teller machines (ATMs) took over cash handling tasks from bank tellers, but bank teller employment has grown in the US since the major adoption of ATMs. And the reason is a demand story. The ATM made it substantially less expensive for banks to open up a branch office; this led them to open up many more branch offices, increasing the demand for tellers on net, even though there were far fewer tellers per branch.

Moreover, this pattern appears to be rather general. Use of information technology is associated with faster employment

growth in non-manufacturing industries – about 1.6% faster growth per annum on average. This is not true in manufacturing industries where, as the analysis of the textile industry suggests, markets are already relatively saturated. Thus automation that uses information technology has been very much like early 19th century manufacturing automation overall, increasing employment in response to increasing demand.

Of course most of the information technology used to date does not involve machine learning or artificial intelligence, so perhaps the impact of the new technology will be different¹. However – and this is a key point – it is demand, not technology, that determines whether automation will increase or decrease employment. The new technologies are being used in markets and applications quite similar to those that use existing information technologies. Because the demand response will be the same and because the nature of demand only changes slowly, we can expect the response to be similar. That is, for the next 10 or 20 years, most applications of new information technologies in most industries will be associated with growing employment, not job losses². And certainly not massive unemployment.

3. WINNERS AND LOSERS

Yet not all the news is good. New technology can benefit workers when they become more productive, leading to higher wages. But with information technology, not everyone has

¹ Artificial intelligence applications have been in commercial use since the 1980s.

² There is an important exception to this logic: cases where the technology *completely* automates all of the tasks performed by an occupation. In those cases, employment will decline. There are some technologies that might completely automate some occupations over the next 10 to 20 years, such as self-driving trucks. However, most analysts see very few occupations being completely automated in the near future because there are very many tasks that artificial intelligence technologies cannot perform.

the opportunity to benefit. Some people are given opportunities to work with the new technology, others are not. Some jobs grow, but other jobs are displaced; some people see growing wages; others see stagnant wages.

Consider, for example, the impact of computer automation on the publishing process. Since the 19th century, text was prepared for publication by typesetters and compositors. During the 1980s, more and more text was prepared using desktop publishing software on low cost personal computers.

But this new way of publishing was performed not by typesetters and compositors, but by graphic designers. Because designers could make revisions directly and interactively on a computer, they could make the revisions faster and better. So the work shifted across occupations. The number of typesetters and compositors in the US fell by three-quarters in a little over a decade. But the number of graphic designers grew even more, offsetting the jobs lost by typesetters and compositors.

As a result, there was not a net loss of jobs. But there were winners – the graphic designers – and losers, the typesetters and compositors. This pattern appears more generally. Computer use is associated with growing employment in high wage, high skill occupations, but it is associated with job losses in low wage occupations. Although computer automation is not associated with a net loss of jobs, it *is* associated with disruptive transitions from some jobs to others, from some sets of skills to others.

4. NEW JOBS, NEW SKILLS

These transitions would not be a major social problem if workers could learn the new skills quickly and at low cost. For instance, if typesetters could take a two month course online to become graphic designers, then they could readily switch occupations. However, it appears that the new skills are much more difficult to acquire than that. Indeed, many

graphic designers who have four year college degrees face difficulty acquiring the skills needed to use the newest technology and to earn high wages.

This difficulty arises from two related features of technological change: 1) new technologies change rapidly, and, 2) they are often not standardized. Continual and rapid change means that the needed skills are constantly changing. Workers have to become *continual* learners. And all too often there are many different versions of new technologies; the skills learned on one may not be applicable on another.

Consider the changing nature of the knowledge needed to prepare pages for publication. Initially, typesetters and compositors learned their trade through an apprenticeship program. Then desktop publishing came along and the key skills required training in print design – often taught in a four year program – and desktop publishing. But then the Internet came along and graphic designers needed to learn web design. And then smartphones came along and they needed to learn mobile design. And increasingly, as the web and mobile applications became more sophisticated, new specialties emerged such as user interaction specialists and information architects, each with specialized skills. Moreover, there were many standards that changed frequently. In 2012, Flash was seen as an essential technology standard for many websites; today, Flash is obsolete, replaced by HTML5 and other standards.

These conditions mean that schools cannot keep up with the technology. When key knowledge is not standardized it cannot be written in textbooks or summarized in lectures easily. Instead, people must learn through direct experience on the job, that is, learning by doing. And teachers cannot keep up with the technology unless they are also able to acquire that experience on the job. Graphic design schools are struggling to keep up.

Furthermore, labor markets do not work well when technology is not highly standardized. Experience matters, but

employers looking to hire workers with needed technical skills have a hard time telling who has the *right* experience. Without effective certification, employers have a hard time telling which prospective employees have the needed skills. This, in turn, means that workers are not fully compensated for the skills they have learned and they thus have diminished incentives to invest in learning new skills.

In such environments, some workers succeed. Some workers have the opportunity to work with the latest technologies, some can teach themselves new skills, and some develop reputations so their value is clear to prospective employers. But many or most workers struggle. So the top graphic designers today are seeing rapid wage growth, while the average designer has stagnant wages. And we see similar patterns in other occupations that use computers: top wages are growing, average wages are not.

The net effect is that information technology is contributing to growing economic inequality, a growing divide between those who have the skills to use the new technologies and those who don't. Some occupations lose out while other grow, yet it is difficult for workers to transition into the growing occupations. And even within occupations, not everyone can acquire skills and a reputation with new technologies, creating a growing gap in wages. Although information technology is not creating massive unemployment, nor is it likely to do so in the near future, its impact is highly disruptive, creating winners and losers and a sense of growing inequality and unfairness. The growing digital divide poses a major problem, especially for the young.

5. THE CHALLENGE FOR THE YOUNG

Historically, young workers have often been in the forefront of those working with innovative technologies and acquiring new skills. In the US textile industry, literate teenage farm girls were recruited to learn the new power looms. Sim-

ilarly, decades later, young women were brought to the textile mills in Japan and then later in China. Recent high school graduates also played a key role in the new industries fostered by electrification in the US during the early 20th century.

Today, many young people are able to acquire early familiarity with computers and smartphones. But it is less clear that they are gaining access to the critical workplace technologies. Many European countries have high levels of youth unemployment, so there is little way these people can learn new skills on the job. And even in the US, where youth unemployment is not above historical averages, young workers' access to new technology is often limited. Only about one third of US workers aged 16-24 use the Internet at work. In contrast, about two thirds of older workers do.

This evidence suggests that the obstacles to acquiring critical new skills related to information technology are particularly high for young workers.

6. WHAT TO DO

This is a difficult problem and it would be naïve to expect that it could be quickly resolved by a simple policy fix. Technology will continue to change rapidly and perhaps even accelerate, making the challenge even more difficult. Nevertheless, individuals can take actions to acquire new skills, businesses can invest in training their employees, and government can put in place policies that remove some of the obstacles to learning as well as to foster new forms of education and labor markets.

Three sorts of beneficial actions are:

1. Encourage learning by doing. Because many of the skills cannot be easily taught in classrooms at this time, it is important to encourage other sorts of learning including hands-on vocational education, firm job training programs, apprenticeship type programs, and work-study programs

that combine classroom learning with work experience. Industries need to establish certification programs so that skills learned on the job can be accurately represented in the labor market, encouraging higher pay. While higher education is important, it is not the right solution for everyone and less-than-college vocational education has been seriously underfunded in many countries. Similarly, while STEM skills and computer coding skills are important, many of the jobs require working with computers in a wide range of tasks that involve social, marketing, planning, and other skills.

2. Encourage strong labor markets. Labor markets will provide the strongest incentives for learning when workers can take their skills with them. Governments and firms should reduce obstacles to employee mobility such as employee non-compete agreements, overly broad trade secrecy restrictions on employees, overly strong exit protections, and excessive occupational licensing requirements. Europe in particular also has a problem with weak labor markets, especially for young people entering the workforce.

3. Encourage wide acceptance of open standards and knowledge sharing. The more that technologies are standardized the easier the associated skills are to learn.

* * *

New artificial intelligence technologies are not likely to cause massive unemployment during the next 10 or 20 years. And they will generate new wealth and meet all sorts of unmet demand. Moreover, the new jobs may provide more fulfilling work than the old jobs. Computers tend to automate the most routine tasks. The new jobs – those that are most immune from automation – involve innately human tasks involving interpersonal, social, and creative skills.

But artificial intelligence technologies will nevertheless cause substantial social disruption, eliminating some jobs, while creating others; requiring new skills that only some

people have the opportunity to acquire; and raising the wages of some, but keeping others behind. These new technologies have the potential to create new wealth, but that wealth will not be widely shared unless large numbers of working people have access to critically needed skills. The development of a skilled workforce is key to combatting rising economic inequality.

Moreover, workforce skills are also important in the longer run. In 30 or 50 years, the effect of new information technology on jobs may not be so positive as it is today.

Indeed, if information technologies follow the same path as manufacturing technologies, then further technological advances may bring lower employment in many industries in the long term. It is, of course, difficult to predict the entire impact of technology on the economy and society that far in the future. However, developing a skilled workforce now may well be the best preparation we can have for dealing with those future challenges.

Technology will develop along a path that depends on the existing economic resources. A population that is skilled at working alongside advanced information technologies will best promote the development of future technologies that augment human capabilities rather than replace them.

COMMENT

CARLO D'ASARO BIONDO

1. INTRODUCTION: FOR EVERYONE

Thank you.

Today's topic is technology and jobs.

Both are inherently about people and about society.

I could go into numbers and research showing how technology can actually help create jobs.

But let me focus my short speech on people- because job creation is important to everyone.

We all benefit when opportunity – to get education, to get information, to get employment – is expanded to everyone.

The Internet offers an unprecedented chance to do exactly that – today, about half of the world's population is online (3 to 3,5 billion people) – by 2020, this will have grown to 5 billion, it grows fast!

And at Google we believe there's a responsibility to realise the potential of the Web for *everyone* – no matter your background, no matter where you are in the world, no matter whether you're a farmer in Kenya, a student in Spain or a professor in the Vatican.

Because only then will more people in more places flourish and have a share of the opportunity technology and the Web offer.

Some of the most advanced Internet use happens in Africa, where people access the Web through mobile – this allows for whole remote communities to have access to e.g. mobile banking services that previously were unavailable, or slow to develop due to efficiency of building their network, or use in agriculture.

– *The leaps and bounds of internet growth in Africa also underlines the need to digital skills, something we're very aware of at*

Google. So far, we have provided free digital skills training to over 1M African people, and we're planning to continue and grow the programme in 2017.

This is why we have a relentless focus on our mission: "organising the world's information and making it useful and accessible to everyone"

2. VALUES: ACCESS FOR EVERYONE, BUILDING FOR EVERYONE, OFFERING EDUCATION

Executing this mission, which is focused on people first, then technology – is no small thing as you can imagine.

And access for everyone, building for everyone are values that are core to Google's business.

Google's CEO Sundar Pichai *has said: knowledge is a game changer. The Internet opens the door to opportunity. It provides access to knowledge, no matter who you are or where you are - you have the same information at your fingertips as anyone else.*

Making information available to everyone, everywhere is **empowering and democratising**: it enables opportunities for education and jobs. *Example:*

– *In the summer of 2016, the world's attention was on Rio. It's a beautiful city, and a fantastic backdrop for the Olympic games.*

– *But Rio has long suffered an accessibility problem: one in five residents lives in a favela, communities that have historically not been included on maps – even to the point that many residences had no official addresses.*

– *This meant that 1.4M people had no address to list on job applications, and had difficulty accessing essential services and exercising their basic rights as citizens.*

– *So we teamed up with local NGOs to map the favelas and today street names in 26 of these communities now appear on Google Maps, with all the benefits that entails.*

Bringing this a bit closer to home, let's look at how the Web can support education and job creation in Europe.

We are only 1% on the way to how technology will transform how we live, learn & work.

Acceleration for the **next 99%** is coming into place with combination of **mobile + machine learning**.

- Mobile allows us to have ubiquitous access to information, to be connected no matter where – or when – we are (imagine use for health and remote information).

- Machine learning enables us to continuously improve our products and services by resolving complex tasks such as simultaneous translation and education.

The good news is that the Internet creates jobs: **each high-tech job** in a local economy creates more than **four additional non-high tech jobs** *in the same region*. This includes workers of a variety of occupations, including lawyers, physicians, wait staff, taxi drivers, and school teachers. **Additional figures:**

- *In 2014, 2.3 million jobs were generated by the mobile economy plus 1.5 million indirect jobs.*

- *The European Commission projected that by 2018, the entire apps sector will employ.*

- *4.8 million people and contribute €63 billion to the European economy.*

- *In 2015 there were at least **1.3 million** mobile app developers. in the EU28, equivalent to around 23% of the total global developer base.*

But to widen the opportunity to all, we need to make sure people acquire the right skills – not just for the few, the privileged, the fortunate, and the wealthy, but **for the many**.

According to the European Commission report, almost **half the EU population (47%) is not properly digitally**

skilled, and in the near future, **90% of jobs will require some level of digital skills.**

So how can we help?

Take Non-profit organisation the *National Students' Academy (NMA)* in Lithuania, who offer additional learning in nine specialist areas to gifted high school students from across Lithuania. With Google's support, NMA teaches computer science to even more students – with increasing participation of women in particular.

In Ireland, the *Scoil Mhuire National School* have set up the first STEAM (Science, Technology, Engineering, Arts and Math) room of the country as a result of a Europe Code Week grant from Google, allowing kids to create their own coding games. It's now a template for Irish schools nation-wide.

And *Spanish Lara Martín* moves closer to her dream job as a fully fledged Android Developer, after graduating from Android Basics Nanodegree – one of the 10,000 Android Developer training scholarships offered across the EU. Lara now plans to build a complex weather app from scratch with her new-found skills. *Italian example:*

– *Crescere in Digitale is the result of a close partnership with the Italian Ministry of Labour with 3,000 internships available to young unemployed people to work with SMBs. Introducing Claudio to Luca as part of the programme has led to a tenfold increase in sales for Luca's business, Caffè Carbonelli*

– *In February 2017, 504 young people finished their internships at digital companies as part of Google's "Crescere in Digitale" programme – 28% going on (job or new internship), 23% got a job, of whom 52% were hired by the hosting business.*

I can give you many more examples and numbers - but the crux of the matter is: everyone deserves to benefit from technology, so that you can start a business, launch the next big idea, or find opportunities to excel in what matters most to you.

3. CLOSING: DIVERSE DIALOGUE

This equality of opportunity on the Web leads me to another important function that the Internet can - and should - perform.

Equality of opportunity means that people's backgrounds should not matter.

The Internet **enables people from completely different backgrounds all over the world to connect to each other, and exchange a diversity of opinions and ideas.**

If you think about it the world wide web is the biggest opportunity of dialogue and communication that we humans ever had... Lets use this wisely.

As the World Wide Web Foundation said: "The Web, by connecting people, enables those with shared interests to exchange their resources independently of their respective locations".

This **human global network** is an extraordinary opportunity to **interact, give, support, and innovate** – although not always without its own challenges as recent times have shown.

Respectful and diverse dialogue is crucial if we, together, want to make sure that everyone can make the most of the Web:

- Take care and listen to **different points of view.**
- Form opinions based on **respect for different views** rather than imposing one's own point of view.
- Find the **common ground** that allows dialogue to improve our ability to relate to each other and to our environment - and most importantly, *learn* from each other.

These principles should be at the **basis of every interaction** – for the private and public sector, for technology players, for NGOs, for internet users – for all of us.

And Google's role is to keep developing and improving **tools that make this interaction easier** and this dialogue more equal (every voice to be heard) and more profound.

And we have a responsibility to **listen, learn, and earn your trust every day** – by empowering people, places, and communities with tools and skills that connect you to new ideas, new information, and new possibilities.

The world we live in must be an open one. Technology should benefit all. Information should be free.

Together, I genuinely hope we're able to get to a better place, for everyone.

And I do not see how we can make a better world if not by helping humans become better through dialogue and connection with one another.

Thank you.

COMMENT

RAÚL GONZÁLEZ FABRE

I. A basic principle: 'Whatever can be done by a machine, will be done by a machine rather sooner than later'.

Machines are more reliable than people, do not have family life to conciliate, no labor legislation is going to protect their rights, etc.

What will they be able to do in the future? We don't know and we are not going to know, because technological progress is more that linearly accumulative. It grows through better algorithms, better applications to the creation of economic value, and higher computation capacity. There is no 'steady state' nor 'constant acceleration' state for technological development, allowing for predictions, and there is not going to be.

As far as I can see, the supposition that no major technological breakthrough is going to affect economic activity during the next 10-20 years, is maybe too much of a guessing. By now, it is already obvious that not only material production and financial services and trading, but also commerce of non-perishables is being heavily affected by computer intermediation. Transportation seems to be close in line...

II. The demand remaining predictable (in fact, growing as more people leave poverty) is a demand for functions, not for products. Technological development may eventually lead to the same functions being carried out by different products.

Let us suppose that I need to speak personally to colleagues in China: a function. We can pay a professional interpreter. Or I can learn Mandarin, they can learn Spanish, or we both can learn a common third language, say English. Or a real-time computer interpreter can be developed that allows me to speak in Spanish and them to hear in Mandarin, and

vice versa. The same function, with its predictable demand, satisfied by a different product. Depending on prices, goodbye to the profession of interpreter and to the language-teaching industries, including language learning in schools and universities.

Not professions of the past, by the way: they are seen right now as having a lot of future. You wouldn't discourage your children from entering any of them, as you would discourage them from acquiring a taxi license in Madrid. Disruption there seems much closer: for the same function, different products. But in 10 years from now...?

Technology may also generate new 'needs' to be satisfied (that is, new functions demanded). The hope for jobs in the already developed countries is that those new functions will require human working hours enough to compensate for the human working hours lost in functions automated. More precisely, 'human working hours' of workers in paid jobs, not of customers in their use of highly friendly applications.

Substituting clients' hours for job hours has already been a regular trend in modern capitalism. It allows for lower production costs (and thus, lower prices and/or higher profits). Supermarkets and self-service outlets for regular shops are a good example. Technology makes it much easier: computerized commerce for personal commerce, including outlets, maybe soon also supermarkets.

Regular paid jobs are thus not only competing against machines but also against the combination machines + customers' hours. It would be surprising if the final balance is positive for paid jobs. Difficult to guess: will increased demand compensate for sharp technological reductions in the human labor necessary to satisfy it? We must start planning for the scenery that the answer is 'no' or 'not here' (but 'yes' in countries with much poor population, where the demand may grow more quickly, but also the modern fraction of the workforce).

III. years is a rather short time span. Kids 12 years old now will be entering the labor market at the end of that period. But we need to design their secondary and vocational school just now, for the labor market they are going to find 10-20 years ahead (of which we can guess little).

Clearly in the middle term of a decade or two, the solution of 'learning by doing' is adequate for the branches more sensitive to automation. I agree that in-company training of the workers for the current way of doing things in each particular company must be reinforced, if possible certified with standards shared within each industry (though doing things better through non-standard procedures and applications is precisely a key for innovation and competitiveness).

But, in my opinion, schools and universities should move in the opposite direction: they must concentrate on the basics that allow for quick learning instead of offering 'updated' training. They have to teach the essential elements that would allow the students to get to grips quickly with whatever way of doing things they may find in private companies. Including more practices, internships, apprenticeships and the like in secondary, vocational and university education, is being done at the cost of leaving less time to learn the fundamentals.

IV. Then, there is an additional problem with private property. In the current state of political affairs, technology will develop along the path of biggest profit for the companies developing and/or incorporating it to their productive processes. It is an imperative of global economic competition in a context of national sovereign governments, that companies themselves cannot escape.

The lack of adequate skills in the workforce is certainly a possible limitation. But it does not guarantee that a job won't be replaced by a machine, or by a machine + customers' hours; it only guarantees that there remains a chance for the human worker. If other array for producing a demanded

function is more profitable, the job will be replaced never mind how many skilled workers are available for it.

In the middle run of 10-20 years we can think of increasing the capacity of the workforce for producing with better capital means. But part of the innovation consists in having more-friendly technologies for production, that is, technologies that can be used by less-skilled workers, avoiding possible scarcities of workforce and thus high salaries. The appropriation of the economic profits of higher technology by the workers as such (not as consumers) is going to be proportional to the scarcity of workers for each function. For the rest, the added economic value will go to the owners of the machines. There is a high economic incentive to need as few skilled workers as possible, that is, to make technologies as friendly as possible.

Given the technological dynamics, I think it is not reasonable in the long run to pretend that workers must indefinitely catch up with ever developing machines + customers' hours, in a way that makes labor a scarce – and well paid – factor in the production functions. Finally, consumption and social integration must be decoupled from paid jobs through:

a) Economic integration through citizenship, by means of some kind of 'universal income' funded with higher taxes on companies that produce high added economic value but few jobs;

and/or

b) Some kind of 'popular capitalism' that allows most people to get much of their income from a very disperse ownership of the capital of those same companies, and less from their paid jobs (if they have any).

That poses the question of the 'social meaning' of private property. In the Catholic Social Teaching (CST), private property is not an absolute right, but subject to the 'universal destination of goods'. If continuous changes in the production

functions erode the most important ways in which that 'universal destination' was happening in the developed countries (creation of well-paid jobs that support social integration through a combination of the private market with a Welfare State), the ways of property themselves will have to be changed. That discussion is already happening, and I don't think CST should be absent, proposing merely that either:

- a) the problem does not really exist;
- b) the solution is the workforce to catch up with technological accelerated innovation through education;
- c) the solution is to limit and control technological innovation.

In my opinion, technology is posing to CST a challenge of the same magnitude faced by Leon XIII in *Rerum Novarum*. Maybe the following phase of the challenge of the property of the means of production, that requires to go back to the fundamentals in order to build new answers.

COMMENT

OLIVER ROETHIG

1. INTRODUCTION

Keeping up to date with qualifications and skills form one of the key challenges for societies and individual in the digital age. How can this be organised, what are the key objectives and who is responsible for what?

One answer is that it is up to the individual or, more practically – as one business representative espoused – workers should get 5-year contracts and their employer can renew them if their skills are up-to-date.

From a trade union perspective, and I believe also from a societal and ethical perspective, this is not the way forward. We need to adapt our structures and processes with the objective that working life allows workers and their families to live in dignity – also in the digital age. A key aspect is that working life provides long-term stability, predictability and a career perspective. While it might not mean one job for life, employment for life with decent pay and decent working conditions remains the goal. We need a standard employment relationship 4.0.

To achieve this, the European social model as we as trade unions understand it, relies besides on business on strong collective bargaining systems as well as a legal and regulatory framework that in the first place aims at forwarding the interest of citizens, not business.

Let's look at challenges regarding qualifications and skills:

2. SPEED AND UNPREDICTABILITY

The pace of technological change is accelerating. Already some years ago, a CEO of a major bank said that the same magnitude of technological change over the last 20 years will

be happening in the next 5 years. Think about what technology of today we did not have in 1997 and extrapolate to the difference from today to 2022. Similarly, there are estimates that 40% of jobs or at least of job content changes in the next 5 to 10 years.

Our mind-set still seems to be that we have this rapid revolutionary change now and after a while we have a new equilibrium. This won't happen. We have exponential change: it is like compound interest or the old story of putting 1 grain of wheat on the first square of a chess board, double it on the next square and so on.

If job content changes so fast, the traditional linear approach for training does not work in an age where no qualification or core competencies are lasting. We cannot squeeze into an ever shorter period identifying new skill needs, setting general standards, developing a curriculum, training teachers, teaching workers and having workers using their new skills in their jobs before they are outdated.

This also means that societies, companies and workers have more difficulties to plan for their futures. What do we do if even a large IT company reduces its long-term planning to 3 years? What are the right choices to make today if the time horizon is 5 to 10 years – for social security systems, company strategies or an individual's career planning? The risk and consequences of making wrong choices becomes greater: simply put, a worker might have invested in a job gaining new skills that are actually the wrong ones 5 years down the line. Take the example of Nokia as a mobile phone company, current changes in the finance sector or in the past the rapid decline of the European textile industry.

The practical question is how can we – again as societies, companies and workers – make choices quicker, in shorter intervals and with less knowledge of the world of work 5 to 10 years hence? From an ethical perspective, the answer cannot be to trust in the survival of the fittest worker, company and country.

3. GLOBALISATION AND COMPANIES

Digitalisation also means an increase in the globalisation of markets and companies while the provision of qualifications and skills remain foremost country specific. In particular in services that can be provided remotely, consumers and companies, can source these from countries where work, including up-to-date skills levels, is cheaper than at home. One factor here is the extent to which training is not financed by companies but by the state or individuals; for instance, being able to replace one's workforce constantly with new IT university graduates is cheaper than retraining one's workforce.

At the same time, companies, especially the larger ones, are less linked to the countries they operate in, including their home country. Top management is not part of a national elite. Work structures and hierarchies are organised across countries. The value chain is "fine-sliced": due to outsourcing and franchising necessary core tasks are reduced. The result is a diminishing core workforce with a stable employment relationship that moreover is spread across several countries or even continents.

On top of this, the speed of change reduces the utility for companies to develop core competencies. Instead, it is more efficient to source competencies from other players, discarding them if no longer up-to-date. For societies, this raises the question how they can keep the skills and qualifications of a national workforce up-to-date if companies, especially the more resourceful ones, are able to evade contributing? How can companies be enticed to invest in skills developments in any particular country?

4. WORKFORCES

Current tasks and jobs become obsolete throughout the economy – not only in a limited number of sectors. The major impact is in the services industries, the backbone of European economies. This affects in particular mid-skilled and mid-sal-

ary jobs (administrative, clerical work, transport and logistics but also technical, professionals and managers). Skilled routine tasks can be replaced by IT systems or taken over by workers in less expensive countries. The result is further polarisation of the labour market and more inequality in society. While low quality jobs will remain more numerous than high quality jobs, the ratio of mid-quality jobs will fall to about 50%+ of the workforce by 2025. For mid-level workers today, we therefore see a relative de-skilling of their work. A side effect is that the gender pay gap will increase, since well paid jobs for women are foremost in this bracket.

With a smaller core workforce in companies, an increasing number of workers permanently moves to hyper-flexible jobs. While for some, these are employment relationships (temporary contracts, zero-hour contracts), for others these are on-and-off contract work (freelancers and crowd-workers). In the extreme, digitalisation might make it possible that the prevalent employment model will be a global virtual labour exchange where people work without having an employer, colleagues, a workplace or a legal framework. Except for the core workforce, a worker might then no longer rely on skills development being organised by traditional company or industry structures closely linked to workplace and employer.

In terms of a workers' life, there is constant pressure for reskilling (with the risk of making the wrong choice) and for time spend on training to be integrated into workers' private and working lives. Work-life balance becomes work-reskilling-life balance. This has implications for stress levels as well as more generally for family life, gender equality and the ability of citizens to do voluntary work. Depending on how training is organised, workers might moreover be responsible for paying for reskilling while income might be precariously fluctuating.

The crucial question for societies is how a framework must look like to empower workers to attain new skills and to ensure decent working and living conditions?

5. WAY FORWARD

The challenges outlined may suggest a dystopian future. While not necessarily providing answers to the questions raised, the instruments and institutions developed across Europe over the last century can provide a toolkit. We need to use and adapt its elements with a view to establish a framework for updating skills and qualifications grounded in the principles of human dignity, solidarity and subsidiarity. Even if the reach might not be global, we need to endeavour to do so at national level and within the context of the European Union.

Elements for a fit for purpose education, vocational training and lifelong learning system are:

- all types of workers (including atypical workers, self-employed and crowd workers) are covered;
- an enforceable right for workers to paid education and training, including paid leave, that allows them to keep abreast of changing skill requirements and to up-skill;
- a funding system that obliges employers and consumers to contribute fairly;
- a mechanism for skill anticipation, skill matching and job placement;
- a framework for the recognition of skills and qualifications, especially those acquired through lifelong learning programmes, so as to make skills transferable between employers;
- new technologies and education/training concepts (especially e-learning) to develop flexible and easily accessible training programme.

The role of governments is to provide an appropriate legal and regularly framework for these elements, not a training framework itself. In terms of actually organising reskilling, social partners, employers and trade unions, need to be at the

core of the process. They are the closest to the workplace and have the most direct knowledge on what is needed. Social partners are thus in the best position to act with the required speed and continuity – of course, with support of other stakeholders, such as public authorities and training institutions.

On first sight, considering the rapidity of change, the most appropriate place seems to be continuous and incremental training on the job at company level supplemented by outside training. However, there are a number of caveats:

- an increasing number of workers does not have an employer;
- giving the responsibility to the employer tends to lead to company specific, non-transferable skills and qualifications;
- the financial resources, success and commitment of companies differ which may foster inequality of training opportunities and results.

To overcome these problems, the company level training activities should be embedded in an industry-wide approach that then also would open up possibilities to integrate self-employed and casual workers. The responsibility for running these training systems should rest with the social partners jointly and be based on collective agreements, in the first place at sectoral level. With European sectoral social dialogue, we have moreover a means to link training systems across countries in Europe.

This brings us back to governments and society. Collective bargaining and social partnership as well as collective and individual labour rights have weakened over the last decades. We need a joint effort by governments, employers, trade unions and society, including the churches, to reinforce these elements. They bring to life the principles of human dignity, solidarity and subsidiarity that should characterise a fair and just society.

ON THE FUTURE OF WORK¹

ALFREDO PASTOR

1. PRELIMINARIES

Job scares have been a feature of our kind of market economy for at least two hundred years. Since the beginnings of the industrial revolution, every once in a while a general feeling sweeps the land that jobs are scarce, or ill-paid, or both; that work is in danger of disappearing. Some of these scares are associated with the cycle: since a capitalist economy goes up and down, employment rises and falls with output. Such cyclical scares are relatively benign – the Great Depression was an exception – and easily forgotten. Others, however, seem to result from the action of deeper, more powerful forces – invasions, plagues, great inventions – and are thought to leave permanent marks on the economic landscape: such crises can be called structural.

Work scares, like economic crises, are a complex phenomenon: partly real and partly imaginary. Real or imagined, but more so if real, they can leave great scars in a community, something easily understood once one remembers that work fulfils three basic human needs in our societies: the wish to develop our capabilities, the need to interact with others and the need to earn one's sustenance. How to see scares coming and how to limit their potential damage are, consequently, important practical questions. Not everyone approaches them in the same spirit, however: some, a small minority endowed by Nature with nerves of steel, tend to take the long view: all is well that ends well. Is it not true that there are many more

¹International Conference, 18-20 May 2007: General Introduction on the Conference Themes.

jobs today than were available in the early 1820s? Is it not the case that GDP, both in absolute and in per capita terms, is an order of magnitude higher now than it was then? The majority will of course answer both questions in the affirmative; but some, looking more closely at things, will take into account the misery that afflicted so many people in the transition between happy states and wonder if there could be ways to mitigate such suffering the next time around. It is this view that inspires, as it should, most of the literature generated around the question of the future of work. Still others, imagining a happy new world in which machines free humans from drudgery, see no cause for worry; on the contrary, our descendants will find themselves occupied in noble pursuits. Disregarding both what may be called the Utopian and the extreme long view, we shall take the majority approach in what follows².

One final note: the concern about jobs has three dimensions: number, wages and quality of work. Of these three, only the first two have been intensively studied. The last one tends to be disregarded, following the dichotomy work/leisure today in fashion: work is undertaken to provide better, more expensive leisure; that it may be unpleasant work is a secondary consideration³. In what follows, we shall follow the trend.

2. WHY STRUCTURAL?

The concern about the future of work pre-dates the current crisis – “the most recent” in the US – but has been aggravated by it. The belief that questions about the future of work

²The study by CASE and DEATON quoted at the end provides evidence on the effect of long-term (enforced) leisure on morbidity and mortality.

³On the quality of work, see The two books by SIMON HEAD quoted at the end. A spirited defense of the need to work may be found in DOROTHY L. SAYERS, *Why Work?* (1942).

will not go away with an improvement in business conditions is grounded in three observations: first (jobless recoveries), that for the first time in recent history, employment has lagged behind output, while in the past both tended to rise and fall in unison; second, that the share of labour in GDP has fallen steadily for the last thirty years (not only in the US) as wages have stagnated; third (polarisation), that the fall in wages and employment has not been uniform across the scale of skills; it has affected mostly those in the middle of the scale, clerical and administrative jobs and simple manufacturing jobs. Such developments have been attributed to a combination of skill-biased technical progress (leading to a wage premium for those with a college education), globalization (offsetting the relative scarcity of unskilled labour in advanced economies) and digitalization (replacing men by computers and robots). These forces are believed to be permanent, and this is what makes the current scare look more serious than, say, the fall in employment that followed the oil crises in the seventies or the end of the dot.com bubble in the nineties. In what follows we shall concentrate on the last of these forces, digitalization. The mainstream position on digitalization can be summarized in three points: first, that technological change will not only stay with us, but accelerate, while institutions lag behind; second, that business as usual will not solve the problem of work disappearance; third, that both economy and society must re-invent themselves to keep up with accelerating technology⁴. Notice here that technology is taken here as an exogenous, blind force, a point to which we shall return at the end of this note.

We shall start with an exposition of the mainstream view of the issues, to be contrasted with another, less conventional, but in my view both more accurate and more useful.

⁴S. *The Hamilton Project* (2015). For globalization, s. BLINDER (2009).

3. ROBOTS (AND COMPUTERS) ARE EATING MEN!

'Sheep are eating men!' complained the Cardinal in Sir Thomas More *Utopia* (1516), as landlords proceeded to enclose common lands to grow sheep, an activity that required much less labour than farming. The complaint has taken new life with digitalization: we fear that robots in manufacturing and computers in services may make people redundant in large numbers. This concern has generated research based on an implicit assumption: wherever machine can replace man, it will. More on that assumption later.

LEVY - MURNANE (2004) ask the question: What task does a machine do better than a man, a man better than a machine? Dividing tasks into manual (M) vs. cognitive (C), routine (R) vs. non-routine (N) they construct a 2x2 matrix

CR Clerical, administrative	CN Scientific, creative, executive
MR Packaging, assembly line	MN Truck driving (so far), home cleaning

Their main result is that routine activities, both manual (filling boxes of cereal) and cognitive (checking personnel records) are at risk, since they can be quickly and cheaply digitalized. Non-routine jobs, on the other hand, are more sheltered: the manual jobs (gardening, placing products on supermarket shelves) because automating them is either very difficult or too expensive with the current state of technology; the cognitive ones, because they make use of abilities such as creativity or social skills.

LEVY - MURNANE'S approach has been refined in several directions. FREY - OSBORNE (2013) is one of the most often quoted papers in the field. The authors start from a slightly different angle: what engineering obstacles hinder the replacement of man by machine in specific occupations? Using a very detailed classification of occupations available only for

the US, the O*NET, comprising over 900 different items, they arrive at a ranking of occupations according to the probability of their being replaced by computers. The main result: 47% of 400M US jobs are considered “at high risk”, 19% at “medium risk”, 33% at “low risk” of computerisation. Their findings are consistent both with LEVY - MURNANE’S and with the polarisation observed by Autor: most of the high-risk occupations fall within the MR category: Office and administrative support, telephone operators are examples.

The literature following this approach is enormous. Perhaps it is worth highlighting MCKINSEY’S report (2016), that further refines the approach by dividing occupations into activities, and classifying these activities according to the LEVY - MURNANE criteria, coming to the conclusion that while between 45 and 60% of all activities could be automated, less than 5% of jobs are likely to be completely automated. The reason for this paradox is that automatable jobs are made of large parts of automatable activities, but most of them have non-automatable activities too. The conclusion is that digitalization will lead to a complete restructuring of tasks, workplaces and jobs throughout the economy, but that this process will take time.

The mainstream approach contains many other threads: questioning the implicit assumption that computers and robots will always be substitutes for human labour, some stress the fact that they can often be complements: man may work against the machine or with it; the same computer can be used to enhance the productivity of a worker (an expert decision system for a doctor) or to replace a professional (a screening device for a receptionist at a clinic). Here is a graph from the MCKINSEY report that illustrates the kind of result that can be obtained.

The illustration is interesting: the reader sees that the graph conforms roughly to LEVY - MURNANE as well as to Autor: the most vulnerable jobs are not the manual ones, but the low-to-middle-wage, routine ones (blue dot high up on

Comparison of wages and automation potential for US jobs

Ability to automate, % of time spent on activities¹ that can be automated by adapting currently demonstrated technology

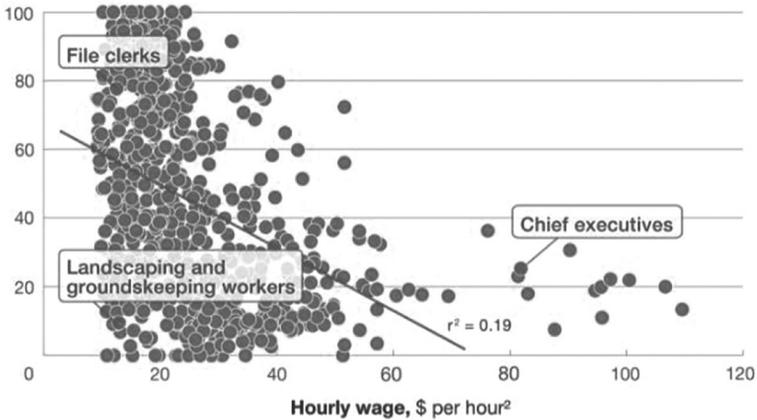


Fig. 1: Wages and automation potential, according to MCKINSEY

the y-axis); jobs relatively unskilled but requiring physical presence are not at risk, but draw low pay, (blue dot near the origin) while CEOs (blue dot far to the right close to the x-axis) are both safe and highly paid, due to the uniquely human abilities they bring to the job. If you happen to be a file clerk, you would be grateful for any advice on how to slide down and to the right towards the blue dot “Chief executive”. The graph itself does not say.

4. THE TIME DIMENSION: TECHNOLOGY AS KNOWLEDGE

For all the many insights of the mainstream approach, it fails to take time into consideration: if jobs can be replaced, when will they be? Does digitalization happen all of a sudden, or does it take a long time? If it does take time, what happens to jobs and wages during the transition? The work of James BESSEN (2015) takes a completely different approach, based on the history of technologies, to address these questions.

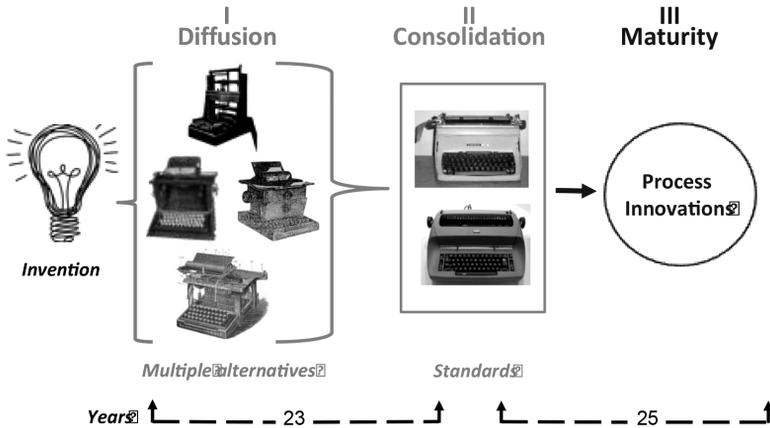
Imagine a typewriter (if you are less than 50, you probably have never owned one). It may be an IBM Selectric, with its ball of characters in the middle of a space, from which it darts to the paper when you press a touch. Launched in July 1961, it looks like the acme of modernity; yet its principle, the writing ball, is the same as that of the Danish design that Nietzsche had delivered to his home in... 1882! How many things have happened since! At the beginning, typewriters had very different designs and operated on different principles; people began to use them, but cautiously: no big paper – pushing firm – a shipping firm, a bank- made a massive investment in those devices, since there were many brands, many designs competing with each other, and no one knew who would win over the others⁵; for instance, each brand had its own keyboard, so being proficient with one machine did little to make one proficient on another, except for unusually gifted operators; the first standard keyboard, the Qwerty, designed in 1868, took a century to become almost universal, but some time before the number

of designs had already decreased, and it was worthwhile both to establish a typewriting school and to attend it, since the market, both for pupils and for graduates, was there. The knowledge that surrounded that new invention, the typewriter, could be codified and taught by standard methods. As the industry matured, consolidation took place: to give an example, at some point, all Spanish police stations used the same model of typewriter: a grey-green Olivetti in which an American would have recognized immediately an Underwood: Underwood had been sold to Olivetti, only to disappear a few years later. Others were doing other things; still others – Remington – had gone back to their origins, the manufacture of arms. Then, of course, desktop computers took over: only the

⁵In a related field, it is a known fact that Mark Twain invested in a new linotype that proved to be the wrong design. Only a lecture tour enabled him to repair his damaged finances.

“An Invention is not a Technology”

J. Besen



Source: BESSEN

Fig. 2

standard keyboard remained of an invention developed over more than a century. Typing was no longer a marketable skill, though stenography, a joint product of typewriting, still was. Secretaries did not vanish, their job changed: they took dictation for very important letters, but they also took care of their bosses' agenda, many under the apparently less demeaning title of assistant; true, an assistant helped more than one boss, but there were many more bosses (CN people), so the net effect of the rise and fall of the typewriter on the number of jobs was unclear, hard to trace, certainly not unambiguously negative.

In trying to describe BESSEN's framework I have used the example of the typewriter because it is a familiar object to most of us. BESSEN has done a detailed study of the textile industry in Massachusetts and has a few other case stories, always under the same guiding principle: *an invention is not a technology, a technology is knowledge*. By following the tortuous

path that knowledge follows as it grows and disseminates itself all through the economy a pattern emerges, which makes it possible to address the questions posed by the digital revolution. In doing so, one must take into account that no technologies are equal, every one has a different scope of application and is born in a different social and economic context. Some – the *lumpers* – will tend to stress the similarities, others – the *splitters* – will put the accent on the differences⁶. A general observation may be appropriate: the digital revolution has the potential of affecting many sectors at once, and the times are such that things seem to happen faster than be-



4. TIME TO COMMERCIALIZATION

Invention	Year first patentable	Years to 1 st commercialization	Years to Shakeout	Total
Ballpoint pen	1938	7	28	35
Transistor	1948	7	13	20
Gyrocompass	1852	56	55	111
Jet engine	1791	153	17	70
Radar	1904	31	17	48
Radio	1900	15	51	66
Television	1905	35	33	68
Average (19 inventions)		23	25	48

Source: BESSEN, *cit.*, p. 39

Fig. 3

⁶I owe this invaluable distinction to the teachings of the late prof. CHARLES P. KINDLEBERGER.

fore; so what was true for sewing-machines may not be true of self-driving cars.

How long does it take for a technology to mature? It depends, but the following table suggests that one generation is about right in many cases. So, if only because of how long it takes to establish itself, a technology cannot be described as an act of God, but rather as a process that can be acted upon.

What happens to the number of jobs? That depends, of course, on the time frame chosen (remember the long-viewers of #1: in the long run, all is well). In the short run, some jobs certainly disappear, but not necessarily in the areas invaded by computers: on the contrary, labour demand tends to be strong precisely in those areas where computers are being employed in greater numbers. There is at least one economic reason for this: as computers (or robots) replace people because of higher productivity, they allow prices of the product to fall, hence raising the demand for it... and hence the demand for workers and/or their wages. This apparent paradox highlights the possibilities of cooperative computerization: computers working with people rather than replacing them. Besides, the disappearance of jobs need not entail that of workers within the firm: some, if not most, are relocated to other tasks, or find employment in similar activities. In a normal business climate, it is difficult to ascertain the sign of the net effect of an innovation on employment. Of course, in a recession the process will lose much of its smoothness.

What about wages? These will depend, not only on the business climate (the demand for the final product) but also on the supply and demand of the skills required by the new technology, and here an interesting pattern emerges: in the initial phase (diffusion), when everything is in flux, training can be acquired only on the job; and, since the designs are so many and so different, only very smart people are capable of transferring the knowledge gained on one machine onto another one. Those people will be at a premium on the (very small) market, and a gap will open between their wages and

those of common workers. As the technology solidifies and knowledge can be codified and taught by standard methods, the required knowledge will be more abundant, unexpected situations will become rarer, the premium on creativity will fall and, since the wage of common workers will have risen (remember, they are now more productive), the wage gap will close. Unusually smart people will leave the industry and go somewhere else. This is a very important insight, since it will guide our policy choice in a crucial matter, education, of which more in a moment.

The reader may wish to use BESSEN's framework to think about the computer revolution, or some segment of it: how far are we in the self-driven car business? Do the waves of acquisitions in the software and network segments signal the beginning of a phase of consolidation, or is it rather a question of stifling potential competition? This level of discussion is more fun, and probably more enriching, than trying to calculate the probability of your being without a job in an indeterminate future.

5. POLICY

None of the above paints an end-of-the world picture, but neither does it dispel our worries. We are left with the impression that something must be done about this technology business. But what exactly? An answer is not available; we shall just attempt to guide the reader first through some general policies that can be applied to technology; then through the universal medicine recommended by all, education, to reach at last an important, if not exactly novel conclusion.

5.1. *Inequality*

Few people have contributed as much as Sir Anthony ATKINSON to the study of inequality. Insofar as technological change is often considered as a main source of income ine-

quality in our economies, ATKINSON has come forth with some recommendations which correspond to the standard approach based on economic incentives⁷. His proposals are based on a fact beyond dispute: *technology, being developed by people, is endogenous to society at large*. The state, in particular, plays a large role in influencing its development: it funds research and pays for many of its products. In fact it is hard to find a technology that does not have at its origins one or various Government projects (more often than not in the military). Consequently, the Government can, if it wants to, exert a decisive influence on the direction of technical change. It would do so, for example, by trying to assess the influence of any given project on job creation, and adding this criterion to its toolbox of cost-benefit analysis. This line of action by the State, however, is likely to conflict with other goals deemed superior, or more urgent, and the effect of this recommendation upon public procurement may not be

perceptible. Furthermore, making the employer internalize the effects of labour-saving innovations is tantamount to impose higher severance costs. If so, it raises the cost of hiring.

5.2. *Education: A Warning*

What else can be done to make people better equipped to face technological change? The universal answer is always the same: education. Of course. But education of what sort? The conventional answer, quoting the “knowledge economy” is almost always the same: higher education, particularly in technology and the sciences. Such an answer, however, is likely to lead to great mismatches with the attending misallocation of resources and personal frustrations. The following table, drawn from BESSEN’ work, may serve as a call for attention.

⁷ ATKINSON (2015) and, of course, his *Inequality* (2016), pp. 115ff.

Skill requirements compared with actual levels in the US

Required Educational Level	2012 (actual)	2022 (projected)	Current Population L. force (actual)	Aged 25-34
High school or less	66%	65%	35%	33%
Some post-secondary	11%	12%	30%	29%
Bachelor's degree	18%	18%	23%	27%
Masters or higher	4%	5%	13%	11%

Source: BESSEN, J.: *Learning by Doing* (2015), p.143

Fig. 4

The table shows the sort of skills industry seems to need in the near future and the likely supply coming out of educational institutions. Nowhere can we see that the economy demands, or needs, a surge of college graduates, while too few people may be coming out of high schools (including vocational schools). Let it be pointed out here that this is in no way inconsistent with the persistence of a wage premium for college graduates. It is still true that a college-degree job will pay more than a high-school one... if you can get it⁸.

A technology is knowledge, and knowledge manifests itself at least in part in skills. But the kind of knowledge and the required skills vary through the unfolding of a technolo-

⁸The next paragraph follows closely BESSEN's book, Chs. 8-10.

gy, following the pattern just outlined. Education is 'required' by technology in two different senses: *first*, as true technological requirements, specific vocational skills: weaver, typist, programmer. *Second*, knowledge is also used as a screening device, a proxy for the general ability to learn. When a technology is at an early stage of development, when technological alternatives are many and diverse with no clear winner, the required knowledge can only be taught on the job: textbooks do not exist, classroom teaching is not

possible, no one has an interest in making big investments in either teaching or learning any one of the many technological alternatives present. In this phase a general ability to learn, and hence to face unexpected situations, is most important, and 'knowledge' of the second sort is in high demand. Now on the one hand, such people are relatively rare, so they will command a premium in the very small labour market for them. On the other hand, the ability to learn is itself fostered by learning, so knowledge in this second sense is fostered by general education: this is the reason why the employers at the Lowell textile mills required their employees to know the three R's, Reading, 'Riting and 'Rithmetic.

But as a technology matures, it builds knowledge in the first sense, as a set of specific technical requirements that can be taught at the level of vocational training. As this stage is reached, the relative scarcity of very creative people, and hence, by approximation, of college-educated people, tends to disappear: there is a downward compression of wages in the industry. With reference to the IT industry, BESSEN notes that not all users of IT need an advanced degree; that one-third of IT workers lack a college degree, and that, while it is true that the college premium is high and growing, the demand concentrates on experienced college graduates. Those among them which are no good at learning on the job may find themselves in low-skill jobs.

BESSEN also draws on an example in the health-care industry, where the development of ambulatory surgery has led to

a fall in the demand for registered nurses, whose training enables them to perform tasks not needed in doctor’s clinics; the job is taken by licensed practical nurses, with less training, skills easier to acquire, but no wage premium. The work of BESSEN indicates that schooling is, without doubt, necessary, but that it has to be carefully planned, and that the pressure towards funding higher education at the expense of the rest may be a serious mistake: we may end up with an excess of highly trained, but perhaps not first-rate college graduates loath to take on the jobs that await them it on lower skill levels.

As a last example of the possibility of creating large mismatches between the supply and demand for skills, the following table suggests that most jobs will be created in activities that do not require a college degree:

Is Education the Answer?

WHO WILL BE HIRING IN 2018?		
<i>Ten Occupations with the Greatest Growth Increase 2008–2018</i>		
(US Total Projected Job Growth: 10.0%)		
Food Preparation and Servers	3,149,426	14.6%
Customer Service Representatives	2,736,825	17.7%
Long-Haul Truck Drivers	1,845,612	13.0%
Nursing Aides and Orderlies	1,699,615	18.8%
Receptionists	1,302,100	15.2%
Security Guards	1,214,882	14.2%
Construction Laborers	1,180,571	20.5%
Landscapers and Groundskeepers	1,128,803	18.0%
Home Health Aides	1,058,041	50.0%
Licensed Practical Nurses	825,651	20.7%

Sources: Bureau of Labor Statistics and Help Wanted

Fig. 5

5.3. *Roles of the State*

The State can both influence the direction of technical progress, protect prospective losers in an efficient way and make access to the required knowledge less difficult. Here are some possibilities out of a potentially long list:

1. From labour's point of view, the transition to a new generation of technology has become more difficult due in part to the shifting of *public funds* away from community colleges and vocational school towards higher-education institutions, just when these more specialized skills will be most in demand. Educational policies should reconsider this shift.

2. The growth of *occupational licensing* (the number of occupations for which a state license is needed has gone from 5% to 29% of all occupations in the US in recent years) restricts training and jobs for middle-skilled workers and generates rents for incumbents (note that the role of rents in generating income inequality is becoming increasingly visible. Licensing should be granted only when needed to protect prospective consumers without adequate information.

3. As already said, the State has helped technical progress through *public procurement*, especially in fields related to defense. However, today funds tend to be allocated to large conglomerates, and secrecy and security concerns prevent independent or small innovators to participate in the generation of knowledge.

4. Abusive *patent litigation* tends to stifle innovation by making it an extremely uncertain venture (patent trolls, excessive patent activity).

5. Protecting good manufacturing jobs by *subsidies or tariffs* is probably inefficient and often useless; re-training is more effective.

5.4. *Recommendations to business people*

We have outlined possible roles for the State, but one should not forget that the primary role in managing the digital revolution belongs to business managers. So it may be useful to start a debate that will no doubt enrich the list below, perhaps by making it shorter:

1. Don't be obsessed by the prospect of massive layoffs. Jobs change their content, take on additional tasks, very few jobs disappear altogether. Don't panic, especially in front of your employees. Dr. Bessen says the only job he's seen disappear completely is that of elevator operator.

2. Don't be afraid that digitalizing an activity will result in less need for people. First, computers often work with, not against, people. This is why activities where new jobs are created are often those which are more computer-intensive. Classic example: the appearance of ATMs has not reduced the number of bank tellers.

3. It may happen that higher productivity resulting from digitalization allows you to reduce the price of your product, and higher sales may allow you to keep employment (if the business climate is good).

4. Take an active role in training your personnel: the times where you could wait to see what came out from learning institutions may be over. This is especially true, of course, in early stages of a technology, when training on the job is most important.

5. Watch carefully developments in the digital industry (you may need outside help for that). Remember the skills needed in each phase of the process are different.

6. Make internal flexibility a must. This will be easy if your employees see that adequate training is provided on your side.

7. Make your workforce participate actively in monitoring the digital environment. They may see things you don't, and you will gain their confidence and keep a good morale.

8. Remember the general pattern a new technology follows. The first-mover advantage is extremely elusive in the first phases. Don't jump on the latest innovation, let others do that first.

Is it possible to draw conclusions from all this? Just one: technological change is everybody's business, since technology is done by us and paid for by us; if all of us cannot enjoy its advantages, all suffer its mistakes. One should follow with diligence its progress and have the courage to make oneself heard whenever it takes a wrong turn. Mankind ought to be able to harness technological progress and not be harnessed by it.

6. ADDENDUM: SAFETY IN THE WORKPLACE⁹

New occupations are created and destroyed all the time, which is why the question 'How many of today's jobs will still be around in twenty years?' is a very imperfect way of addressing the issues raised by the digital revolution. Sometimes, new occupations are born as a result of social concerns or regulatory pressure, not as the product of a new technology. As concerns the pattern of skills and wages, however, the process is similar to that followed by the spread of a technology. This is the case of safety at work.

This well-known picture suggests that safety in the workplace cannot have been the most pressing concern of construction companies one century ago. The International Labour Organization (ILO) had been created in 1919 with the Treaty of Versailles, but it had no legislative powers and

⁹I owe this insight to Messrs. Puigferrat and Galopa of COPCISA, a Spanish construction company.



Fig. 6: *Men at lunch*, New York City, 1929

could only make recommendations; hence adopting safety measures was left to the initiative of individual companies, sometimes at that of individual construction sites. In the most safety-conscious firms, civil engineers in charge of operations were charged with the task of studying tools, equipment and procedures that could improve safety; their knowledge of the many aspects of construction work enabled them to devise solutions for a great variety of problems. Slowly a set of best practices was created, some standards adopted – helmets, gloves, goggles, harnesses – and, many years later, as a result of social and legislative pressure, union demands the development of accident insurance, a uniform set of protocols has become standard in the industry the world over; the picture below can be seen at the entrance of most construction sites.

As standardization proceeded, knowledge could be codified and taught; one century later, safety at work was in the



Fig. 7: At the entrance of a construction site, 2017

curriculum of vocational training programs; degrees in safety at work were offered in some colleges. Construction companies hired cheaper specialists and left civil engineers free for higher tasks: their ability to face unexpected situations was no longer need there. No jobs had been destroyed, but the skills demanded and the wages paid had followed a pattern similar to that observed during the adoption of a new technology.

Disclaimer

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COMMENT

JACQUES DARCY

1. Digital developments prompt changes that could result in greater equality and widespread prosperity, nevertheless inequality of origin enables some to take higher levels of risk than others. Pareto-inspired approaches could be useful to assess this aspect of current economic trends

2. Much of innovation economic studies is focussed on the study of individual firms or technology sectors. However current developments should prompt a rethink of macro-economics, it would be opportune to reassess basic paradigms of classical economy (equilibrium; keynesian economics; etc. in this light, and point to which macro-economists today are working on the new tools which are needed)

3. The role of military and space research expenditure in driving technology revolutions is a fact which we cannot avoid, but which probably creates a vicious circle leading to technology development on the one end, war on the other. Economic research should study such trends much more seriously than until now. Having access to adequate data may require decisions by representative bodies (parliaments etc.) so that defense restrictions are lifted.

4. Lastly the issue of intellectual property regimes should be looked at in standalone manner. In ethical terms, it is worth discussing whether anyone can appropriate an intangible (say an idea) – Some traditions (take native peoples) actually consider that appropriation of any sort of asset, intangible or tangible, is a sin.

COMMENT

WALTER MAGNONI

Il mio intento è quello di provare a dialogare con la proposta del professor Alfredo Pastor, cercando di mettere in luce alcuni punti, a mio parere cruciali, ed avendo come sguardo prospettico quello dell'etica sociale.

Sono un teologo morale, ma nella quotidianità dirigo la Pastorale Sociale e del Lavoro dell'Arcidiocesi di Milano e coordino la Pastorale Sociale della Lombardia ed inoltre faccio parte del gruppo esperti della CEI che segue i problemi sociali. Le mie osservazioni provano a mettere in dialogo il testo del professor Pastor sia con la teologia e il Magistero Sociale della Chiesa, sia con l'analisi che traggo dell'Ufficio che dirigo.

1. LA DIGITALIZZAZIONE NELLA LOGICA DELLA "RAPIDACIÓN" DI PAPA FRANCESCO

Mi pare di scorgere una profonda sintonia tra l'analisi di Pastor e quella di Papa Francesco, in particolare laddove nella enciclica *Laudato si'* il Pontefice parla di "rapidación" per evidenziare la velocità con la quale avvengono questi cambiamenti. Lo stesso professore nella sua analisi riconosce che la rivoluzione digitale ha accelerato i processi in maniera inedita rispetto al passato.

Vorrei partire da questa considerazione per porre la mia prima osservazione al testo. Quali cambiamenti produrrà quella che ormai viene comunemente chiamata quarta rivoluzione industriale o di industria 4.0 (dopo quella del carbone e della macchina a vapore; dopo quella del petrolio, dell'energia elettrica e della produzione di massa, e dopo quella più recente di internet e delle tecnologie dell'informazione e

dell'automazione)? Qui siamo nel campo dell'intelligenza artificiale (ovvero macchine capaci d'apprendere), della stampa 3D, delle nanotecnologie e delle biotecnologie. Lo stravolgimento appare inedito ancora più del passato.

Allora la domanda che pongo verte non tanto sui cambiamenti nel medio lungo termine, dove è ipotizzabile una stabilizzazione della società, ma sul breve periodo immaginando l'arco temporale dei prossimi almeno 10/20 anni.

Parto da un esempio che noi italiani sentiamo molto e che sto seguendo da vicino, grazie a un percorso intrapreso anche con altri soci della Fondazione Centesimus Annus: lo stravolgimento del mondo bancario.

Se è vero, come lei afferma che l'introduzione dei bancomat non ha eliminato gli sportelli bancari, da noi in Italia si sta verificando un grosso esubero di dipendenti bancari a causa principalmente del sistema on-banking che permette di compiere le operazioni più comuni senza più recarsi ad uno sportello.

Riporto solo uno dei tanti articoli apparsi nei mesi scorsi: «Solo cinque anni fa erano oltre 316mila, ora sono 298.575. Un esodo, fatto di 18mila tra esuberanti, licenziamenti e uscite anticipate che non conosce battute d'arresto. È il popolo dei bancari, ben diversi dai banchieri che occupano i posti di comando negli istituti di credito. Addetti allo sportello, ma anche dirigenti e responsabili d'area, si ritrovano oggi a pagare lo scotto più pesante della crisi del settore bancario in Italia. Il boom dell'home banking, cioè dei servizi accessibili attraverso Internet dal pc o dallo smartphone, ha inciso fortemente su un mestiere che deve di fatto reinventarsi per non scomparire. Anche perché la scure delle banche per far quadrare i bilanci sempre più precari non accenna a placarsi. Al contrario la scelta di tagliare i costi del personale è diventata un'operazione sempre più praticata, che assume proporzioni più grandi quanto più fragile è lo stato di salute della banca. Mps, ad esempio, ha annunciato circa 2.600 esuberanti e la chiusura di 500 filiali entro il 2019. La Popolare di Vicenza ha in

programma un esubero strutturale fino a 1.500 dipendenti» (http://www.huffingtonpost.it/2016/10/26/bancari-esuberi-n_12655530.html).

Ma si pensi anche alle migliaia di tagli in atto da parte del gruppo Unicredit.

Nel breve termine il problema tocca molte categorie: bancari, addetti alla segreteria, negozianti (sostituiti dalle vendite on-line).

Sembrano avere un senso le parole di Papa Francesco al: «l'orientamento dell'economia ha favorito un tipo di progresso tecnologico finalizzato a ridurre i costi di produzione in ragione della diminuzione dei posti di lavoro, che vengono sostituiti dalle macchine» (LS 128).

Pastor afferma giustamente che dietro ad ogni computer c'è una persona, ma cosa pensa delle osservazioni del gesuita Giacomo Costa che troviamo nel numero di Gennaio 2017 quando sostiene che: «Macchine sempre più sofisticate, capaci di apprendere dalla propria esperienza e da quella delle persone, e in grado di analizzare in un batter d'occhio masse di dati che una persona impiegherebbe anni a raccogliere, rivoluzioneranno il rapporto con coloro che le utilizzano, che potrebbero ritrovarsi ad essere semplici "terminali umani" di sistemi interconnessi sempre più sofisticati. Se anche non fosse così, si amplierà lo spazio d'impiego di macchine al posto dei lavoratori, investendo non solo mansioni di routine o di fatica, ma anche quelle più sofisticate: i progressi nel campo della traduzione automatica, della guida senza conducente e addirittura delle diagnosi mediche automatizzate e a distanza ne sono un esempio» (G. COSTA, «Trasformare l'esistente: il lavoro che vogliamo?», *Aggiornamenti Sociali* 01/2017, 5-12: 7).

Io credo che questo processo non vada ostacolato ma favorito e orientato alla ricerca del bene comune. Vedo i benefici che erano presenti in tutte le altre grandi invenzioni dei secoli precedenti, ma il punto che vorrei provassimo a considerare seriamente è la diminuzione del lavoro retribuito e l'aumento del numero di disoccupati. Credo sia opportuno

analizzare le prospettive occupazionali e provare a pensare nuove vie. Non possiamo aspettare 20 anni!

C'è un oggi che c'interpella e crea scoraggiamento nelle persone. Quali risposte concrete possiamo dare per rispondere alle preoccupazioni dei giovani e ai timori di chi perde un lavoro e non sa come muoversi?

Io mi ritrovo in sintonia con l'idea di Pastor che il problema non è il posto fisso, ma al contempo accompagno tante persone senza occupazione e sarebbe importante affinare le strategie di ricerca e inserimento nel mondo del lavoro. Possiamo fare qualcosa?

2. L'EDUCAZIONE E LA FORMAZIONE AL LAVORO DEI GIOVANI

Una delle osservazioni chiave del testo del professor Pastor tocca la sfida dei giovani che passa per la cura educativa. Mi trovo in profonda sintonia con questa riflessione, però mi permetto di far notare che l'analisi proposta è condotta tipicamente nella realtà americana: ad esempio, quando si parla del ruolo dello Stato, il modello di pubblica amministrazione preso in considerazione è quello USA. Parzialmente diverso, invece, il modello EU e il ruolo che svolge lo Stato nelle amministrazioni pubbliche europee. Ma le mie considerazioni vanno su due versanti:

1. Credo che oltre a insistere sulla formazione tecnica, sia altrettanto importante la formazione umanistica. Molto del lavoro ha a che fare con le relazioni interpersonali ed è opportuno avere persone capaci di conoscere il cuore dell'uomo, esperti in umanità (rubando l'espressione a Paolo VI). Sapere tecnico e sapere umanistico chiedono d'intrecciarsi e l'uno senza l'altro porterebbe certamente un impoverimento.

2. La sfida della formazione è a mio avviso quella d'insegnare a pensare. Accettare la complessità senza scoraggiarsi alla fatica dei cambiamenti, ma cogliendo le opportunità che si generano. Imparare un metodo con cui affrontare i proble-

mi vale più di molte nozioni, soprattutto in un tempo dove i mutamenti sono così rapidi. Mi sono chiesto: non potremmo come Fondazione immaginare un percorso formativo per alcuni giovani, dove mettendo insieme le nostre competenze, gli diamo strumenti per affinare il pensiero? Naturalmente la soluzione che io immagino non è quella di formare al “pensiero debole” tipico della post-modernità, ma ad un “pensiero solido” perché fondato sull’etica cristiana.

3. COSA DICE L’ECOLOGIA INTEGRALE PROPOSTA DA PAPA FRANCESCO ALL’ATTUALE SITUAZIONE DEL MONDO DEL LAVORO E DEGLI STIPENDI?

Vorrei provare a immaginare il contributo che la recente DSC, in particolare pensando a Benedetto XVI e Francesco, possono dare all’analisi fatta.

Credo che vi sia una parola da recuperare nel modo di guardare il lavoro oggi: la relazione!

Ma il punto decisivo sta nel tipo di relazione che si vuole istituire. Il paradigma tecnocratico dominante che il Papa condanna fortemente si basa su relazioni meramente strumentali, dove l’altro m’interessa solo come strumento per i miei fini. Uso la persona alla stessa stregua con cui uso una macchina. Invece, la sfida dell’ecologia integrale in merito al lavoro (in tal senso decisivi sono i numeri dal 124 al 129 della LS) è quella del pensare alla relazione che l’essere umano deve stabilire con l’altro da sé.

Così come tra le persone che abitano un medesimo territorio quello che è chiesto è di non essere solo cittadini, ma di sentirsi popolo (EG 220), allo stesso modo le persone con cui si lavora non sono semplici colleghi, ma persone che mi devono interessare in tutto. Nel mondo del business si lavora molto per affiatate il team di lavoro e a volte si pagano persone per creare relazioni più fluide tra le persone e questo semplicemente in quanto aumenta il rendimento e di conseguenza i profitti.

Per un cristiano dovrebbe esserci una ragione più profonda per costruire relazioni virtuose con coloro che s'incontrano nel mondo del lavoro, ovvero il fatto di avere una stessa radice, di provenire dalla stessa mano creatrice. Ma cosa implica tutto ciò nell'attuale mondo del lavoro? Come si può andare in tale direzione?

4. GLI STIPENDI E IL RAPPORTO CON LA RICCHEZZA

Nella tematica viene messo a fuoco anche il tema stipendi. Da noi in Italia è un problema per i giovani che in tanti casi, malgrado abbiano buone competenze sono fortemente sottopagati e sfruttati. Ma qui sento l'importanza di coniugare da un lato il senso della giustizia. Nella Dottrina Sociale della Chiesa c'è la domanda sul giusto salario ed è interrogativo costante. Si tratta di pensare al valore dell'opera prestata e a cosa serve ad un uomo per avere una vita dignitosa. Ma Benedetto XVI aggiunge al ragionamento la tematica della gratuità e della logica del dono (si veda tutto il terzo capitolo di CV). La memoria va ai benedettini che vivevano con lo stile dell'«amministrare senza avere» del «non lasciarsi dominare dalle "cose"» (L. BRUNI - A. SMERILLI, *Benedetta economia*, Città Nuova, Roma 2008, 61). Credo che al di là degli stipendi, dove appare necessario ragionare anche sul ruolo delle istituzioni e sulla correttezza di un certo peso fiscale che per alcune categorie di persone appare troppo gravoso rispetto all'ammontare complessivo delle entrate (si pensi alle cosiddette "partite IVA"), vi sia da ripensare alla logica della gratuità nei rapporti tra le persone che recupera un legame sociale e dà forza ai fragili. I vulnerabili oggi non sono quelli che non hanno uno stipendio, ma coloro che se venisse meno il loro stipendio si troverebbero senza una rete sociale di sostegno. C'è una forza nel sapere che non si è soli, che altri si prendono cura di noi e noi di loro.

Anche questo apporto del Magistero mi pare significativo per arricchire la riflessione.

COMMENT

OLIVER RÖTHIG

1. INTRODUCTION

Digitalisation is sometimes called the 4th industrial revolution and its characteristics and challenges are sold as something totally new. This is not so. Much of what we see today, such as outsourcing, globalisation, zero hours, self-employed and piecework has been around for many years – some techniques are even simply old-fashioned capitalist techniques to exploit workers using new technology. Just one example – the gig economy of today is a cheap copy of London in the 18th century: Jobs as we know them did not exist for most people then. They worked in precarious arrangements and were paid by the “piece” or task. A good illustration was given by Sarah O’Connor in the Financial Times recently, is a scullion of Westminster Abbey, the most menial worker in the kitchen: she submitted a bill in 1703 for sweeping the chimney and weeding the yard and waited six months to be paid. The gig economy today while small is not marginal: first rough estimate suggest around 2.5% of today’s workforce in Europe make more than half of their income from such work (<http://www.uni-europa.org/2016/12/05/crowd-work-europe-rise-new-report/>).

Digitalisation has become a buzzword and just talking about it leads us astray. It is a catch-all for closely entwined trends that are mutually reinforcing. I will look at a number of those factors that characterise today’s change processes with regard to the accelerating speed of change, labour markets, business models, workplace organisation and people’s dissatisfaction with developments. The perspective here is that of trade unions in the European services sector which also leads to some conclusions on the way forward to meet

the challenges of the new digital age (for a more in-depth view, see a research paper on trends in Europe's services sector: <http://www.uni-europa.org/2016/06/27/europes-service-sector-key-trends/>).

2. SPEED OF CHANGE

The pace of technological change is accelerating. Already three years ago, I heard a CEO of a major bank saying that the same magnitude of technological change over the last 20 years will be happening in the next 5 years. Think about what technology of today we did not have in 1996 and extrapolate to the difference from today to 2021. Similarly, there are estimates that 40% of jobs or at least of job content changes in the next 5 to 10 years.

Our mind-set still seems to be that we have this rapid revolutionary change now and after a while we have a new equilibrium. This won't happen. We have exponential change: it is like compound interest or the old story of putting 1 grain of wheat on the first square of a chess board, double it on the next square and so on.

A few illustrations:

– If job content changes so fast, how do we squeeze into such a short period identifying new skill needs, developing a curriculum, training teachers, teaching workers and having workers using their new skills in their jobs before they are outdated. In an age where no qualification or core competencies are lasting, such a linear approach won't work.

– Similarly for investment decisions: if the time horizon is 5 to 10 years, there is great uncertainty for companies. This is good for start-ups but difficult for established and in particular large companies – where trade unions tend to be stronger.

– Finally, how do we as individual plan our lives if we cannot see more than 10 years ahead, especially when social security coverage is being reduced?

– We are lacking mechanisms to control such kind of change. We need to “institutionalise” the digital revolution. Insofar the labour market is concerned, social partners, employers and trade unions are best placed to manage such change, because together they are the closest to the workplace. They have the most direct knowledge on what is happening and thus are in the best position to act quickly and continuously.

– Some talk about digitalisation changing the rules of the game, but what we rather have is an entire new game in town – with rules that are not even defined.

3. LABOUR MARKETS

Less and less employment in Europe is stable and lasting.

The OECD estimates that 25-40% of all jobs will have more than 50% of their tasks being replaced by automation in the next 10-15 years. While that does not mean that the individual jobs disappear, overall it still means a reduction of 17%. Major job losses will be in the services sector, in particular in the mid-skilled and mid-salary range (administrative, clerical work, transport and logistics but also technical, professional and managerial jobs). This enhances a trend to a polarisation of the labour market. While low quality jobs remain more numerous than high quality jobs, the ratio of mid-quality jobs will fall to about 50%+ of the workforce by 2025.

Digitalisation facilitates global sourcing of work, often going hand-in-hand with standardisation (commodity trap). It puts services workers, the majority of the workforce, from across the globe in competition to each other and increases downward pressure on wages, in particular in developed countries.

We already see that productivity increases are mostly shared between business and consumers while the share of workers is declining. Indeed, cost pressure on labour seems

to come from both competition between companies and customers' demands for cheaper services. Workers must compete with customers doing the job themselves via the web, robots and artificial intelligence.

4. BUSINESS MODEL

The structure and business strategies of companies are changing.

Within a company itself, operations are organised transnationally, functions are centralised serving several countries. We also see a "fine-slicing" of the value chain: due to outsourcing, franchising and crowdsourcing necessary core tasks are reduced resulting in a diminishing core workforce with a stable employment relationship.

Within an industry, we further see a trend to a "winner-takes-all" model at the top of the value chain, e.g. Amazon. Profits trickle, if not rush upwards putting wages under pressure further down the value chain.

One could argue that due to continuous change it does not make sense to develop core competencies, since companies cannot see beyond the 5-10 year time horizon. Rather, successful business is about sourcing competencies from other players and discarding them if no longer up-to-date.

5. WORKPLACE ORGANISATION

Traditional employment falls while hyper-flexible jobs essentially without a permanent employment relationship are increasing (such as contract work, freelancers and crowdworkers). In the extreme, digitalisation might make it possible that the prevalent employment model will be a global virtual labour exchange where people work without having an employer, colleagues, a workplace or a legal framework.

Work units for a larger part of workers become smaller and require fewer skills, not least due to automation and ar-

tifical intelligence. As a consequence, performance pressure increases since workers are faced with a constant evaluation and can be replaced by others (globally).

From a managerial perspective, all the factors mentioned lead to managerial overload: work organisation becomes too complex and opaque.

6. PEOPLE'S DISSATISFACTION WITH STATUS QUO

Our societies are at a tipping point. An increasing number of people feel that the promise for a better future for them and their children is no longer there. They feel unfairly treated and left behind, whether the Brexit voters in Britain, those who elected Trump in the US or all the other supporters of populism throughout Europe.

Too many ordinary people have no secure jobs or at least no hope for getting one at some stage. There are too many bogus self-employed, temporary agency workers and zero hour contracts. What we miss are safe jobs with a clear career prospect.

As trade unions, we are in favour of freedom of movement for workers in Europe, but what about this story: somewhere in a town in Northern England with high unemployment, before the Brexit decision, a supermarket advertised for jobs – yet, only in Poland. What can we say? Workers in that town feel helpless, ignored and aggravated. For them, society and Europe does not deliver and they blame migrant workers.

Let us take this a step further: with digitalisation, migrant workers do not need to come to that English town to take away local jobs; they just control robots in the supermarket via a joystick through their crowd platform from home. Is it better or worse if you do not see those who take away your job?

In future, will we live in divided cities with high quality service jobs in city centres where well-off customers get excellent individualised advice? Whereas the rest of us lives in

rundown communities in the outskirts doing crowd-working on individual low skill gigs, ordering food and goods via the internet and seldom socialising with anyone.

How do we counter the trend of a polarisation of our societies, between countries, geographically across countries, within the workforce?

The middle is evaporating and with it the basic communality and consensus that has been carrying our societies since the Second World War.

7. THE WAY FORWARD

All these factors challenge our societies and, from a trade union perspective, industrial relations. In a “winner-takes-all” virtual and borderless economy, the key question is how we can keep industrial relations fit for purpose when it remains very much based on the nation state and traditional standard employment.

While we might not have the answers yet, we know where to look for them. Here is an outline of things to do:

1) Re-value service jobs in care, domestic work, services with direct customer contact in shops and other services. Those jobs need to be increased and better paid. A simple reason why: A Japanese colleague of mine always gets annoyed when Western academics criticise the low productivity of Japanese department stores. His retort is that in US stores a customer always needs to hunt for a shop assistant while in Japan they wait for you. What is more productive, at least for the customer?

2) A clear commitment by policymakers, business and unions to strengthen collective bargaining, in particular at national and/or sectoral level. Collective bargaining is a proven tool for combatting inequality. In the context of a digitalised and borderless labour market, this also means developing ways to extend collective bargaining, collective and

individual labour rights as well as social security coverage to all types of workers whether offline or online (including free-lancers or people working through crowdsourcing).

3) Developing an approach to secure and increase access to skills and lifelong learning in the services industries, with social partners at its core and one that will ensure proper skill development for all services workers, including the self-employed, throughout their career and against the backdrop of rapid changes in services sectors.

4) A consistently regulated European internal market for quality services that stops regime shopping and social dumping across borders.

5) A substantive EU investment plan, 2% of GDP, with substantially increased means for infrastructure and skill development as well as innovation in services.

6) Enhanced cooperation among trade unions throughout Europe and beyond, because the interest of workers is increasingly affected by factors outside the scope of any one country. This includes a strengthened role for joint action of national unions, in particular through their European or international organisations, such as UNI Europa, regarding organising as well as influencing the EU, governments and multinational companies.

To conclude: Let us not talk only about change. Let us talk more about what continues and on which we as trade union can build? In our sectors, we have many experiences with atypical work and unions can be successful in the digital world.

I said earlier on digitalisation is an entire new game, but let us not forget the players remain the same. The last 150 years have shown that our societies do not condone economic “progress” that puts profit before people. Business going to much into such a direction will be forced back onto a course of serving the common good and respecting human dignity.

As trade unions, we have met many challenges before – only think of the start of the trade union movement in the 19th century. Trade unions fought against the odds and won. And trade unions will do so again.

* * *

UNI EUROPA, THE EUROPEAN SERVICES WORKERS UNION

As the European trade union federation for 7 million service workers, UNI Europa speaks for the sectors that constitute the backbone of economic and social life in Europe. Headquartered in the heart of Brussels, UNI Europa represents 272 national trade unions in 50 countries, including: Commerce, Banking Insurance and Central Banks, Gaming, Graphical and Packaging, Hair and Beauty, Information and Communication Technology Services, Media, Entertainment and Arts, Postal Services and Logistics, Private Care and Social Insurance, Industrial Cleaning and Private Security, Professional Sport and Leisure, Professionals/Managers and Temporary Agency Workers. UNI Europa represents the largest region in UNI Global Union.

COMMENT

JOSEP SALVATELLA

We live in a digital, global and connected world characterised by continuous, fast, social and technological change, the constant arrival of new players, and ubiquitous mobility and connectivity. The process of digitalization we are undergoing is creating an economic situation that offers new opportunities. The digital economy is silent. It takes place in a non-physical, vast and invisible domain and is governed by numerous automatic systems that give it two key features: speed and unpredictability. The digital economy is acting as a source of growth and creation of business and work opportunities. We are in the middle of a real new industrial revolution that is changing our society in a way we have never seen. For first time, a combination of technologies are disrupting the way we generate value (as industrial revolutions did) and the way we generate and distribute knowledge (as Gutemberg's printing press did), all at once.

It is estimated that within 4 years, the digital economy's share of the global economy will be twice as large as it is now. In other words, growth opportunities in advanced economies lie in the digital economy.

The economic situation calls for company managers to integrate digital into their everyday work, exploit new business opportunities and adapt their companies' organisational abilities to take the greatest advantage of the growth opportunities offered by digital.

The challenge for organisations and professionals is to be able to see digital change not as a threat but as a great opportunity to adapt, learn, relearn, evolve and progress. The key is to see digital transformation as the great opportunity it is.

Only by being highly-skilled digital professionals can we confidently face the future of work and only with highly-skilled digital professionals can organisations confidently tackle the current processes of digital transformation. Organisations can only be considered digitally competent when they have digitally competent professionals working for them.

Having skilled professionals is the surest guarantee of being competitive and building responsive teams and organisations that enable you to successfully tackle the changes rapidly taking place in the business environment. These high-performance teams must be results-oriented, based on distributed leadership, make intensive use of technologies and information, have great capacity for communication and learning and be used to networking and collaboration.

More and more highly-skilled digital people, companies and countries will take advantage of the new social and economic opportunities and the differences with those who can't follow the speed of changes will grow exponentially. This phenomenon, is described as The Great Decoupling and is the principal threat of digitalization. This consists of the increasing separation between economic growth and the generation of employment which may generate huge economic differences between digital and conventional talent. Additionally, as is currently the case, digital talent is scarce and this can slow down the growth of the digital economy. The challenge is how to manage this situation; a digital economy demanding digital talent and not finding it and a conventional talent demanding employment and not obtaining it. This situation is, and will be, generated by the speed of disruptions we are facing and the incapability of people to adapt to these disruptions.

The recipe to bridge this gap is in the constant development and a smart management of our talent, as individuals, as businessmen or as politicians. A smart use of the digital environment, rich in information and knowledge, in order to

develop and digitalize the talent and promote attitudes of self-development. We need to generate new learning ecosystems useful for people and which promote positive and entrepreneurship attitudes

This approach can make people better professionals. Collectively they enable companies and societies to successfully face the digital challenge; take advantage of opportunities; focus investment; develop a digital culture; persist with change and be consistent. Digital transformation is not a technological matter but rather a question of vision, strategy, and organisational culture.

It means being able to successfully overcome the challenge of managing talent in the network era. Hence the importance of professionals and their professional development and the leading role that management teams must play in the initial push and subsequent support and maintenance of that transformation. That is also the reason for the importance of having suitable talent and having digitally skilled professionals. It is a shared responsibility but it is, above all, management teams who are responsible for being firmly committed to driving forward the internal development of these digital skills.

SECTION 4
ETHICAL ISSUES IN ECONOMICS AND FINANCE

WHAT CAN A RELIGIOUS LEADER SAY ABOUT CORPORATE RESPONSIBILITY?

DIARMUID MARTIN

Let me start by some comments on one of the sessions in your conference: How do we encourage and incentivize people to do what they know they should do? I want to talk about a thing called public opinion. I'll give you an example. In 1995 I led the Vatican delegation to what at that stage was the largest gathering of heads of state and government in history: a summit on social development.

I was asked in my instructions to introduce a reference in the documents to the social damage caused by landmines, particularly in cultures which were trying to get away from the horrors of war. I was told: under no circumstance! This is a conference on social development. Disarmament questions must be left to our disarmament colleagues and their own much more arcane negotiations. I did finally get a phrase inserted but if you read it you probably would not know what it was really about: it mentioned that "certain conventional weapons which may be deemed to be excessively injurious or to have indiscriminate effects". That is actually the name of an international treaty and the countries that had signed that treaty couldn't object to its being mentioned.

Two years later there was a full-blown international treaty outlawing the use of landmines in Ottawa. What happened in the meantime? Had I converted the unrepentant? No. Public opinion had changed dramatically so that now in talking about landmines it was far better to be on the side of the saints.

Public opinion can form and greatly influence the common ethics of business, the ethical framework of a nation or

indeed of international affairs. The new landmine treaty was an interesting case. Many military experts had their doubts about its wisdom. But there comes a moment when anybody watching the tide of public opinion realizes that you are best to cut your losses and go with the stream of public opinion. The price of not doing so will be too costly.

Ethics and ethical behaviour in business march with the times and develop with the times. The major changes can come through public opinion change. Look at the classic ones: fight against slavery, the estimation of the role of women, the question of child labour. At times the change in public opinion can actually surprise the pragmatic. If you take, for example, the ban on smoking in public places in Ireland. Nobody would dare smoke in a restaurant in Ireland today. Many said it wouldn't work. There were many pragmatic reasons to think that an absolute ban would never work, and that perhaps some compromise would be the best way of moving forward. An idea whose time has come and who's just been swept by the tide of public opinion becomes impossible to resist. Curiously, the total ban or the total imposition becomes easier to sell than compromise.

For public opinion to change you need forerunners. You need men and women of intuition and innovation and courage and conviction who are prepared to take with determination a stand, and a principled stand, an uncompromising stand.

In the complex business of politics the art of compromise is an essential part of day-to-day ability to move forward. The level of compromise which becomes acceptable is determined by those who do not compromise. Democracy requires another presence in society than that in which everything is decided by majorities.

The Thatcher government attempted on more than one occasion to reintroduce the death penalty. There was solid public support in the country but Members of Parliament voted against it. An ethic which builds on compromise alone

will always be weak. Cheap ethics is of no avail to anyone. Veneer ethics is useless. In a society where compromise is the order of the day and where many dislike the dogmatic, or dislike the inflexible, or reject any concept of the absolute, we need the uncompromising.

That said, public opinion is a two-edged sword. Public opinion can be manipulated, can be emotional rather than rational. It can treat superficially and reduce to apparent simplicity situations which are in fact quite complex. The judgment of public opinion is a blunt tool with very little space for subtle details. That is a problem we have seen today in the rise of populism. How easily public opinion can be manipulated with regard to populism. Now we have a new range of political parties which have very little to propose but can gather populism by 'being against'.

The twin brother of populism is spin. Spin is about not just creating fake desires but even in making us think that there are fake outcomes which we believe in. You can win many battles with spin, but spin in the long run weakens victory of the real war which is about trust and confidence.

When spin gets out of control then it gets tied up in knots. People are left adrift not knowing where they stand, where truth is to be found. The confidence in institutions is weakened. When that occurs in public institutions and in public life, then the consequences of a failure in trust are serious. Spin is rarely the friend of transparency.

Ethics must have an independent foundation. Ethics is not an ideology or just a pragmatic program of ideas. The very nature of ethics is that personal responsibility must be at its centre. We're responsible for the foreseeable consequences of our acts. Independent responsibility is always at the heart of ethical behaviour.

Ethics is not an ideology that we trot out when we want to. It's not a mission statement which we can frame. It's not a handbook of dos and don'ts. It's about the responsible application of fundamental ethical principles to the decisions we

make. In the long term a just society is attained by people who live justly and with integrity.

In corporate governance the concept of personal responsibility is central. It can be very easy to say that “I did not know. The blame is with someone else”. When things go wrong – this happens in the Church also – resignations take place at the lower levels. When I was faced with the scandals of child sexual abuse I was very disappointed to be confronted with what I call the “baking the cake” culture: I only put in the sugar, I only put in the flour. Neither of us had any responsibility for the cake, because we weren’t there then it was put into the oven.

We are all responsible for the foreseeable consequences of our actions and our omissions. Real corporate responsibility can only be constructed on the foundation of an acute sense of personal responsibility. Ethics requires governance and regulation and enforcement. We live in a world of human beings and where corruption will always be found in the order of the day.

It should be noted that one of the most common forms of corruption is inefficiency which robs people, especially the poorest and the most vulnerable, of quality services which are their democratic due and for which they will pay anyway. In that sense, there should be no real conflict or tension between ethics and effective leadership and management of an organization.

One final question. What can and should a religious leader say in this situation? Should I leave it to the experts and return to the sacristy? Can religious values influence economic and social stability? The job of the Christian churches is to preach the message of the Gospel.

This is a message which is addressed to every individual and that has social implications for people who follow the message of Jesus. The basic message of Christian Churches is about the love of God. There are two characteristics of the love of God which I believe are particularly interesting in the

modern world. One is gratuity. God loves people without any preconditions. Take the story of the prodigal son who returns home. He has his little negotiating speech ready but he doesn't get the chance to use it because his father is there with his arms open. The other is super-abundance. The love of God is such that it surprises you. It's generous. It's so generous that it turns you head over heels.

These two values stand in contrast to a market driven consumer society in which everything is precisely measured out. If the label says 16 ounces you won't get an ounce more. You might get an ounce less! If we truly lived in an environment like that where you only got what you paid for and nothing beyond, none of us would be here today.

We are all here because someone gave us a break, because someone put enough trust in us to give us a chance, because people gave themselves for us. The world and an economy need the values that create generosity, that make you care about another person even when the person is weak, and that motivate you to really make an investment in the God-given capacities of others so we can all flourish together.

ETHICS AND ECONOMICS¹

ROBERT SKIDELSKY

1. INTRODUCTION

I want to open a conversation between economic and ethics. At present they speak largely incompatible languages, making conversation impossible. The thin utilitarian bridge between the two which links growth of GDP to the ethical aim of reducing suffering is completely inadequate for a good conversation.

Ethical questions are of three kinds. What is just? How ought we to behave? And what is good or desirable in itself? Such questions ought not to be beyond the purview of economics. All economic choices are simultaneously ethical choices (in the widest sense) because they concern both the means by which we pursue our ends, and the nature of the ends themselves.

Economists need to form a view of the justice of the economic system, the morality of economic behaviour, and the purposes to which economic life is directed.

Economists often claim that they are concerned only with efficiency. They may have ethical views as citizens, but these are irrelevant to their 'scientific work'.

This assumes that economics is a 'hard science', whose propositions are true or false. There are two objections to this answer. First, if it were true, economics would have very little to do, because few economic propositions can be empirically refuted.

But, secondly, even natural scientists have become increasingly aware that they need to understand the ethical

¹Vatican Conference, 19 May 2017.

implications of their work. No economist should claim the false modesty of a technician, on tap but not on top. Technicians have a responsibility for how their technique is applied.

There is no uniquely correct way of modelling economies. Economists make choices about the way they do economics. Like all technicians they need to be held to account for their choices. This is even more necessary now that economics has more influence on practice than the other social sciences.

2. THE SEPARATION BETWEEN ECONOMICS AND ETHICS

The distinction between how men actually behave and how they ought to be have is the foundation of non-naturalistic ethics. It was weakened but not abolished by the naturalistic ethics of utilitarianism. According to Bentham, human psychology is such as to cause people to seek to maximise pleasure and minimise pain. The 'good' was identified with a psychological sensation, thus abolishing the distinction between is and ought, fact and value.

But not entirely: Bentham's psychology restated the old conflict between egoism and altruism in a secular language. The moral imperative of utilitarianism, for which it is impossible to find a justification in utilitarian psychology, was to act in such a way as maximise the happiness of the universe.

Adam Smith, who was a moral philosopher as well as an economist, postulated two independent motives for action: self-interest and altruism. Humans acted from self-interest but were impelled to do so under the watchful eye of the 'impartial spectator', which might loosely be translated as moral conscience. This kept a place for ethics in economics. But Smith never succeeded in reconciling the two motives for action, largely because he had a severely impoverished notion of society. Economics paid increasingly less heed to the impartial spectator, more to the ability of the market to aggregate the self-interest of its individual participants into the common good. Economics came to embrace the paradox of

selfishness, most engagingly stated in Mandeville's Fable of the Bees, which showed in verse how 'private vices' produced 'public benefits'.

However, the 19th century was an extremely religious century and the paradox of selfishness producing good through the invisible hand of the market was unacceptable to that pious age. An ethical school of economists grew up in Germany, the USA, and England which insisted that it was the task of economics not just to subject economic motives and results to ethical scrutiny but to prescribe ethical behaviour in economic relations.

But the marginalist revolution cut the ground from under ethical economics. By the end of the 19th century the main trunk of economic theory had largely emancipated itself from concerns with just rewards, good motives, and ideal ends. Wants (ends) were taken as given – not subject to further enquiry; and self-interested market exchanges would, with suitable qualification, sum to the general good. The virtuous element of economics was to be sought in the concept of rational sacrifice, whereby the present generation renounced present enjoyment for the sake of the greater happiness of their children.

Alfred Marshall signified economics' liberation from the vaguer sciences when he named his textbook of 1891 *Principles of Economics*, rather than *Principles of Political Economy*; and succeeded in 1903 in taking economics out of the Cambridge moral science degree, on the ground that its 'metaphysics' (what we now call ethics) 'put off able men who would otherwise have studied economics'...

In his *Scope and Method of Political Economy (1891)*, Maynard Keynes's father, John Neville Keynes, proclaimed the terms of peace between the then warring schools of scientific and ethical economists. Economics, regarded as a positive science, was independent of ethics. But ethics was to provide a standard for judging economic motives and the justice of economic systems.

With Marshall's 'metaphysics' thus cleared out of the way the road was open for Lionel Robbins 1932 definition of economics as the science 'which studies behaviour as a relationship between unlimited wants and limited resources which have alternative uses'.

The economist could indifferently tell you how to produce more apples or kill people in the cheapest way possible. Qua economist, though not as citizen, he had no other expertise to offer.

3. REINTEGRATION

So we need to undo Marshall's work, and make ethics a compulsory part of the study of economics. It is as technical, in its way, as the 'technique' economists currently learn; but it has the additional benefit of being both rigorous and (rarely) mathematical. Ethics should inform economic enquiries in the sense of drawing attention to the ends of economic activity, pronouncing on the means, and drawing appropriate conclusions for policy.

Economists partly recognise this. The main – and widely accepted – ethical goal of economics is to reduce physical suffering by reducing poverty. Economics justifies itself as practical ethics by its pointing to the most efficient way to achieve this. We would surely want to agree that the reduction of avoidable suffering is an ethical goal; and that an important measure of our success in achieving it is the growth of GNP.

Economists go on to argue though that scarcity will always be with us and there is therefore no further need to think about the ethics of growth. Drop the highly unrealistic assumption of insatiability and a torrent of ethical questions emerges:

Should we be worried by any slow down in growth? How much growth is enough for a 'good life'? Are there 'natural' limits to growth? What duties do we have to future genera-

tions? What contribution can economics make to what Mill called the 'art of life' as opposed to the means of life?

Morality is concerned with the question of how we ought to behave. Even if economic growth remains valid as an ethical goal, economists need to be aware of the moral implications of different kinds of efficiency. This touches on all forms of economic organization. Slave labour may be more efficient ('costs less') than free labour, but cost reduction is obviously not a complete argument for using slave labour. What about child labour? As Joan Robinson once put it: 'There's one thing worse than being exploited by capitalists, and that is not being exploited by them'.

Or off-shoring jobs to cheap labour locations on the ground that this is efficient for reducing poverty in poor countries?

Is it right to use robots to replace human labour?

Can the concept of ethical consumption be justified on economic grounds or is this simply a private preference? It is important to stress that there are no right moral answers to such questions. But economists should at least be sufficiently self-aware to realise that their moral biases influence the way they model economic life, and pretend they are a value-free science.

4. THE JUDGEMENTS ECONOMISTS MUST MAKE

Let me illustrate what I have just said with an account of some of the moral and ethical judgments the economist needs to make. The economist needs moral insight into (a) the justice of the private property system, (b) the relation between employers and employees, (c) the moral value of self-interest. He needs ethical insight into (e) the ends or purposes of economic activity, (f) the value of nature and (g) the value of wants.

5. PRIVATE PROPERTY IN THE MEANS OF PRODUCTION

This is the moral Achilles heel of the capitalist system, as was recognized by Locke nearly 400 years ago. In his *Two Treatise on Government* (1689) Locke says that everyone has a 'property' in his own labour. From this it follows that everyone has a natural right of property in the fruits of his labour. Labour is therefore the price of property. (This is the labour theory of value).

Locke meant by property both the 'fruits of the earth' (roughly the necessities of life) and the source of those fruits, the earth (roughly 'the means of production'). He assumed that there still enough free land available to give all who worked both kinds of property. But he also defended existing private property rights as improving the productivity of the soil and thus affording an enhanced property of the first kind to those whose labour had been insufficient to secure them property of the second.

This can be interpreted as giving owners of capital the duty to provide work on pain of expropriation.

But this moral claim for a 'right to work' as surrogate for a right to ownership of the means of production was evaded by two modelling assumptions of neoclassical economics.

The first is the full employment assumption. By this device all unemployment is assumed to be a choice for leisure, carrying with it no right to income.

The second is the assumption that in a perfectly competitive market all the factors of production receive the equivalent in money of what they produce. This takes distribution off the economic agenda.

At first there was some optimism that the theory of subjective utility could furnish an objective argument for income redistribution. Arthur Pigou, the founder of welfare economics, set out to show, by means of the law of the diminishing marginal utility of money, that a transfer of income from rich to poor would increase total utility. But his demonstration,

while logically persuasive, required treating everyone as having identical tastes, and the availability of a satisfactory measure of total happiness. Pigou's proofs soon broke down.

Economists' interest in distribution faded away when American economist John Bates Clark demonstrated that, in perfectly competitive markets each factor of production received the value of its marginal product. Competitive markets ensured not just that all participants got what they wanted, but all were paid what they were worth. Questions of allocation and distribution were simultaneously resolved by arithmetic!

Except we know they weren't. The questions raised by Locke should be part of the moral reflection of any decent economist, because it lies at the heart not only of the historically contested nature of value theory (what creates economic value?) but of the conflictual, and often dysfunctional character of the contemporary capitalist system.

Political practice in capitalist economies has not adhered to such rules of efficiency, at least consistently. Governments have provided income support to the poor through redistributive taxation, despite the objection that this only perpetuates poverty by encouraging the poor not to work. In the Keynesian era at least they guaranteed employment for all those who wanted to work despite the objection that this destroyed labour market flexibility and caused inflation. These measures were not enough to eliminate conflict over the distribution of the 'fruits of the earth', though they reduced it.

Today, with the active encouragement of neoclassical economists, the employment guarantee has been removed and welfare benefits have been cut down in the name of efficiency.

Notice that the moral debate is not one-sided. There is a liberal argument for the state not interfering in the voluntary contracts made by employers and workers. We would at least need to ask how 'equal' these contracts are. What one requires of economists is that they be conscious of the moral choices implied by their analytic choices.

6. THE RELATIONS BETWEEN BOSSES AND WORKERS

When Keynes proposed to leave the capitalist system alone provided only that it could be induced to offer full employment, the socialist Evan Durbin accused him of justifying the freedom of employers to 'exercise their sadistic impulses in the control of industrial workers'.

Much has been done since then to curb any such 'sadistic impulses in the control of industrial workers'. Hierarchical systems of control have been flattened, and employers' rights hedged in with numerous regulations covering health and safety, summary dismissal, harassment at work, and much else.

In a parallel development the hold of patriarchy has weakened. Women now have full access to the labour market. But in another sense patriarchy is intact. For Locke, work in the home carried no separate right to the 'fruits of the earth'. This attitude persists, and women's domestic work remains unpaid.

Despite some shifts in moral understanding, the fact remains that in a private enterprise system, employers provide employees with such fruits of the earth as they decide. With the decline of trade unions this has become even truer than it was forty or fifty years ago.

Numerous attempts have been made over the years to secure non-owners of capital a greater say in the conditions and purposes of their labour. Forms of de-centralised collective ownership or control within the framework of a privately-owned economy include workers' share-ownership, production co-operatives, workers' representation on boards of companies. The 'stakeholder' concept is the latest attempt to water down employer prerogatives. Some companies have in fact introduced one or other of these practices.

On balance economists have objected to interfering with employers' rights on efficiency grounds. These objections need to be disciplined by moral reflection. It is not that econ-

omists are exceptionally hard-hearted in the matter of how to treat others. It is that their discipline inclines them to a view of efficiency which makes them forget that workers are also people.

7. THE MORAL VALUE OF SELF-INTEREST

Economics overturned traditional ethics by turning greed for wealth from a vice into a virtue.

In the pre-modern tradition love of money was regarded as ethically opprobrious and destructive of martial valour and communal ties. Augustine had denounced it as the worst of men's sins, worse than love of power or sex. The 18th century trick was to redefine it so as to bring it into line with utility. It made little sense, wrote David Hume, to call a vice something which was as beneficial to society as the desire for gain. The old term 'avarice' was sidelined in favour of the colourless 'self-interest'. 'There are few ways in which a man can be more innocently employed than in getting money' wrote Dr. Johnson. Montesquieu talked of the 'douceur of commerce'.

Following this lead, contemporary economics subsumes ethics in long-run utility functions. For example, it can demonstrate that 'honesty pays', so probity in market transactions does not require the support of an explicit ethical system.

On the other hand, the assumption of utility-maximising behaviour implies that, in competitive markets, all subjective preferences are in fact realized (subject to a budget constraint). So the common good – defined as the greatest happiness – is realized by the market system.

Two moralities of behaviour are being opposed: individual self-interest and the 'ties that bind us' to each other. Both are 'natural'. Economists should be invited to reflect on which emphasis conduces more to human well-being, or how social arrangements might reconcile them.

8. THE PRICE OF PROGRESS

Economics is about how the economy can be most efficiently designed as a growth engine. The logic is simple: the growth of wealth is the means to end poverty. Ending poverty is ethically good. But the ride will be bumpy, so the question arises: how much suffering is justified to end suffering? This moral issue is well understood in other fields – for example when we question the morality of war. But economists, by and large, are blind to it.

So what price is it morally acceptable to pay for progress? Duncan Foley has written: ‘The moral fallacy of [Adam] Smith’s position is that it urges us to accept direct and concrete evil in order that indirect and abstract good may come of it’ (Adam’s Fallacy, 3).

Mainstream economics is thoroughly wedded to different versions of the ‘price of progress’ argument. If the critic points out the wrenching costs of continuous adjustment to new conditions, the economist will invite us to compare how people live today with how they lived prior to the industrial revolution.

James Mill put the utilitarian case in a way that would not seem out of place now: “The free enterprise system has its hardships, but it is the price we pay for progress and the general good”. His son, John Stuart Mill, unable so confidently to excuse the sufferings of others, added the proviso that this suffering would surely be temporary: as progress advanced, it would no longer be needed. A timeframe was, alas, not provided.

Herbert Spencer added a social Darwinist twist. The sufferings of the poor, were the mechanism through which society thrived. Only by rewarding the rich and punishing the poor would it do so. Economists alert to economic injustice today will sometimes excuse it on the ground that we cannot ‘afford’ just social arrangements until we are a lot richer. Scarcity demands efficiency, not morals.

However, this argument for postponing ethical considerations till scarcity is overcome is undermined by the fact that most economists regard scarcity as a permanent condition.

And of course there was Joseph Schumpeter, who said 'never waste a good recession'. He was the apostle of wealth-creation through creative destruction: the idea that progress was not so much a smooth evolutionary process, but a chaotic one in which moribund giants are replaced by agile upstarts. This is a concept that modern-day Silicon Valley has embraced under the slightly softer label of "disruptive innovation". Destruction of industries, communities, ways of life was not too high a price to pay for progress

And the most recent addition by Richard Gordon who produces the ridiculous argument that people got more pleasure watching an hour of television in the 1950s than people got from listening to an hour of radio in the 1930s.

You will not find any discussion of the price of progress in the standard economic textbook. Yet one would expect moral disquiet at the thought that those who impose the suffering are almost never the ones who suffer!

A neoclassical economist will argue that the 'compensation principle' was invented precisely to reduce the price of progress'. Provided the gainers can compensate the losers, markets will be Pareto-efficient. Whether they do so or not is up to politics; the fact that this almost never happens in practice isn't seen to invalidate the underlying idea.

All 'price of progress' arguments beg the question of what economic growth is for. Is it to make us richer or is it to make us better? And what is the connection between the two?

9. THE GROWTH OF THE CAKE WAS THE OBJECT OF TRUE RELIGION

In this somewhat caricatured summary Keynes was implying the means – growth of the cake – had preempted the ethical question: what is growth for? The answer which most

of us would give, on reflection, is so to reduce physical scarcity that most people will be enabled to lead 'richer' lives. Economists are in tune with popular feeling in seeing growth of material prosperity as the royal road to a good life for all.

But economists who query continuous dedication to the growth of GNP have also been struck by the fact that beyond a certain income level, people's contentment, the average of happiness, the sense of well-being seems not increase. This has prompted them to query the continuing organisation of society to maximise economic growth.

So far the ethics of the matter are clear enough. Growth should stop at the point when further growth no longer produces a net improvement in the quality of life. The argument starts with what we mean by the good life. To most economists (and it has to be said to many others) the answer is: a happy life. This is in line with the utilitarian ethics of most economists, who accept the Benthamite goal of maximising pleasure and minimising pain. The goal of 'happiness' as an agreeable state of mind replaced the Greek 'eudaimonia', or the well-lived life, as the state of affairs to be aimed at. To be good is what makes one happy – or at least less miserable.

So the main economic aim of governments the world over is to increase Gross Domestic Product (GDP). The assumption is that growth of wealth will make people happier. But to what extent is GDP a good measure of even material welfare? Many would say that it is a poor proxy for quality of life. Sea breezes in New Hampshire are healthier than air conditioning in Alabama. But they don't show up on GDP. Nor does volunteering, housework or care – one of the crucial insights of feminist economics.

As a recent author, Ehsan Masood, has noted 'GDP is neither a measure of welfare, nor an indicator of well-being. This is because it is not set up to recognize important aspects of our lives that are not captured by the acts of spending and investing'. Alternative indicators have been developed: the Human Development Index, Gross National Happiness. Flawed

though they are, they are efforts to get beyond growth of quantity to growth of quality.

For economist Richard Layard of the LSE, happiness should be the end which economic organization should set itself. This will not necessarily mean the end of growth but will involve substantial redirection of spending towards towards 'social goods', like education, health-care, public infrastructure and such like, much in line with Galbraith's programme as outlined in his 1958 classic, *The Affluent Society*.

Maximising happiness is interpreted as maximising the goods and services that people want. This is probably the best that economics can do. But it should be obvious on reflection that the distinction between 'is' and 'ought' is not so easily disposed of. What is desired is not the same as what is desirable. If it were, we would have no way of subjecting our desires to any moral scrutiny at all. All we could hope to do is, by law or regulation, to limit their expression so as to prevent them from harming others, including future generations. This is the liberal solution. But there is surely more to be said.

10. THE VALUE OF NATURE

This is at the heart of the issue raised by Green economics.

The economic view that nature is simply an instrument for human purposes has always provoked an impassioned reaction from poets and writers distressed at the 'rape of nature' for the sake of progress.

The Green movement has taken up these themes, but it remains split between those who want to limit our depletion of nature for purely instrumental reasons (the 'shallow' wing, exemplified by the Stern report on global warming) and those who value it as an end in itself (the 'deep' wing). In the 1970s, the scientist James Lovelock came up with the *Gaia* hypothesis: the idea that the earth is a self-regulating system like an organism, which we disturb at our peril. He thought of it as a scientific hypothesis, but by calling it *Gaia*, the Greek earth

goddess, he gave nature an increasingly mystical meaning. Gaia turns from being bountiful Mother earth into a vengeful fury who turns on her progeny when they abuse her.

There is an issue here for ethicists which economics should not ignore. The 'shallow' wing of the Green movement is an extension of standard cost-benefit analysis over a longer time-frame and hence with added scientific uncertainty. Its basic argument is that we should not privilege our own generation over the yet unborn. But we do not value nature purely for its usefulness. We care about the existence of the polar bear and snow leopard for their own sake and apart from any utility we derive from it. The same is true of the vast majority of endangered species across the globe.

Should we then view the flourishing of non-human life as an 'end in itself', independent of any interest we may have in it? This raises seemingly intractable problems. What can the flourishing of non-human life mean? Because as we know nature is 'red in tooth and claw'. Arne Naess, the original deep ecologist speaks of 'an equal right to live and blossom'. But who are the bearers of these rights? Are plants, bacteria, fungi all included? Should we devote equal resources to protecting all living things? Are individual animals the bearers of rights or whole species? If our criterion for intervention is the utilitarian one of minimising non-human pain, this gives us no reason to protect plants, who can feel neither pleasure nor pain.

Taking such moral considerations into account will determine how much intervention in nature it is right to sanction for the sake of economic progress, and what kind of intervention. It is frivolous to say that some technical innovation will 'turn up' to repair or cauterise the damage we cause to our natural habitat. Or that if this planet becomes uninhabitable, there is always the solar system to retreat to. We simply cannot rely on the right kind of technology turning up in time. Economists need to take an ethical position.

11. NEEDS VERSUS WANTS

The biggest barrier to economics taking ethics seriously is the failure, shared by the liberal tradition as a whole, to distinguish between wants and needs. Needs are absolute, in the sense that unless they are met we perish. This is the moral argument for poverty reduction. But wants are relative, and in principle limitless. This is the basis of the economist's assumption of insatiability. By failing to distinguish between the two, and by placing material wants at the centre of its picture, economics evades discussing the ethical value of the wants we have, and therefore thinking about systems of social organisation which repress or discipline our craving for novelty and gadgets.

The old distinction between 'worth' and 'value', the former meaning *valor naturalis*, the latter *pretium*, has long ceased to have any meaning for economics, in which value depends entirely on subjective preference. Since the limitless wants are assumed to be mainly for material goods, economists find themselves trapped in the position of advocating economic growth without end to ensure the satisfaction of wants which will never be satisfied.

COMMENT

LUIGINO BRUNI

Gift is too dangerous and subversive to be compatible with the needs of businesses and institutions. That's why it tends to be substituted by the incentive which presents itself as a partial gift. Will we ever see the resurrection of the gift from the heart of the market?

*"The obligation of reciprocity in the exchange is not a response to specific powers linked to the objects, but a cosmic conception which presupposes an eternal circulation of species and beings" (MARCEL MAUSS, *The Gift*).*

At the origin of the ethos of the West there is the gift with all its ambivalences. Many origin myths associate human history with the refusal of people to stay and remain in a state of the harmonious reciprocity of gifts. The tales of Prometheus and Pandora (meaning: "all gifts"), or those of Adam and Eve tell us the same story in different languages: that human beings are unable to build their own civilization on free gift. But they also tell us that there is a profound relationship between gift and disobedience, between gratuitousness and authority, between freedom and hierarchy.

In Eden, the subjugation of women to men, the root of all other types of social subordination, is the result of their common disobedience: "Your desire shall be contrary to your husband, / but he shall rule over you" (*Genesis* 3:16). From the failure of the primordial relationship of reciprocity the first hierarchical relationship of domination is born. And so the hierarchy becomes the main response to the failure of free gratuity, its first alternative, its first enemy.

There is, in fact, a radical tension between hierarchy and gift. Hierarchy devours the gifts of its subjects, consuming

them in the form of sacrifice: the kings, pharaohs and priests claim the first fruits and always want the best part (Zeus condemns Prometheus because he offers him the worst part of the bull quartered). However, hierarchy fears free gift more than anything else as it is not geared to its objectives because it cannot be oriented. Trying to turn the gift-gratuitousness into similar but harmless things is the invincible tendency-temptation of every hierarchy, doing everything possible to remove the unmanageable surplus from the gift, its poisonous sting given by its free nature.

The governments of the organizations also need the creativity and freedom of the gift, but they would want only the one that can (and should) stay within the established and safeguarded boundaries. And so, in times of real crisis, when free gratuity would be the first truly necessary thing, one is left destitute of this very essential.

That's the key to – more or less – the tragedy of the gift in businesses and institutions. This tragedy is manifested at various levels. The communities and movements of civil society, not infrequently even businesses, are also, and in many cases especially, born of passions, desires, overflow, from our desire for life, future and the infinite. *That is*, from our gratuitousness. These associated forms of life are created because some people, or at least one, can see some all new and interminable spaces that allow for the full expression of their personality and dreams. They see that there is a place, and only that one, where the ordinary limits that exist elsewhere have disappeared, the barriers have fallen, or cannot be seen any more. Everything becomes possible. And they set off towards infinity, even when everything is done in a basement, or in a village in the forest.

Then with the passing of time the ideals and passions become practical, the first proto-institutions are born, leaders emerge, rules are written. Hence contracts, regulations, and soon the inevitable hierarchy are formed. And so the initial communities-movements gradually become associations, or-

ganizations, cooperatives, companies, which in order to function and grow need to manage, normalize, remove and banish those spontaneous practices and those surpluses that were the origin of the first experience. In order to be able to manage and navigate within the government rules, to coordinate and guide actions toward institutional goals, it becomes necessary to unify and standardize behaviours, too. And the first freedom of the first gifts dies. The only gifts that remain are the sacrifices that feed the hierarchy and its objectives, the ones that feed its hunger. All this happens not because the management is bad or dull, but by the very *nature* and vocation of hierarchy: to perform its job it has to encourage the most ordinary, gregarious and domesticated elements of creativity and freedom, in order to fight the more subversive and destabilizing dimensions of gratuity, those that would be essential especially in the most important and delicate moments (crises, generational changes, tests...).

This is one of the most important dynamics of the institutions: once our gratuitousness has generated organizations, the inherent and necessary dynamics of their government eventually denies the expression and practice of those free gifts which had caused it to be born. The “daughter” organization devours the “father” gift. This is how many of the most beautiful collective creations end, because the body generated by gratuitousness puts out the original creative and free spirit, the only breath that life knows. This “impossibility theorem” manifests itself in many organizations and institutions, but it is absolutely central in the so-called ideal-driven organisations (IDO) and so in spiritual and charismatic communities, which often burn out, wither and die because the hierarchy and the government prevent their resources capable of saving the organization from its own extinction to operate freely. We have daily and ample evidence of this.

At the base of the progressive elimination of the free gift, a key role is played by the transformation of the *gift* into *incentive*. Gifts and incentives seem very different realities. But

if we look at them carefully, we realize that they are bordering concepts that look alike. Reciprocal relationships based on the exchange of gifts create large debit/credit relationships by their very nature. These are highly generative and radically complicated to govern. The gifts that are born to respond to other gifts, never being equivalent to each other, are unable to compensate and to “settle” the debt of the first gift. Instead, they feed the relationship and reactivate the cycle of reciprocity. In other words, when a gift received is recognized and an attempt is made to reciprocate it with another gift, the second gift is not the first gift with the minus sign in front, but it is a primal act that holds open and re-launches the chain of mutually given gifts.

That’s why this reciprocity, which was the first language with the help of which communities met and started to get to know each other, gradually generated the commercial type of reciprocity of the contract. If the function of the contract is perfect and balanced, it actually aims to close down a relationship, but if it’s imperfect and unbalanced about the reciprocity of gifts it aims to keep that human relationship open, generative, fruitful, and therefore unpredictable, able to surprise and amaze, just like life. In the reciprocity of gifts, the “credit” created by the first gift it is not compensated by the second gift, which remains in excess, and this surplus becomes the mother of new relationships, the dawn of new days. Compensation of gifts is impossible, or at least it is always partial and imperfect, because we do not own the unit of account to make the calculations, we do not want to do them either, and we are most often wrong when we do it, thereby fuelling disagreements and conflicts. Like an iceberg, the greater and more important part of the gift is the one that’s *invisible*. What we can see is just the surface, but we know that beneath its signs there lives a powerful and mysterious energy capable of extraordinary things: it can rebuild an entire community but it can also destroy it. This invisible and

obscure part of the gift is the root of the fascination and fear that gift has always exerted and still exerts on us.

But (and we are in the heart of the tragedy of gift) its sub-merged part, the calculations never done and the accounts that do not work, the debts and receivables that do not compensate each other, add up to all that businesses – and in general, organisations – really hate. The utopia of every organization is therefore to be able to acquire the creativity, passion, energy and generosity of the *homo donator* (the “giving man” – *the tr.*) without the inherent ambivalence, without any demand and recognition of gratitude, without bonds. And so they perform a genetic manipulation and turn it into *homo oeconomicus* (“economic man” – *the tr.*). The incentive is the first tool to try to manipulate the gift in the contract. They are somewhat similar: the *homo oeconomicus* is a *homo donator* deprived of his original, creative, destructive and destabilizing energy.

The incentive, if we observe it well, is really as a kind of counter-gift in a form of reciprocity. This is what the *head* (ownership and/or management) “gives” to the *agent* (worker) in exchange for a given behaviour which is to his advantage. That’s why some economists (including Nobel Prize winner George Akerlof) described the employment relationship as a “gift exchange”, adding, honestly, the adjective “*partial*” to it. The incentive can be described as a partial counter-gift because it is completely aimed at the free component, to make the *agent* controllable and manageable by the *head*. It is not by coincidence that the incentive is often called (improperly) *award* by companies, in order to symbolically emphasize its dimension of simulated gift... *partial* gift. Too bad there is something in human life that does not lend itself to partial reductions, to be shortened, blunt or cut – and it is gift itself. Unlike other living realities, *gift lives only in its entirety*: if I reduce it, halve it, I simply kill it. The incentive, presenting itself as a small and partial gift, is actually the anti-gift, the antidote that defends the corporate body from

the real and free gift, which disappears and is gone when we need to re-start, to resurrect.

Businesses continue to live, to be born and to be reborn because many workers violate the taboo of gratuitousness, bearing all the consequences. Businesses do not know it and do not want it, but if they are alive and reborn it is because the taboo of gratuitousness is desecrated every day by free people who cannot help giving gifts, despite the prohibition to do so. The reason why we cannot help giving gifts is that we are alive, and that incentives are just not enough: we want and we are worth much more.

Long ago, gift generated the market. Will it, one day, be reborn from the heart of the market?

COMMENT

LUIGI GUBITOSI

Lord Skidelsky has explained the phenomena of globalization and automation very well, so I will touch upon them just briefly.

Overall, globalization has been, although with some nuances, a very positive event for mankind. There are less people in extreme poverty in the world than 30 years ago, especially in developing countries. Less people are dying of hunger. Trade has increased not only among the G7 economies and the emerging market but also among the emerging markets themselves. As an example, trade between China and India was \$ 1,7 bln in 1997: it has grown to \$ 72 bln by 2014. Economic links between countries have multiplied. According to Bloomberg, textile manufacturers from China, Turkey and Bangladesh have invested in 2015 over \$ 2 bln in Ethiopia to open new factories. Similar investments have spurred the call centres hub development in the Philippines. In short, trade has played a positive role to reduce poverty and strengthen links between different countries and cultures, as it has often happened in the course of history.

However, in the Western world, globalization seems to have taken a somewhat negative connotation. Since the Great Recession of 2007, economic instability has been spreading anxiety in many Western countries; as a result, populist parties have emerged and thrived on this feeling of instability. They, in a nutshell, blame globalization both for the loss of jobs that have moved to the emerging markets and for the wave of immigrants that has swept Western Europe.

Indeed, Western societies have had a tough time, recently. Automation, even more than globalization, has taken a toll on employment. Take banking jobs, once the ultimate secure job

in countries such as Italy: they have not gone global - with the possible exception of some back office activities - they moved to the Internet. The same is true for many retail jobs due to the emergence of the likes of global on line retailers such as Amazon.

Call it – if you wish – the California Paradox. The Golden State is home to the internet revolution, and boasts the same Gross Domestic Product as France. If independent would rank as the world's sixth largest economy. Nevertheless, according to a recent Census reported by Forbes, it has the highest true poverty rate in the United States.

Even where unemployment is back to pre crisis levels, unstable jobs have replaced stable ones: there are less bank clerks and more Uber drivers. There are less unions, limited benefits and no job stability. Social mobility has slowed down. What used to be known as the American Dream, is actually showing that people are moving down as much as up the social ladder, today. For the first time since WW2, you cannot take for granted that children will do better than their parents.

Thus, the perception of rising inequality generates uneasiness and despair among those that feel left behind in Western countries. This feeling may be negligible in emerging markets like China, where the economic high tide raises almost every boat, but inequality – if ignored – will soon become a significant social problem there as well. Demography has a negative role too. Smaller families and longer life expectancy put an extra burden on welfare systems. For many, aging becomes a winding road to uncertainty. In short, there is widespread uneasiness in our society, which sometimes turns into rage.

Immigrants become the obvious target of such rage. Immigration has increased dramatically over the last few years, especially in Europe and the US – where it is much more visible – but as a matter of fact an even larger number of immigrants move yearly across emerging markets. Refugees flee war zones like Syria but also escape poverty. Any human

being lives on projects and dreams, and fights for a better future to live. Immigrants escape hopelessness.

The arrival of immigrants typically polarizes societies: some are open towards the newcomers, others are suspicious. Particularly they worry about security. A comprehensive policy on integration is necessary to address the needs of immigrants and social stability. Many governments are struggling to address this issue: some can rely on established multicultural societies and adequate policies, others need to create their own policy from scratch. Take two examples under the same blue flag with twelve stars: on one hand you have France, that has a tradition of immigration from several generations. On the other hand you have Hungary: a central European state that has always been socially homogenous. Europe is in between these two extremes and finds it impossible to lead a common initiative on immigration. Italy is struggling with the same problem: it is on the forefront of the fight against human trafficking in the Mediterranean, but it has still to develop a comprehensive policy on immigration.

Immigrants are a perfect target for populist politicians. They are easily profiled in stereotypes. They are easily associated with the threat of religious extremism. They are an easy victim to any rhetoric of “us against them”. When times are tough, it doesn’t take much, in public discourse, to light the fire of racism.

Social cohesion is diminishing and values are not as commonly shared as they used to be. Last century’s ideologies have to a large extent disappeared, but a number of dividing lines within society are appearing which over time, if unchecked, can cause significant damage.

So how to incentivize solidarity in this complex context? Solidarity is still a significant pillar of our society. An impressive number of people volunteer to help others, every day. Religious values are barrier to rage and racism and promote cooperation and integration. Many organizations and private individuals reach out to help the weakest, the elders, the poor.

It is of paramount importance to spread this value and show the examples. Media must promote real, not alternative facts. And that must apply to fiction, movies and social media too. Education to accept and cherish diversity must start at kindergarten. Promoting these values must be part the main task for Public Broadcasting Media as a catalyst for the entire media sector and society at large.

At the same time, governments must promote economic growth and integration, reduce inequality, and ensure security in order to rally the people around key values. Social values and public policies are not mutually exclusive; they are necessary to each other, in fact.

Time is of essence. Globalization and protectionism will continue to fight each other. And in times of crisis, it is necessary to remember that there is a case for arguing that – in fact – the world is getting better. Science is curing many a disease, child mortality is decreasing in many countries and many African and Asian countries are slowly climbing up the social ladder and developing a strong middle class. People are living healthier and are more prosperous than their grandparents.

We have to ensure that our society accepts change, embraces diversity and proactively fights fear in order for the world, to paraphrase the title of a famous book, to remain flat.

THE FIGHT AGAINST HUMAN SMUGGLING AND ECONOMIC CRIME¹

RAYMOND W. BAKER

Thank you. I am very grateful for the opportunity to participate in CAPP Foundation's 2017 conference. This morning we are focusing our attention on human smuggling and economic crime, as Lord Skidelsky will focus our attention this afternoon on incentivizing solidarity and civic virtue.

In Global Financial Integrity we estimate that human trafficking generates \$150 billion a year in profits. The Asia-Pacific region and the European Union countries generate around \$50 billion each in profits from this most abusive crime. More than 14 million souls a year are trafficked for purposes of forced labor, and another 4.5 million are trafficked for engagement in the sex trade. There could be as many as 50 million trafficked individuals around the world currently being exploited for labor and sexual purposes.

Human smuggling and transnational crime are motivated by the desire to earn and shelter profits in a hidden manner. These activities need to be understood within the facilitating system that enables them to thrive. Let me introduce this part of my remarks with a story, in order to make clear where I'm coming from...

The capitalist system has undergone over the last half century a largely unrecognized but utterly fundamental change. Prior to this, from the late 18th century to the mid-20th century capitalists were almost exclusively focused on earning profits. Since then, from the 1960s onward, capitalists

¹2017 International Conference, 19 May 2017.

have become equally or almost equally obsessed with hiding profits. The democratic-capitalist system as a whole is affected by this new and disturbing motivation within its capitalist component. These two basic tenets – democracy and capitalism – which should be operating in sync to spread prosperity and freedom are instead becoming decoupled, no longer working in sync.

To facilitate this new goal of capitalism – secrecy – a shadow financial system has been created and expanded for the purpose of moving and sheltering trillions of dollars of unknown provenance generated by unknown owners. Corporations, banks, and individuals make liberal use of the shadow financial system to secrete money of suspect origin, exactly the same system that is utilized by traffickers, other criminals, corrupt government officials, tax evaders, and terrorist financiers.

The original tenets of democracy – popular vote, rule of law, representative legislatures, protection of minority rights – have not fundamentally changed since they were formulated in the late 1700s.

The original tenets of capitalism – making profits, spreading wealth, operating ethically if we subscribe to Adam Smith's *Theory of Moral Sentiments* – have been radically altered. This alteration, this addition of a second motive in capitalism, is contributing to transnational crime, income and wealth inequality, and political instability and is undermining freedom and democracy around the world.

Rebalancing capitalism and democracy, along with climate change, is in my judgment the most difficult and urgent challenge we face. With the world's population moving toward 11 billion by the end of this century, 11 billion people severely divided in income, wealth, opportunity, and security, the capitalist system as we are currently practicing it cannot be sustained. The system must change or it will be ripped aside.

Now let me flesh out three aspects of this rather sweeping thesis and link these realities within capitalism to human smuggling and economic crime. First, the shadow financial system.

Second, the money that this system moves and secretes. And third the impact this reality has on youth unemployment as we discussed earlier, on transnational crime such as human trafficking and drug trading, on income and wealth inequality as the Vatican has eloquently addressed, and more broadly on the democratic-capitalist system itself.

First, the shadow financial system. The most important point to grasp is that this system is a product of our own creation, we in the wealthy western world. This is not something done to us by traffickers and drug dealers and corrupt government officials. No, this is something done by us for the purpose of advancing this new motivation within capitalism – shifting and hiding income and wealth.

Understanding the elements of the shadow financial system, this “in-between existence” as Archbishop Tomasi calls it, helps to grasp the impact this system has on crime.

Tax havens: These of course are places to which you can transfer money and pay little or no taxes. When I started in business in the early 1960s there were unknown to me at the time only three or four tax havens around the world. Today, depending on which list you read, there some 70 to 100, with more being established.

Secrecy jurisdictions: Most tax havens provide the necessary lawyers and bankers and accountants to set up hidden entities and then to receive, deposit, and transfer incoming and outgoing proceeds so that owners and sources are hidden.

Disguised corporations: Shielding the identity of the natural persons owning these entities, disguised corporations now number in the millions around the world, more apparently in the United States than in any other country. There is

no argument in favor of not knowing with whom you are doing business, but this is the reality in thousands of transactions every day.

Anonymous trust accounts: These provide essentially the same advantages and opportunities as disguised corporations, facilitating transactions where the ownership of funds and accounts can remain hidden.

Fake foundations: You can create a charitable foundation, you can donate money to your charitable foundation, and you can designate yourself as the beneficiary of the charity of your foundation, avoiding taxes at every stage.

Money laundering techniques: Are these mechanisms used only by human traffickers and drug dealers and other criminals? No; exactly the same money laundering mechanisms are used by otherwise respectable corporations and upstanding individuals. Years ago a senior Interpol official in Lyon spent more than two hours describing to me the ways that he had observed criminals and corrupt government officials moving their illicit money. When he finished he leaned back and asked if I had anything to add. I said to him, “you have not cited a single example of moving criminal and corrupt dirty money that I have not seen repeatedly in the movement of commercial dirty money”. He bolted forward completely stunned, learning for the first time that everything he had worked on for five years had its antecedents in the way that commercial dirty money is moved.

Trade misinvoicing: Multinational corporations and other smaller businesses misinvoice imports and exports for the purpose of moving tax evading and tax avoiding money across borders. This has become entirely normalized in global commerce.

Holes left in western laws: Perhaps some of you saw the film by the NGO Global Witness, with an individual disguising himself calling upon New York lawyers to discuss money of suspect origin which his principle wanted to use to buy real estate, a jet, and a yacht. Twelve of thirteen lawyers offered to

continue the dialogue, with degrees of enthusiasm for handling the business. Each was considering the myriad ways they could abet the transactions without too overtly breaking the law.

This is the shadow financial system that we have created. It is not the work of human traffickers, drug dealers, and other criminals. No, it is entirely of our own doing. We created this system to shift hidden revenues and profits across borders and hide these revenues and profits in disguised accounts. We created this system to serve this second motivation now driving capitalism – the secret moving and sheltering of money we have generated.

Second, how much money is generated and moved through this shadow financial system? I've spent a lifetime in the developing world. I lived 15 years in Nigeria building a group of companies, and then, retaining interests in Nigeria, moved back to the States and did business all over the rest of the developing world for another 20 years. I knew that the economic realities I was observing, severely impacting poverty and inequality for billions of people, were not being addressed by economists and policymakers. So after 35 years in the private sector I segued into the think-tank community as a guest scholar at the Brookings Institution in Washington, DC, wrote a book on capitalism and dirty money and the philosophical underpinnings of the shadow financial system, and then formed Global Financial Integrity to address the issues I was seeing.

In GFI we estimate that \$1 trillion a year moves illicitly out of poor countries primarily into rich countries. This is based on data filed by governments with the International Monetary Fund. Furthermore we know that this estimate is very conservative because there are many components of dirty money that do not show up in statistics filed with the IMF.

Think of this. \$1 trillion a year that we can measure flowing out of poorer countries into richer countries. This is more

than the total of overseas development assistance and foreign direct investment flowing into developing countries. The developing countries are in fact net creditors to the developed world. We in the West like to believe that we are supporting the poor in other lands. In fact it is the poor in other lands who are supporting us.

This trillion dollars a year flowing from poor to rich contributes to the startling rise of M2, the economists' measure of liquid assets – cash, savings accounts, certificates of deposit, treasury bills, etc. M2 has now reached some \$80 trillion. Virtually the whole of this \$80 trillion is earning interest at less than the rate of inflation. In other words the \$80 trillion is losing value. We have accumulated idle wealth beyond our capacity to utilize productively. The wealthiest one percent of the world own more than the remaining 99 percent of the world.

Third point, what are the consequences of the shadow financial system and the trillion dollars a year it moves out of poorer countries and the excess trillions that have built up in the richer countries?

We have discussed youth unemployment and underemployment. M2 and youth unemployment are rising together, almost in lock step. In 28 OECD countries, youth unemployment is averaging 30 percent. In most developing countries, youth unemployment and underemployment is almost certainly comparable. Nigeria, a country I know well, estimates youth unemployment at 28 percent. Nigeria is also a major source country for human smuggling and is plagued by the terrorist activities of Boko Haram.

Human trafficking may be the most scurrilous of transnational crimes. Yet this outrage and virtually every aspect of cross-border crime are growing. Two months ago we released our report, *Transnational Crime and the Developing World*, an analysis of human trafficking, arms trafficking, drug trafficking, the illegal organ trade, illicit trade in cultural property,

counterfeit and pirated goods, illegal wildlife trade, illegal fishing, illegal logging, illegal mining, oil theft, and more. Many criminal groups are involved in more than one activity at a time, utilizing the same mechanisms and routes and money laundering techniques and disguised entities to carry out their nefarious activities and stash away safely their illicit profits.

The reason I dwell on the shadow financial system and the trillions of dollars it moves and accumulates is to make it clear that every aspect of transnational crime utilizes the same shadow financial system that we use to shift and shelter much of our money. We created the system that now facilitates the transfers of revenues and safe deposits of wealth arising from transnational crime. We created the system which we dubiously thought was to our advantage, and now we find that criminals the world over are using our system to their advantage.

How many people working in the shadow financial system ask themselves how their work may be contributing to crime and corruption and poverty for others? As Professor Alfredo Pastor has said, too often the notion of what is ethical disappears amid the constant pursuit of loopholes in laws and regulations.

How many people ask themselves the basic question posed in *Genesis 4:9*, "Am I my brother's keeper?". The lawyer who sets up the disguised corporations and trust accounts that are integral to the shadow financial system, does he ever ask, "Am I my brother's keeper?". The accountant who muddles the entries in books of record to hide the source or destination of ill-gotten gains, does she ever ask herself, "Am I my brother's keeper?". The banker who looks the other way when illicit money is suspected, does he or she ask, "Am I my brother's keeper?". The government official who legislates or maintains holes in the law to enable the shadow financial system to continue bringing money into our coffers, does this individual ever ask, "Am I my brother's keeper?".

The capitalist system is operating increasingly – *increasingly* – outside the proper rule of law. In so doing it is accelerating the rise of crime, it is contributing to human smuggling, to other forms of economic crime, to corruption, to terrorism, and it is undermining democracy. The primary threat to peace and stability moving forward is not coming from the criminal, the human smuggler, the drug dealer, the terrorist, the corrupt. The primary threat to peace and stability moving forward is coming from us, from our weakening of legal, ethical, moral practices in global economic affairs.

Pope Francis in his Encyclical Letter, “On Care For Our Common Home,” closes with the prayer:

*Enlighten those who possess power and money
that they may avoid the sin of indifference,
that they may love the common good, advance the weak,
and care for this world in which we live.
The poor and the earth are crying out.*

COMMENT

ERNIE ALLEN

In his powerful presentation Raymond Baker notes that human trafficking is big business, a \$150 billion global industry. For more than thirty years I have focused on its most vulnerable and most hidden victims, the children.

This insidious practice thrives today because of its economics. It is easy, low risk and enormously profitable. I agree with Mr. Baker regarding the role of the shadow economy and the movement of funds from the developing world to the developed world. Yet, human trafficking and child exploitation do not just occur somewhere else on the other side of the world. They also occur right here in our enlightened, advanced Western world.

Mr. Baker's overview of the shadow economy is compelling. Yet, I submit there is one more factor to consider, one that has made the shadow economy even more central to this problem in the modern age. That factor is the internet. The internet has revolutionized the way we live, work and play. Yet, there is a dark side, with challenges unlike any we have ever seen before.

Two years ago a man in Sweden was convicted of the "long distance rape of children in the Philippines", which officials called "virtual trafficking". He hired men in the Philippines to obtain and rape children as young as 5, while he directed the assaults via webcam from the comfort of his home. Today, such "live streaming" of the sexual abuse of the world's poorest children, paid for and viewed by Western consumers, is big business.

There are no scientific incidence studies. Yet, the anecdotal data are overwhelming. In my nearly thirty years at the National Center for Missing & Exploited Children, in no sin-

gle year did we handle as many as 1 million reports of child sexual exploitation. Yet, in 2016 the Center received 8 million. In 2002 we created a Child Victim Identification Program (CVIP) to identify and rescue children being sexually abused, whose photos were then disseminated via the internet. In 2003 we received 50,000 images from around the world. Last year, CVIP received 25 million. Child sexual exploitation has exploded with the advent of the internet.

How is this possible? Are that many people sexually attracted to children? Prior to the internet, someone with sexual interest in children felt isolated, aberrant, alone. Today, he is part of a global community. He can interact online with people of like interests worldwide. They share images, fantasies, techniques, even real children. And they do it all with virtual anonymity.

Last year authorities in Australia shut down a ring in which the child victim was adopted as a newborn, and then sexually abused and photographed from birth. The images were distributed via an encrypted network worldwide. The organizers then traveled with the child so members of this exclusive network could not only view the photos but also sexually abuse the little boy themselves. They were caught only because one of them made a mistake and their network was penetrated by law enforcement. At the time of the arrests, the child was 7 years old.

Canadian researcher Dr. Michael Seto estimates that at least 1% of males is affected by pedophilia (attraction to pre-pubescent children) and 3% by a combination of pedophilia and hebephilia (attraction to early teenage children). Today, there are 3.5 billion males on the planet: 1% is 35 million people; 3% is 105 million. This is not an insignificant problem, nor is it one that is limited to one country or one region or one institution. It is a global phenomenon.

Further, much of it is financial crime. A decade ago we received a lead that led us to the operators of a child pornography business. When their sites were shut down, they had

70,000 customers, paying \$29.95 per month and using their credit cards to access graphic images of small children being raped and sexually assaulted. One of their sites was called "Baby Rape".

I called the Chairman of a major credit card company and asked, "how is this possible?". He said, "we don't know what these transactions are for. If you can identify for us in a timely way where the account resides, who the merchant bank is, we can take action. This is an illegal use of the payments system".

So, that is what we did. We brought together 34 major financial institutions in a Financial Coalition with a goal of eradicating commercial child pornography. One member, an Asian bank, hired a leading economic consultant to estimate the size of this illegal industry. The consultant said it was a \$20-30 billion industry. Concerned about the provability of the estimate, we simply called it a "multi-billion dollar industry".

The companies donated live accounts. We provided the accounts to selected law enforcement which made purchases on illegal sites we identified. When the transaction went through, we would alert the payment company which would stop the payments and shut down the accounts.

We continued this process for seven years. In 2013 the US Treasury Department reported to me that in their estimation the problem of commercial child pornography had dropped to "effectively zero", less than \$1 million per year. We had severely damaged the business model.

The companies wanted to hold a press conference and declare victory. But I was skeptical. I was convinced that we hadn't ended it, we had just moved it. We concluded that this problem was migrating to a new kind of "shadow economy", an unregulated, unbanked digital economy, fueled by internet anonymity and the use of virtual currencies. This new digital economy belongs to no nation and is overseen by no central bank.

This new digital economy is intertwined with the traditional economy, and includes cryptocurrencies, like Bitcoin, and many other vehicles for engaging in transactions and for sending or transferring money. Many of these have legitimate uses but are difficult to regulate. Russia's WebMoney has 31 million users. Africa's M-Pesa which allows users to send money via text message and store it via cellphones has 25 million users. There are many others.

To address this emerging phenomenon, I chaired a new task force which included law enforcement and financial leaders. It also included the Bitcoin Foundation, the Tor Project and others at the heart of this emerging challenge. We agreed on four fundamental premises:

1. That this is a global phenomenon. Digital economy funds move network to network, not nation to nation. This is not a problem that any government can solve alone. It requires global cooperation and global leadership.

2. That draconian regulation is not the answer and is, in fact, counter-productive. Many elements of the new digital economy are good. For example, according to the World Bank two billion people on the planet today do not have access to banks or credit cards. New technologies can help provide financial inclusion. We must be careful that we are not so aggressive in our approach that it simply pushes these enterprises into areas where this is little or no regulation, creating new safe havens.

3. That there are existing laws and regulatory structures that should be utilized, focusing at the point at which digital currencies are exchanged for fiat currencies, like dollars, euros, pounds or yen. However, few countries have taken this step. And finally

4. That the central challenge is internet anonymity. In the mid-1990s, the US government created Tor, a tool to enable anonymous internet use. It was designed to protect U.S. intel-

ligence communications, and later to protect political dissidents and journalists from retaliation by repressive regimes.

The purpose was high-minded and noble. Yet, as with other innovations, there are unintended consequences. Political dissidents are not the only ones using these tools. Today, there is a “Dark Web”, an anonymous, secret internet for drug dealers, weapons merchants, human traffickers, assassins, pedophiles, child exploiters and others.

A study by Portsmouth University in the UK found that while just 2% of Dark Web sites are pedophilia sites, they account for 80% of Dark Web traffic. And the Dark Web sites being used for commercial purposes are collecting payment primarily in virtual currencies.

Because advances in technology have outpaced changes in law, today law enforcement may be unable to trace even very large criminal transactions. I believe fervently in the right to individual privacy. However, I also believe there is a difference between privacy and anonymity, and that total internet anonymity is a prescription for disaster, ensuring unregulated safe havens for every form of criminality, including human trafficking and child exploitation.

Mr. Baker correctly notes that “the primary threat to peace and stability is coming from us, from our weakening of legal, ethical, moral practices”. I agree. I also submit that our challenge is to maximize individual privacy and human rights while balancing them against the rights of children to be free from abuse and exploitation.

COMMENT

MAX-PETER RATZEL

As expressed by previous speakers, I am also grateful and delighted to have been invited not only to participate to this conference but also to address you with some of my personal thoughts on the topic, based on my humble experience.

You may have noticed from the program that I am not a scientist but a former police officer. I have served in various functions on national and international level. Against this professional background, I have some practical experiences in preventing crime and clarifying crimes. In addition, I also provided policy advice to politicians in Europe and globally as well. In so far, I also understand political needs to be dealt with.

It's my pleasure to also meet again my former fellow colleague Antonio Maria Costa with whom I had the privilege to trustfully cooperate when he acted as Director of UNODC in Vienna. As my background is very different from that of other speakers, I'd like to focus more on aspects of structural crime; I will link this to the topic at hand. That approach may assist us to broaden the subsequent discussion by practical aspects as well.

Being a former policeman, I may surprise some of you with my particular ideas. But let me confirm in advance upon my categorical intention to contribute to the debate and to sharpen it to some extent.

Let me first shortly talk about major aspects of OC, exemplified by the trafficking of human beings and economic crime as profitable part of globally acting OC networks.

To start with, we must generate a common understanding; we also must agree in a kind of definition about OC in order to structure our debate. To my general experience, OC

is first of all a very specific peculiarity of serious and most harmful crime, characterised by various factors:

- OC requires a group of minimum three persons, whose cooperation is based on the division of labour, on a continuing bases;

- they are linked together by any kind of internal togetherness;

- they follow a common will whilst committing serious and relevant crimes or demonstrating any other unlawful behaviour

- they apply so called enabling factors like

- using business structures,
- demonstrating power or threatening,
- executing any kind of influence to public authorities like corruption;

- whilst following the ultimate goal to obtain money or assets, to establish power or to achieve esteem.

I trust everybody in the audience can share this rather general definition of OC. In so far, I presume a common understanding amongst us on this topic.

Let's then – in a second step – approach the phenomenology of OC. Despite many decriptions in public and in media, OC is not anonymous at all. It does not happen somewhere else, in far distances from us. It's not at all a chimera. It's not global per se. Instead, OC is very individualized; it's amongst us; it happens every day; it occurs locally – but often with global interdependencies. OC is very concrete, and it does influence our entire life – although most of us may not even notify these circumstances.

In consequence, each of us – here in the audience and on the panel as well – is more or less involved into OC. This may be the case either as victim or as perpetrator, possibly even uninformed. To some extent, OC does mirror our societies. In so far, I conclude the second paragraph of my speech by stat-

ing: each of us should be aware of OC; we all can dispute, resist and counteract OC!

I fully share Mr. Baker's statement as he said in the beginning of our session:

"The primary threat to peace and stability moving forward is not coming from the criminal, the human smuggler, the drug dealer, the terrorist, and the corrupt. The primary threat to peace and stability moving forward is coming from us, from our weakening of legal, ethical, moral practices in global economic affairs".

I wouldn't contest that statement at all; I rather wonder in how far this statement is also valid for ecclesiastical institutions, e.g. banks or economical organised companies, run by the Catholic Church or its affiliates. I don't know any precise figures or even estimates; I just raise the question!

What does this mean to us, gathered here in the room to discuss topics of global relevance? Very simple: each of us has a certain obligation to reflect on this "primary threat" and to consider his or her specific options how to deal with it. As previously said by me, some of us may be involved in human trafficking or economic crime, in an uninformed way. In how far do we deeply reflect our businesses or investments? Do we really assess the risk to be indirectly involved into OC prior to starting business or to invest some money in a company with a good business profile? If this was the case, many businesses would not have been possible. Let's shortly reflect on some events which happened recently and opened our eyes concerning global OC:

- the leaks by bankers in Switzerland, providing information to taxation authorities' in various countries demonstrated wide networks of economic crime, hidden or even camouflaged in or by prominent banks;

- the leaking of the Panama-Papers, indicating that many high ranking persons, so called PEPs, are obviously deeply involved into money laundering and economic crimes;

- information around the transportation and accommodation of refugees raised concerns as dubious companies have earned vast amounts of undeserved money from public sources;

- etc.

Referring to some of Mr. Baker's figures, I can just admit that I don't know if these figures are valid or not. The number of victims – 50 million trafficked individuals, counting up human smuggling for forced labour and for sexual exploitation – may be right. Concerning the mentioned profits of 150 Billion \$ pa, I would rather differentiate: the profits do not appear on one single bank account or at one "big guy", the "master mind" or king pin of human smuggling. The problem is much more complex and sophisticated. As Europol stated 2066 in its very first Organized Crime Threat Assessment, OCTA, OC structures are very complex and difficult to describe. The perpetrators act entrepreneurial, they behave in a flexible way; they also proceed opportunistic and multifaceted; they are interconnected and interlinked across many countries. That does mean that they also share the benefits of their evil doings. The dirty money is not just accumulated at one single person; in contrast, it's distributed across the organisation. Naturally, the incoming money is also used to cover costs of living for the criminals and their relatives, for logistical purposes, for accommodation of victims, for corruption etc. That means that part of this money does also contribute to the Gross Domestic Product of several countries, affected by and involved into human smuggling and economic crime; these are the countries of the victims' origin, of their transportation as well as the target countries for these poor people or even distant countries with a solid banking infrastructure, used to launder money and to camouflage the assets. Part of the money does also show up in the balance sheets of many honest companies which do not necessarily know about their involvement in OC structures. Finally, the

finespun network of persons, companies and cash flows is nearly impenetrable. If OC has arrived at this point, it does work perfect. Only “non-visible” OC is good OC!

Which consequences do we draw from hat description? As all of us know, “silence means consent”. I am convinced that none of us will voluntarily agree in criminal behaviour; this is for sure. In so far, we have to carefully observe that situation; we have to raise our voices and we have to counter-act. Most of us are responsible persons, following good governance rules every day. This means that we have to do our utmost to assist clarifying the structures involved in smuggling of human beings or economic crime: maybe for forced labour, for sexual abuse, or for any other illegal purpose like money laundering. We have to check our own behaviour and our business models or attitudes to avoid that we are or become part of the illegal game as well. Possibly, our inconspicuous professional roles as

- service provider for transportation,
- car dealer for light trucks,
- seller of vessels and life-vests,
- lesser of industry areas or of residential buildings,
- banker, etc.

do provide us by chance the opportunity to get an inside view or a hint in criminals’ behaviour. If this is the case, we have to inform the police or any other competent authority about our findings and suspicions. As we know, many people in the banks did realize in the eighties and nineties that a group of customers did launder their money via bank transfers or did finance strange looking companies or illegal businesses by using the legal banking system. But they did not inform the police as they were not duty bound to do it. Only since the money laundering laws and regulations were globally implemented – as one of the many consequences after 9/11 – these business people became aware of their obligation to report

about their suspicions. To my personal understanding, this obligation is a moral one, not a responsibility under criminal law. But this is often misunderstood or misinterpreted by individuals. It's too easy and tempting to find excuses for its own misbehaviour!

If a responsible banker does report about suspected money laundering to the Financial Intelligence Unit of his country, he is risking losing a client – that's sardonic reality. But the legal obligation, moral and ethical standards do not allow him to not doing it.

Having said this let me complete my intro with a rational appeal to all of us to contribute to the fight against OC, especially against human smuggling and economic crime.

Each of us shall use his talents and his specific opportunities to make a contribution to the long lasting and comprehensive fight against OC. In a functioning society, based on human rights and rule of law, advocating for moral and ethical standards, everyone needs to do their part. This does count for the Catholic Church as well.

I trust we can discuss this aspect at the panel and with you, the much valued audience, as well. I look forward to an inspiring, provocative and non-standardized debate.

COMMENT

MARCO IMPAGLIAZZO

European public opinion is being systematically updated on the number of migrants landing on our shores. Almost every day newspapers report figures and variation over the corresponding periods of previous years. The not too subliminal message is: TOO MANY. Rarely, if ever, do they mention the dimension of the heartrending human slaughter, the bloody toll exacted by Mediterranean crossings from the Middle East or Africa to Southern Europe. And yet here too record numbers have been reached: 4,420 casualties in 2016, compared to 3,463 in 2015 and 3,184 in 2014. This is a 28% and 39% increase respectively. According to a survey carried out by the University of Amsterdam 3,188 people drowned between 1990 and 2013, but by August 2015 the number had increased to 8,607. It is a macabre account and exact figures are very hard to come by. Some sources go as far as bringing the total of migrants who drowned or died on overland travel to Europe between 2000 and 2015 to a staggering 23,000: 50% more than estimated. A warlike slaughter, an average of over 1,600 a year.

On July 8, 2013, four months after his election, Pope Francis went to Lampedusa on his first pastoral trip. He talked about the globalization of indifference and concluded his moving homily with these words: "Who cried over the death of these brothers and sisters? Who cried for the people who were on the boats? For the young mothers and their children? For the men who were hoping to make a little money, enough to provide for their families? We live in a society which has forgotten how to cry, how to share in other people's sufferings: the globalization of indifference deprived us of the ability to cry!".

Drownings have become an open wound in the body of our societies, a wound that burns and festers. Lest we forget, for some years now the *Community of Sant'Egidio*, on the occasion of the World Day of Refugees, has been honoring with a solemn ecumenical and interreligious prayer the memory of “dying of hope”. For it is the hope of a better future that is the root cause of migration, that “makes people oblivious of danger, obliterates fear and sometimes obscures reason”, as Domenico Quirico, a great reporter, wrote.

In welcoming refugees from Beirut reaching Italy thanks to a “humanitarian corridor” Andrea Riccardi explained that “humanitarian corridors not only offer an answer to the great humanitarian crisis caused by the war in Syria but provide an escape from the deadly tentacles of the human traffickers, smugglers, death lords who force so many to undertake such a terrible journey”.

The initiative of humanitarian corridors, launched in January 2016, is first of all an answer to the innumerable tragedies that take place near our coastline, the possibility that Christian organizations offer the refugees: they no longer have to risk their life in order to seek the protection to which they are theoretically entitled. But the guarantee of safe and regular access routes is accompanied by a proposal submitted to the EU to overcome the contradiction of having an advanced juridical framework – perhaps the best in the world – and yet one that is almost impossible to implement.

Europe has in fact extended the protection offered to asylum seekers. Next to the refugee status defined by the Geneva Convention, which in practice covers cases of individual persecution, it added subsidiary, humanitarian and temporary protection. It introduced the category of individuals at risk of discrimination, inhuman or degrading treatment, adverse events or the life threatening results of armed conflicts. But though the right to seek asylum is strengthened, in practice it is greatly limited since applications require the applicant's presence in a EU state. Furthermore there is no or very little

harmonization between the various states: national asylum policies differ widely and great discretion is left in the implementation of common standards. This explains why the percentage of migrants from the same area who are granted asylum is so different from one country to the other. Under the migratory pressure of the last few years EU member states have retreated behind their borders, barring a few temporary exceptions, and abandoned the principle of solidarity and shared responsibilities. Just think of the anachronistic Dublin III Ruling still extant and of how the resettlement and relocation agreement has failed. In Europe doors are barred even to UNHCR programs for global resettlement – i.e. the transfer of refugees from the country of first arrival to another country which agrees to offer them protection.

The project of humanitarian lanes developed out of the belief that refugees should be able to apply for protection with third countries institutions. Its juridical basis is Article 25 of the European Union Visa Regulation which grants each member state the possibility of issuing visas with Limited Territorial Validity for humanitarian reasons, reasons of national interest, or existing international obligations. Thanks to Article 25 an agreement was signed with the Italian Ministry for Foreign Relations and the Italian Home Ministry to authorize the arrival of 1000 refugees from Lebanon, mostly Syrian nationals, over a two year period. Some ten days ago, with the last contingent, we have reached about 850 arrivals. Lebanon, with a population of 4,5 million, hosts approximately 1,2 million refugees: by comparison Italy should host 13 million.

The agreement grants legal entry into Italy (and the possibility of filing asylum requests) to vulnerable people, i.e. families with children, elderly and sick people, people with disabilities but also victims of persecution, torture and violence. These people are selected through representatives of the sponsoring organizations operating in loco, thanks also to the cooperation of local players (international organizations,

Churches, local NGO, etc.) and the names are passed on to Italian consular authorities in transit countries to allow control by the Home Ministry. On arrival in the country of destination they are photographed and fingerprinted and a final check is carried out in real time by the European control system. Safety, both for refugees and hosts, is a basic characteristic of the project.

Once in Italy refugees are welcomed by the project sponsors and – in cooperation with other partners – are settled in various homes and reception centers. Our communities have been very active in helping us to find accommodation at religious houses or in apartments made available by private individuals. Migrants are helped to integrate into the Italian social and cultural tissue: they are taught the language, children are enrolled in school, etc., and of course they are offered legal assistance to file asylum applications. The template is one of small units, personalized assistance similar to that provided for adoptions, involvement and active participation of local communities. Andrea Riccardi has spoken of them as “the answer of Italian civil society... that eschews selfish self absorption, does not look the other way but wants to act, to help”. In fact so far offer of help has been higher than demand.

The central role of civil society is also due to the fact that the project is entirely financed by the sponsoring organization, at no cost to the State.

The first humanitarian lane was born thanks to the partnership between the *Comunità di Sant'Egidio*, the *Federation of Italian Evangelical Churches* and the *Waldensian Evangelical Church*. In January 2017 a second humanitarian lane was officially opened: the hotspot is in Ethiopia and it will transfer 500 refugees from South Sudan, Eritrea and Somalia over a one year period. In this instance the *Comunità di Sant'Egidio* will be cooperating with the *Italian Episcopal Conference* through *Caritas*.

The model has proved contagious: recently the French government decided to adopt the same approach and negotiations are under way with other European countries. It is an example of best practice and a perfectly replicable avant-garde solution. Our hope is to see it soon extend to cover the entire continent.

DIGITAL IMPACT ON PAYMENTS, CREDIT AND FINANCIAL RISK MANAGEMENT: NEW ETHICAL QUESTIONS?¹

JOSÉ MANUEL GONZÁLEZ-PÁRAMO

1. OVERVIEW

The ethics of a company starts with the definition of its reason for existence, of its mission, its goal as an organization. That's why it is so essential for a financial institution to put people at the center of its mission. In that sense, it is worth noting that banks play an essential role in society. Their main function is to help people and companies to bring their projects to fruition, not only through lending, but also by investing in human capital, financial inclusion, financial literacy and social programmes. Clients and the society must be at the heart of all our actions. This is a humanistic vision of the banking business that can be featured as "people-centric". Such a vision springs from a deep sense of awareness about the enormous impact our activity has on people's lives and hence the great responsibility that we have.

To understand better the ethical challenges financial institutions are facing, it is necessary to first describe the new environment where the financial activities take place today. The financial sector is at a major crossroads, making it imperative that we maintain this humanistic vision of banking. This sector is immersed in the digital transformation of the economy, based to a great extent on a balanced access to and use of data, the new oil of the economy.

¹Consultation jointly organized with Universidad Pontificia Comillas ICAI-ICADE and BBVA Group, Madrid, 25-27 January 2017.

1.1. *The digital transformation of the economy*

The number of connections, interactions and information transmissions that we engage in using digital technology is growing exponentially, blurring physical barriers and reducing the cost of accessing information. Mobile technology, social networks, artificial intelligence, blockchain, cloud computing and Big Data are the main disruptive technologies to which companies now have to adapt. Welcome to the brave new world of hyperconnectivity!

1.2. *Big Data: the catalyst for the digital transformation*

The exponential increase in digital activity also leaves a trail of information which can be exploited in order to gain a better understanding of the behaviour of the various market agents. Advances in Big Data analysis techniques (such as data mining, data analytics and machine learning algorithms), the rise in the potential of the cloud (for storage and computing efficiency) and the ability to access tremendous amounts of computing power enable value to be extracted from large volumes of information at a high speed. “The added value of Big Data resides in the potential to uncover new correlations for new potential uses once the data have been collected”².

Big Data breeds the transformation of the the Financial sector

In the financial sector, which has been involved in digitisation for many years now, the depth and scale of analysis performed using Big Data is impressive and very advanced. Key pieces of information include data self-reported by customers, transactional data that banks directly observe, internal operational data and information publicly available on the Internet. Financial institutions, but also the new players of the

²L. MOEREL, *Big Data protection: how to make the draft EU regulation on data protection future proof*, February 2014.

digital world, the ‘fintechs’ and the GAFA³ digital giants are increasingly paying attention to the value they can extract from the large amounts of data they have access to. New analytics fueled by Big Data may not only improve credit-risk assessment and fraud prevention, but also may be used to predict behavior, identify trends or forecast future events. In addition, access to Big Data allow internal processes to be increasingly automated and decision-making to be based on better evidence. By knowing their customers better, banks can anticipate customer needs and offer more tailored advice, products and services, at the right time.

1.3. *Freemium or purely free services convert data into the new currency of the economy*

Some of the most popular services in the information society – social networks, search engines and apps – are completely free. But, are they really? What business model is this, that makes it possible to make money by offering things for free? In many cases the model used in the world of digital platforms is the so-called “freemium”, based on a free basic service for the user and offering a paid alternative with improved service (fewer limitations, no advertising, etc.) to the customer. Freemium is just one of the manifestations of the new data economy. ‘Purely free’ is another one. In any case, the services we access free via the Internet are not actually free – the currency being traded is our data. In this ‘prosumer’ environment, people consume content and services, while at the same time producing data, which they then exchange for these services.

That brings us to structure our presentation in three parts, covering three broad issues in which “digital”, “finance” and “ethics” interact:

³GAFA is standing for ‘Google, Apple, Facebook and Amazon’.

1. First of all, we will review to what extent the digital revolution influences the capacity of the financial services to reaffirm its purpose in the perspective of inclusion and the fight against poverty.

2. Then, we will discuss privacy and cybersecurity, the two pillars of trust, and the main challenges associated with privacy.

3. Finally, before the section of conclusions, we will introduce the new concept of 'data philanthropy', or how information can be turned into knowledge for the common good.

2. DIGITAL FINANCIAL INCLUSION OR THE VICTORY OF THE DIGNITY

In 2014, according to the latest "Global Findex" Survey⁴, only 62% of adults in the world had a bank account. Being unbanked prevents families from accessing financial services, such as credit and insurance, needed to start a business, invest in education and health, and improve the overall quality of their lives. The high percentage of unbanked populations has turned the promotion of financial inclusion into a priority, recognised both by national governments and global standard setters – regulators, development institutions, and NGOs⁵.

As Pope Francis proclaims in the latest Encyclical, *Laudato Si*, "Greater attention must be given to the needs of the poor, the weak and the vulnerable... We need to strengthen the conviction that we are one single human family"⁶. Referring to the financial sector, Pope Francis insists that, in the

⁴ A. DEMIRGUC-KUNT et al. (2015), *The Global Findex Database 2014. Measuring Financial Inclusion around the World*, World Bank Policy Research Working Paper.

⁵ For example, the G20's strong commitment to promoting financial inclusion has prompted the increased involvement of other global standard-setting bodies national legislators and industry participants.

⁶ Pope FRANCIS, Encyclical *Laudato si'*, Section 52.

protection of equal human dignity and the common good, people are entitled “equal access to the means of technical education, credit, insurance and markets”⁷.

In summary, financial inclusion is a question of justice. It is a question of freedom. It is a question of dignity. It is related to human rights. Without access to financial services, inequality results, leading to social instability, and eventually social disruption.

Let’s move on to the analysis of why Financial Inclusion is on the verge of a massive change.

Financial Inclusion is now at the intersection of three significant global trends⁸:

- the high level of penetration of *mobile phones* in emerging economies,
- *Big Data* advances in credit assessment, bringing efficiency,
- billions of *lower-middle-class consumers*, particularly in *emerging markets*, have growing income (even if these incomes stay pretty low to compare with developed country standards), which fuels their needs for financial services.

It’s easy to understand why the term ‘financial inclusion’ is quickly replaced by the term ‘digital financial inclusion’. Digital advances, especially in Big Data, and mobile technology are key components to drive real improvements in access to financial services and help people to fully participate in economic life, driving economic growth and reducing poverty.

Digital technology innovation is enabling banks to profitably build a high-volume and relatively low-margin business in the un/underbanked markets.

⁷ *Ibid.*, n. 5, Section 94.

⁸ *Big Data, Small credit, The digital revolution and its impact on emerging market consumers*, Omidyar Network, October 2016.

Extending loans in underserved markets has always been challenging. One of the main reasons for this situation was the lack of data. Indeed, the difficulty in collecting adequate predictive data on underserved consumers in a cost-effective manner has plagued credit providers for decades.

The use of Big Data is changing everything. Now, it's possible to develop credit scoring using nontraditional data, dramatically lowering the cost of identifying, assessing, and reaching un/underbanked consumers.

As always with Big Data, the type of data used can be extremely varied⁹: Examples of data types include call data patterns, web browsing history, social media activity, location data, government records and public databases. These will be complemented by more personal data like behavioral analytics, utility payment records, mobile money transaction data, different proofs (as ID, income or residence), and psychometric data.

Real life examples like Destácame¹⁰ in Chile and Tala¹¹ in Colombia, tend to show that some consumers are willing to exchange their data – even their most closely held, confidential data – in exchange for bigger or better loans. Other relevant case is the fintech Cignifi¹² that uses algorithms based on anonymised mobile phone data and SMS patterns to assess consumer credit risk.

It is worth stating at this point that as the first financial services to be offered to the unbanked population, payments play a key role in increasing the amount of credit offered globally. At the same time, financial inclusion, by increasing the number of cashless payments, positively affects the overall efficiency of a country's payment system, due to economies of scale and network externalities. Thus there is a

⁹ *Ibid.*, n. 7.

¹⁰ For more information: www.destacame.cl

¹¹ For more information: www.tala.co

¹² For more information: www.cignifi.com

virtuous circle between both of the main functions of banking in the context of financial inclusion: improving payment systems and granting more loans.

3. TRUST, THE CORNERSTONE OF THE DIGITAL ECONOMY, AND OTHER ETHICAL CHALLENGES

The crux of the issue in the new digital economy is how to protect the new wealth that represents Big Data. First of all, we will remember why the rights to privacy and protection of personal data are inviolable. Then, we will go into a deeper analysis of trust in the new digital era and discuss the ethical challenges that arise through the different layers of data protection.

3.1. *Rights to privacy are inviolable*

The fundamental rights to privacy and to the protection of personal data have become more important for the protection of human dignity than ever before¹³. The Charter of fundamental rights of the European Union, following the Universal Declaration of Human Rights and the European Convention of Human Rights, points out in Article 1 that “Human dignity is inviolable”. In the same vein, Pope Francis, in the encyclical *Laudato si'*, sheds light on this notion of human dignity, using the word “dignity” no less than 23 times. Human dignity must be respected and protected. The dignity of the human person is a fundamental right in itself. In addition, human dignity paves the way for other rights, including the rights to privacy and protection of personal data. Losing control of one’s personal information is to a large extent losing control of one’s life and one’s dignity¹⁴.

¹³EUROPEAN DATA PROTECTION SUPERVISOR, *Towards a new digital ethics*, September 2015.

¹⁴See MICHAEL MC FARLAND, *Why we care about privacy*, Markkula Center for Applied Ethics, Santa Clara University, June 2012.

3.2. *'Trust' in the new digital era*

Trust is the foundation of the banking business. As such, it is a bank's responsibility to operate in a way that inspires trust between itself and its clients. This trust mainly relies on the capacity of the bank to store and protect depositor's savings and money.

Trust, is also the cornerstone of the digital economy. However, data, rather than money, is the new currency. Without trust, digital businesses cannot gather consent from their clients to use and share the data that underpins their operations.

Organisations have been busy focussing on countless new tools and techniques to collect data and extract from them valuable analysis to make decisions. However, as these products and services are rolled-out on a wider scale, the risk of errors and security breaches only increases, along with the risk of permanent damage to customer trust.

And what good is all of that data, without the permission to use it?

To unlock the potential of the data, enterprises must inspire consumer confidence, by shaping themselves around two strong principles: data privacy and cybersecurity. If properly embraced, these two pillars will help support customers' decisions and strengthen confidence in the banking sector, enabling banks to lead their clients forward, into the digital future.

Data is the identity of our customers, and we must take care of it. Making sure outsiders don't gain unauthorized access to data and damage hard-won trust is of vital importance. Wherever data goes, security must go with it. Therefore, intensive cybersecurity, encompassing advanced techniques such as cryptography and authentication, is crucial to create a stronghold for customer data.

As seen previously, personal data has an economic value, as it is a factor for exchange on the Internet. Data is used for the purposes of advertising, marketing, generating profiles

and tracking consumer habits. Today, most people are unaware of the broad extent of this tracking. Due to the quantity, sensitivity and complexity of personal data being collected, regulators have stepped in to define acceptable uses of consumer data. However, regulation by itself is not enough: Internet users must exercise responsible behavior and take into account who is using the data, how, what for purpose... and whether there are sufficient levels of security.

Let's focus on the three pillars of the data protection, where the major ethical challenges related with trust arise: consent to process data, the individual's control over his/her own data, and control of the process by an independent authority.

a) Consent to process the user's data

There is a need for 'clear and affirmative consent' for the use of personal data by the company.

That's why you need clear and understandable language' in privacy clauses. The problem with Internet users is that most of them don't read the terms and conditions of the websites they access, and that's where it is clearly stated what's done with their data, the processing policies, and the general policies of the website. This undoubtedly calls for education on data protection.

A fact deserves special consideration: "It would take the average person about 250 working hours every year, or about 30 full working days – to actually read the privacy policies of the websites they visit in a year"¹⁵. Therefore, the 'Terms & Conditions' have a long way to go in terms of transparency and clarity.

¹⁵ ALEECIA M. McDONALD - LORRIE FAITH CRANOR, "The Cost of Reading Privacy Policies", in *A Journal of Law and Policy for the Information Society*, 2008; MIKE MASNIK, *To Read All Of The Privacy Policies You Encounter, You'd Need To Take A Month Off From Work Each Year*, April 23rd 2012.

b) The individual's control over his/her own data

Doubtless, better descriptions of how private data will be protected will significantly increase trust. Transparency and clarity are essential for ensuring that people always understand how their personal data will be managed and which rights do they have regarding their personal data:

- The right to be informed about one's personal data.
- The right to be informed if personal data has been pirated.
- The right of access to data which has been collected concerning him or her. Each individual must have control over what is done with his data and the principle of transparency: that he really knows what his data are being used for. "Personal data should be processed only in ways compatible with the specific purpose for which they were collected is essential to respecting individuals' personal legitimate expectations. For example, codes of conduct, certification and audits can help build a robust trust in the digital market"¹⁶.

To verify the character of the stated purpose is not necessarily an easy task:

- *Anonymisation*: companies may consider most of their data to be non-personal datasets because they anonymise all personal data. However, in reality it is now rare for data generated by user activity to be completely and irreversibly anonymised. But technological advances and the ability to associate data across multiple sources is shifting boundaries of what is or is not potentially re-identifiable¹⁷. This raises the question of integrity of personal data: if, sooner or later, one is very likely to be re-identified, this lack of a real anonymisation clearly undermines the concept of personal data itself.

¹⁶ *Ibid.*, n. 12.

¹⁷ See, for example *Alternative data sellers fail to remove personal information, say hedge funds*, Financial Times, 12 December 2016.

– *The objective of the data collection*: the clear objective of Big Data is to uncover new correlations for new potential uses, that may have nothing to do with the original purposes for which the data were collected.

– *The risk of the profiles*: most of the time, the provider will create profiles built around the behaviour of the user that can be used as the basis for decisions affecting the user. “Profiles used to predict people’s behaviour risk stigmatisation, reinforcing existing stereotypes, social and cultural segregation and exclusion”¹⁸. Rather than allowing the user to determine who he wants to be and what he wants to consume online, the service provider’s use of Big Data creates a situation in which the user is fed content reinforcing a generalized, stereotyped version of himself, his peers and his views.

– *Discrimination*: article 21 of the Charter of Fundamental Rights states “Any discrimination based on any ground such as sex, race, colour, ethnic or social origin, genetic features, language, religion or belief, political or any other opinion, membership of a national minority, property, birth, disability, age or sexual orientation shall be prohibited”. The discrimination can be explicit, or due to preexisting biases.

That’s why users, in order to detect unfair price discrimination on the basis of poor data quality and unfair profiling and correlations¹⁹, should get access to the profiles and the logic underlying the decision-making processes.

– The right to have personal data rectified or deleted if necessary (right to be forgotten in certain conditions). In theory, users can request website administrator to eliminate personal information contained on their databases... However, this is sometimes pointless, as there are widespread da-

¹⁸ *Ibid.*, n. 12.

¹⁹ EUROPEAN DATA PROTECTION SUPERVISOR, *Preliminary Opinion on Privacy and Competitiveness in the Age of Big Data*, March 2014.

ta-sharing practices whereby personal data collected is passed on to other partners, and can no longer be controlled by the owner of the data. This highlights the importance of entering personal data exclusively on reliable sites.

– ‘The right of Portability’, or the right to transfer most of one’s own personal data to another service provider is an effective starting point for creating the conditions for true consumer choice²⁰.

c) Control of the whole process by an independent authority

Compliance with rules regarding user consent to access data, shall be subject to control by an independent authority.

As analysed previously, data owners have the rights of consultation and complaint. Through these tools individuals can request to see, update and correct their data, and revoke and suppress access to any third parties who may possess their information. If the third party does not respond, or if the response is negative, the owner may petition the supervisory body to conduct an investigation and make a decision.

Among possible decisions, the supervisory body could use fines to penalise improper use of personal data. As an illustration of that, the new EU Data Protection Regulation includes fines of up to €20 million or 4% of annual Group turnover.

To conclude this section, we will outline a series of other challenges in relation to protection of data.

d) Other ethical challenges in relation to protection of data

– *Systemic risk in the offing?* A growing dependence on a global system of continued collection and analysis of new data could make society and the economy more vulnerable to unprecedented security flaws and malicious attacks²¹.

²⁰ *Ibid.*, n. 12.

²¹ *Ibid.*, n. 12. See also MARC GOODMAN, *Future crimes*, Random House, 2016.

– *Divide between the haves and the have-nots.* It seems that a large divide is taking place between the haves and the have-nots, the ones who know how to access to the right information and analyse it, and the ones who don't, the ones who can stand up for their rights, and the ones who can't. In the context of this "digital divide", Robert A. Shultz²² presents two key questions to consider: (1) How does the use of the Internet by the least advantaged affect their life prospects? and (2) How does the use of the internet by other sectors of the economy contribute to the life prospects of the least advantaged?

– *More democracy?* At first sight, greater information availability seems to enable more transparency and therefore, more democracy. However, the reality is quite different²³:

- China requires service providers doing business in China to reveal data to Chinese law enforcement authorities.
- In the United States, the Snowden case²⁴ revealed numerous *global surveillance* programs run by the NSA.

Financial entities have made great efforts to attain the highest levels of data security and to educate customers on safety and privacy best practices. In order to guarantee consumer protection and maintain the excellence achieved, the authorities should establish the same security requirements for all payment service providers and avoid sharing personal credentials among players in order to safeguard customers information. Furthermore, a level playing-field for security requirements should follow international standards to ensure

²²ROBERT A. SHULTZ, "Ethics and the Internet", *Values and Ethics for the 21st Century*.

²³As the philosopher Byung-Chul Han says "The society of total transparency is necessarily transformed into tyranny, at the mercy of total control and vigilance" (*The society of transparency*, Stanford University Press, 2015).

²⁴For more information about Snowden case, refer to: www.theguardian.com/us-news/the-nsa-files

inter-country operability, but be flexible enough to follow market evolution and protect against new potential fraud mechanisms.

4. 'DATA PHILANTHROPY': INFORMATION TURNED INTO KNOWLEDGE FOR THE COMMON GOOD

Private sector companies accumulate a tremendous amount of data in their day-to-day operations. Market research, communications tracking, client relationship management, and market activities generate a wealth of information, which tends to stay in the private domain. The call for increased privacy standards and opt-out conditions for such data has been reinforced by recent national and international security announcements. At the same time, there is increasing recognition that private sector data and Big Data can be used for public good, giving rise to a new "data philanthropy".

To illustrate this, let's share one example of how Big Data, through the analysis of financial transaction data, can turn information into knowledge for the common good.

UN Global Pulse and BBVA Data & Analytics, BBVA's center of excellence in financial data analysis, developed a partnership to explore how financial transaction data can be analysed to better understand the economic resilience²⁵ of people affected by natural disasters.

The project analyzed Point of Sale (POS) payment and ATM cash withdrawal data at high geospatial resolution to gain insight into the way people in Baja California Sur (Mexico) behaved prior to, during and in the wake of hurricane Odile. Analysis of the transaction data provided an opportunity to understand behavioural patterns displayed when people are subject to external shocks such as natural disasters. This is just one example of how public-private partnerships

²⁵ Access to the microsite: odile.bbvadata.com

may help citizens. The emergence of the concept of “smart cities” or some advanced forms of e-government provide additional examples.

5. CONCLUSION

The financial sector is immersed in the digital transformation of the economy, driven by Big Data, the new oil of the economy. Big Data is no longer a promise nor a trend. Big Data is here and is sparking profound changes in the financial industry. Regarding banking, Big Data affects the three primary roles: the role of depositary, the role in the payment system and last but not least, the role as intermediary between depositors and borrowers. .

The impressive development of financial inclusion, especially in emerging economies, is a good example of this time of great changes. In addition, the use of Big Data and its analysis, in all economies, significantly improves the credit scoring process and efficiently generates new business opportunities.

However, the analysis of large volumes of information like Big Data, raises a series of ethical issues, in particular regarding the protection of data and safeguarding of customer trust.

Technology and data are neutral, it is their use that can both generate great value and create significant harm²⁶. Once Big Data systems know us better than we know ourselves, the risk is that authority will de facto shift from humans to algorithms²⁷. Eventually financial institutions, but also people themselves, may implicitly give algorithms the authority to make the most important decisions in their lives, including

²⁶ *Unlocking the Value of Personal Data: From Collection to Usage*, World Economic Forum, February 2013.

²⁷ YUVAL NOAH HARARI on big data, *Google and the end of free will*, Financial Times, August 26, 2016.

the financial ones. That would mean a lack of freedom for people, and the end of free will. Identifying in a limited way what is good for you, Big Data could then empower Big Brother. Against this risk, self-awareness, self-control, and education in human values are the best antidotes.

Improving trust should be a top priority for financial companies. As everybody knows, trust is hard to earn but easy to lose. A bad experience can undo much of the trust placed in a financial institution. Data privacy and cybersecurity, the two pillars of trust, must be primary considerations in the digital economy. In addition, transparency, clarity, integrity and respect of people are key elements to build trust. This is a necessary condition to drive the consumers into the new digital era.

Beyond the notions of business, respect of people's data privacy on the one hand, and advances in financial inclusion, on the other hand, are questions of dignity and human rights.

Disclaimer

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COMMENT

MALCOLM BROWN

José Manuel Gonzales-Paramo has presented us with an extremely clear and helpful paper. In responding, I don't want to question any of the facts or analysis offered here. I want, rather, to explore questions about what strategies the churches should adopt in promoting ethical living and ethical finance in the face of the technological developments in data collection and handling that Mr Gonzales-Paramo discusses.

As a philosophy undergraduate, one of the questions at my final examination in Logic was: Should it worry me if there is a man somewhere who has a large book in his safe which contains all the facts about my past, present and future actions? To which my answer was, No, provided he keeps it in his safe. The corporations which dominate our lives today have the equivalent of that book, and the last thing they intend to do is to keep it locked away. We should be worried.

My first observation is prompted by the assertion, in the first paragraph of Mr Gonzales-Paramo's paper, that financial institutions must place clients and society at the heart of all their functions. I recognise this as an ethical imperative – but I think more needs to be said about who are the clients and what is the society that such institutions serve. In the UK context, the nature of company law makes shareholders' interests paramount. The shareholders are, in some sense, clients – but that is not, I think, the sense in which the word is used here. Again, in my own UK context, the shift from a client-centred ethic to a shareholder-driven profit imperative in financial institutions long predates the rise of modern technological data collection capacity. But it is against the background of this shift in corporate ethics that we have, first, to evaluate the ethics of Big Data handling and, second, examine

the centrality of trust (ably captured in the paper) as it actually functions within societies.

In 1991, the William Temple Foundation in Manchester, England (named after the great Archbishop of Canterbury who died in 1944), where I was Executive Secretary at the time, published a report on research concerning the nature of vocation¹. We worked with groups of people in different professions who had entered their profession with a sense of Christian

vocation only to find the ethics of the profession had been stood on their head over the years. We worked with people in healthcare, education and banking – and it was those in banking who spoke most powerfully of the ethical shift in their industry. Having entered the banking industry to help people “bring their projects to fruition” (to quote Gonzales-Paramo) they found their jobs now depended upon the quantity of financial products they could persuade clients to purchase, irrespective of whether those products would benefit them significantly.

That was the seismic shift in banking ethics, from customer as client to shareholder as client, which took place well before the march of digital technology got fully under way – and it was within the parameters of that new ethic that financial institutions have learned to exploit their digital capacity in the ways described in the paper.

There seems to me, therefore, to be a gap between the clear assertion of the purposes of the financial institutions and the ethical framework within which they have become masters of vast amounts of digital information. I appreciate that the UK corporate culture may exacerbate this influence, but it provides, I think, a reminder that many financial institutions do not approach the question of Big Data from the point of view

¹RACHEL JENKINS, *Changing Times, Unchanging Values?*, The William Temple Foundation, Manchester 1991.

of “how can we help our clients flourish”. And because the clients have twenty five or more years of disappointing experience of how financial institutions work, the question of trust becomes both central and intractable.

To pursue the issue of trust a bit further, one of the biggest difficulties we face is that corporations that interface with the public, including many financial institutions, have become very sophisticated at presenting an image of trustworthiness that is more of a façade than a reality. Fascinatingly, the data they are now able to capture about us makes the simulacrum of trustworthiness even more sophisticated. The English comedy duo from the 1950s, Flanders and Swann, coined the phrase, “always be sincere, especially when you don’t mean it!”². Corporations have mastered that art very cleverly, always seeking to appear trustworthy even when they are busy shifting risk and complexity from themselves down to their staff and clients. And people are becoming aware of this. Customers don’t know who to trust, and they often can’t avoid assuming that corporations are trustworthy because they have no alternative, but they frequently suspect they are being lied to or misled. (In parentheses, I despair when churches adopt “corporate speak” without realising that it makes people suspicious. When people hear the church say “we take safeguarding very seriously” they recognise the language of corporations lying to them – like an airline saying “we take safety extremely seriously” as a response to their failures which caused a crash).

An example that I know from first hand is the Pay Day Lending firm, Wonga, with whom the Archbishop of Canterbury, Justin Welby, crossed swords some three years ago. Wonga used highly sophisticated algorithms to make loans to mostly vulnerable people who had been excluded from main-

²And before them, Groucho Marx observed of sincerity that, “if you can fake that, you’ve got it made!”.

stream banking. Their interest rates were huge and crippling to many. Their clients were predominantly poor, young and socially marginal. But their advertisements, couched in reassuring tones, used homely puppets portraying middle class elderly people – everyone’s grandfather and grandmother – to convey a message of safety and reliability that was belied by their aggressive milking of clients’ bank accounts for repayments. The projection of trustworthiness by the rapacious can be far more sophisticated than even Wonga managed. But when the image of trust is broken by the facts of corporate untrustworthiness, cynicism reigns and recovering trust becomes formidably difficult.

So I believe the problem of trust is acute. Financial institutions shifted away from a client-centred ethic long ago, and have woken up in the brave new world of Big Data with that new ethic largely unchallenged. The ability to simulate trustworthiness has meant that people no longer know what trust in a corporate body (*any* corporate body) looks and feels like. The irony is that if institutions use their capacity for data capture to try to act in a trustworthy way, the very fact that they can access that data predisposes people to suspect them. And there is no established model of what a trustworthy institution in an age of Big Data might look like.

It is worth noting that these observations about trust are based, not on a rejection of market economics but on an analysis of market failure. Properly functioning markets, in which competition is vigorous, should mean that companies can gain competitive advantage by developing a client centred ethic. Much has been said about how governmental and other functions are behaving more like corporations but corporations that seek to have an edge on their competitors can benefit greatly from learning from a public service ethos in order to become truly client-centred. But, as we know from the financial crash of 2008, when banks become too big to fail we are observing market failure in action. Inadequate measures to preserve competition have resulted in corporations which,

across many sectors, act increasingly monopolistically – and the erosion of trust is one outcome of that kind of market failure. Again, this is the background against which we are discussing data harvesting on a vast scale – a background of market failure, inadequate ethics and lack of client orientation.

I would like, therefore, to propose two ways forward, even though they are mutually contradictory. That need not be a problem. Sometimes it is necessary to develop a Plan A and a Plan B simultaneously so that it is possible to prepare for different futures.

My Plan A, so to speak, is to seek to model ways of using large scale data capture in the service of ordinary people and communities, especially the most vulnerable. I am under no illusions that a few ethically-driven projects of this kind will bring about a culture-shift for good in all institutions but, following the example of the Fair Trade movement, it would be reasonable to expect some marginal bias toward a general ethical awareness as well as the direct good that such pieces of work might achieve.

I am in the early stages, on behalf of the Church of England, of a conversation with a specific company which specialises in international money transfer and is keen to use the data it gathers in the course of its core business to enhance the lives of its clients and their families (internationally) in ways that do not directly enhance the business but simply make it a business people want to work with because of its philanthropic element. Whether there is a potential partnership here between this company and the church is a matter to be decided much further down the line, and I am sure readers will understand that I am not in a position to give any further details now. But I hope it is a sign that it may be possible for such ethically-driven alliances to happen and that the potential for using large scale data capture for purposes that are not profit-led, is at least conceivable. Even if we fail, we may have laid foundations on which others could build. After all, the

Fair Trade movement began as an idiosyncratic and apparently marginal challenge to the logic that supposed that the price mechanism always trumped ethics. It has become something much greater than that today. Fair Trade – and, I submit the kind of project I am hinting at above – would come into the category used by another participant in our consultation, of “Data Philanthropy”.

My Plan B is more radical. It starts with challenging the implication that financial inclusion is best achieved through inclusion in existing financial structures. It builds on the growing trend (albeit, currently a middle class fad rather than a serious movement) to “de-toxify” one’s life by minimising one’s participation in electronic activity that makes one’s life insupportably complex and, often unwittingly, feeds the data-collection machine³.

Might it, therefore, be possible to conceive resistance to the threat to human rights posed by Big Data starting with *disengagement* from technology rather than with its reform? The levers of reform are elusive and the authority to pursue reform (at least through legislation) is hard to identify. The global reach of IT in general has outstripped the regulatory power of governments. So what would a “citizen-led”, grass roots resistance movement look like? The power the citizen retains (at the moment) is the power to refuse to play the game. If I do not watch TV, I am impervious to TV advertising. If I don’t have a supermarket Loyalty Card, the supermarket cannot predict my purchases or pursue me with promotional materials which influence my spending. If I pay by cash, my spending patterns remain opaque. And if I don’t

³Although I describe this as a “fad” I am struck by the growing number of references in popular journalism to cutting down on our activities which generate data of the kind under discussion. Sometimes, these are “lifestyle” articles – sometimes they have a more serious political angle which is specifically about our vulnerability to data harvesting. My hunch is that we will hear more of this approach in coming months and years.

use the internet, or use it only very sparingly, the amount of data I make available is too limited to make predictions about me reliable. I keep the corporations guessing about me.

This is an idea building on other movements in community finance, such as Local Economic Trading Schemes (LETS) which took whole communities outside the mainstream monetary system for certain purposes, replacing it with barter and local currencies. There remained a relationship with mainstream finance, but it was a relationship at one remove which kept money circulating within a community rather than being taken out of the community. LETS are not the answer to all issues, but they represent locally-driven alternatives. This is in line with the Archbishop's comment to the CEO of Wonga (who had accused him of being an enthusiast for government regulation) when he said "I am not talking about regulation – I want to see you competed out of business". In other words, other, local and ethical, models of accessing finance such as Credit Unions could be made so attractive that the clientele for rapacious Pay Day Lenders would diminish – which (albeit combined with some new regulation) is largely what has happened to that sector of the industry. My suggestion is that, if the ways in which corporate institutions handle their data-gathering capacity is impervious to ethical frameworks, or if the ethics are a mere bolt-on that changes nothing at a fundamental level, the proper response could be to build a movement of refusniks through facilitating alternative ways of accessing the finance and other things they need that does not generate vast amounts of electronic data.

I am aware that opting out of a major structure of modern life will sound drastic and perhaps self-defeating. All technological change raises fears and leaves unanswered many questions, including ethical questions, which eventually get answered, often after much damage has been done. The situation outlined by Mr Gonzales-Paramo is already upon us but has never satisfactorily answered important questions about issues such as trust, leaving an ethical void into which many

devils might enter and take residence. One such is the loss of face to face contact in transactions which is foundational to trust and accountability. As I write, I am listening to a recorded message from a bank telling me how important my call is to them – which it patently is not or they would have answered it by now. (As I sit, later, editing my text, I have just spoken to a nice lady from the bank who has made me feel like a valued customer – I rest my case!). If we cannot have institutions which earn trust by meeting us at a human level, let us set up or own alternatives which, even if they cannot compete on all fronts, can model better transactional relationships and trust.

I referred to this approach as “citizen led” – but it perhaps has more in common with a resistance movement. The constant plea from the organisations that capture vast amounts of data about us is that only **the4** guilt have anything to fear. But the moral vacuity of this proposition should be obvious – who is to define guilt and what guarantees can they offer that diversity will be honoured? In a context where conservative religious views on human sexuality are routinely described as potentially “extreme”, how will I know that my faith will not be incorporated into an algorithm somewhere in order to disadvantage, marginalise and silence me?⁴. Our push-back may need to reach into our Christian tradition of the preferential option for the poor – which means trying to view the world through the eyes of the poor. If only the guilt have anything to fear, let us not bask in middle-class smugness that we will be OK, but ask what the collection of data about us would look like to those who assume they do have something to hide.

Between them, my proposed Plans A and B make a certain amount of theological sense. Christians are called to be alert

⁴In the UK, the “Casey Report” on social inclusion (2016) slipped into this language about conservative religious views.

to the power and pervasiveness of sin. They seek to work with the powers and principalities of this world to orient them as far as possible toward the Kingdom of God – but where sin is entrenched and unrepentant we are bidden to shake the dust from our feet. The church, meanwhile, is both in the world and not of the world. Collectively, we seek repentance, reform and renewal of the world and its institutions – but we also seek to model holiness and godly living in our own life as a community. In some matters, notably family and sexual ethics, the church seeks to live counter-culturally, demonstrating in the lives of its members a better way than that offered by the world. There is no reason at all why our counter cultural ethic could not extend to church-based financial institutions and other structures which value doing things differently. This is not about total withdrawal from the world but about the church’s own theological “Plan A and Plan B” which together both engage with the world and stand apart from it. It is the point where our doctrine of Incarnation meets our doctrine of Atonement. The first calls us to hallow, as far as we can, the institutions of the world as pointers toward the coming Kingdom. The second calls us out of the world into the pursuit of holiness. Both are integral doctrines of our faith and it is the calling of the church to discern which should take priority in forming a Christian response to a given situation – the two approaches complementing each other as the church models in its own life that which it exhorts others to emulate, however imperfectly.

There is much more I could say in response to Mr Gonzalez-Paramo’s excellent paper. I have not commented on the great deal of material with which I agree wholeheartedly. There are, I think, some areas where potentially fruitful area of further work might be done, for example, on the question of human identity and the public sphere. In a world of identity politics where people expect to be treated in ways appropriate to an identity which may be, to some extent, self-chosen and asserted, what is the place of privacy in forming and

sustaining identity? Why should we care if our identity is publicly known if the liberal individualism of society proclaims my right to assert my identity and for it to be respected publicly? Can I be simultaneously known by my self-professed identity and yet keep aspects of that identity private? But these are questions for another day!

COMMENT

DAVID LLEWELLYN

Finance in general, and banking in particular, is experiencing another of its periodic revolutions induced by technology. The range of technological developments (including digitalisation) enshrined in the concept of FinTech is transformational in the financial industry. Digitalisation is where diverse forms of information (text, sound, images, voice, etc.) are converted into a single binary code and implies the storing of such images in a form that is suitable for transmission and computer processing. Robots and artificial intelligence can now do increasingly complex activities especially in the area of information management. Digitalisation encompasses activities such as P2P lending, the way that consumers access financial services and communicate with financial services firms, how payments are made, etc.

World-wide there has been a rise in the number of digital banks launched by mobile networks, and the digitalisation of the payments system has been growing apace. Digital firms usually have substantial cost advantages over traditional financial services firms. They may take various forms such as owned by traditional financial services firms, in a partnership arrangement with existing firms, or may be in direct competition with existing firms. In the last-mentioned case, digital firms may exploit and compete away cross- subsidising parts of the value chain in existing firms' business processes. McKinsey suggests that the digital revolution could wipe out up to two-thirds of the earning capacity in some of banks' business products and services.

Technology and digitalisation is transforming the way financial services are searched, chosen, and purchased by consumers. As stated clearly in the Gonzalez-Paramo paper:

“The financial sector is at a major crossroads”. As with all crossroads, we must decide what direction to take: this is the big challenge arising from FinTech most especially with regard to ethical standards and the underlying culture of financial firms as they embrace the new challenges generated by the digital revolution.

The general theme of Jose Manuel Gonzalez-Parma’s paper is how all this is transforming the industry. There is no doubt that it has implications for bank business models, access to, and uses of, information, consumer behaviour, competition and the competitive structure of the financial services industry, and regulation. Above all, it raises important ethical and consumer protection issues.

It is probably no exaggeration to suggest that the Digitalisation Revolution will become the fifth in a line of economic revolutions ranging from: (1) the *Industrial Revolution* (economies became industrialised), (2) the *Technology Revolution* (growing application of advanced technology to all aspects of the economy), the (3) *Information and Communications Revolution* (worldwide web, internet, email etc.), (4) the *Globalisation Revolution* (economic and financial activity becoming globalised with global networks) to (5) the *Digital Revolution*.

Financial technology is expanding exponentially. Digitalisation in particular is transformational in the financial services industry in several ways:

- It is revolutionising the way information is accessed both by suppliers and consumers of financial services,
- The way consumers search for and use information to make decisions,
- The way consumers access financial services firms including the much reduced need for extensive branch networks,
- In some areas it lowers entry barriers to the industry and in the process impacts on the structure and competitive structure of the industry. In some areas it undermines some

of the key comparative advantages possessed by existing financial services firms,

- The use of algorithms to guide decision-making: in some areas (e.g. Robo) decisions are effectively outsourced by the consumer to rational algorithms,

- Massively enhanced computing power and algorithms to analyse data relationships, and learning applications learn the habits and behavioural characteristics of consumers,

- It has an impact on the business models of financial services firms,

- It reduces the number of people employed in some of the traditional processes within firms as processes are increasingly digitalised.

We owe a debt of gratitude to the author for producing an excellent overview of the key issues with valuable perspectives and insights that need to be considered by everyone involved in the banking and financial services revolution. Several key themes are raised in the paper and in particular the ethical issues involved, the central importance of consumer trust and confidence in the financial sector and the markets and institutions within it, and the enormity of the changes in the sector that are likely to follow digitalisation. To appreciate the range and enormity of the implications of the transformation, it is worth quoting directly from the Gonzalez-Paramo paper:

“The number of connections, interactions and information transmissions that we engage in using digital technology is growing exponentially, blurring physical barriers and reducing the cost of accessing information. Mobile technology, social networks, artificial intelligence, block chain, cloud computing and Big Data are the main disruptive technologies to which companies now have to adapt”.

A central theme of the paper is that FinTech and digitalisation is transformative in the financial sector and few would disagree with this important insight. However, this must also

be considered in the context of a wide range of other pressures on the banking and financial services sectors. It is the *combination* of pressures that makes the current transformation so big. Other dominant pressures include: new approaches to regulation; the evolution of new bank business models (partly, but not only, due to technology); overcapacity in many parts of the European banking industry; new consumer behaviour patterns including based on technology and digital facilities as consumers become increasingly digitally literate; pressure for greater inclusion; the legacy of the banking crisis; the fact that a large number of banks in Europe are not earning a rate of return on equity equal or above the cost of capital, and currently low market valuations of banks. There are lessons to be learned from other industries that have been subject to a combined mix of a wide range of transformational pressures: in particular, that it creates enormous uncertainty and that it is not necessarily the large incumbents that survive as dominant firms in the industry.

It is impossible to do justice to this wide-ranging paper in a short commentary and this brief note will focus on three issues in particular that arise from the paper: (1) some key consumer protection issues arising from FinTech in general and digital finance in particular, the importance of Trust and Confidence in finance and the implications for this deriving from new technology and digital finance, and (3) the important related issue of culture within financial firms from which all behaviour of financial firms derives, and.

1. CONSUMER PROTECTION ISSUES

The essential feature of digitalisation focuses upon information: access to it and the ways it can be used in the finance industry. Information and its management are central to all aspects of banking business: banks can be said to be in the information business. Customer information is not only central to bank business models but is also precious to consum-

ers. The information advantage that banks have can be used in the interests of customers but can also be exploited to their detriment and this dichotomy becomes even more central in the digital age. As put in the Gonzalez-Paramo paper: “Data mining, data analytics, and machine-learning algorithms enable value to be extracted from large volumes of information at a high speed”.

Bringing the strands of the argument together, several specific consumer protection issues arise in the digital age and may be summarised as follows:

- Whilst a bank’s access to customer information is a central feature of banking and can be used to the advantage of customers, privacy is also valued by consumers.

- Equally, the security of information will be demanded by consumers: the incidence of fraud has become a concern.

- Consumers may become concerned at increased remoteness from the suppliers of financial services most especially when there is a shift to algorithms: erosion of relationships could become a concern to consumers.

- The perceived lack of control over how information is used could also become a serious issue. As put in the paper: “Big Data could empower Big Brother”.

- In many ways consumers will not fully understand what is happening through digitalisation which raises the important issue of consumer education.

- Consumers need to have assurance that they can invest trust and confidence in new technology and digital processes.

To sum up: central issues with respect to the consumer protection dimension to digitalisation of finance focuses on *who* is using *what* information about *whom* and for *what purpose* and the extent to which consumers are aware. Consumer trust and confidence must also be a central issue as it is in all aspects of finance. We turn to this in the next section.

2. TRUST AND CONFIDENCE

These consumer protection considerations in the digitalisation of finance give emphasis to the importance of one of the themes in the paper. It is worth highlighting that in many senses consumer trust and confidence are especially essential in retail finance and relates to integrity and competence: both are needed. This is because retail financial transactions are fundamentally different from most other economic transactions. Firstly, consumers often lack confidence in making judgements about financial products and can be nervous when making substantial financial commitments. Secondly, the amounts of money involved are sometimes substantial for individual consumers. Thirdly, consumers need to have confidence that sellers of financial products have the consumer interest at heart and are not simply selling products in order to enhance their own personal income through, for instance, sales-related remuneration incentives. Consumers often have only limited ability to confidently judge the suitability of sometimes complex financial products. Furthermore, as many financial products are not purchased frequently there is limited opportunity to learn from experience and the consumer often has to rely on advice when making decisions in which case principal-agent relationships are established and the consumer needs to have confidence that the agent is working and advising in her interests.

For all these reasons, the paper rightly gives emphasis to the need for consumer trust (which I would extend to include confidence) in the finance industry most especially when dealing with sometimes complex financial instruments and products. Gonzalez-Paramo puts it well: "Trust is the foundation of the banking business. As such, it is a bank's responsibility to operate in a way that inspires trust between itself and its clients". This is always necessary. But there are new dimensions to this when considering FinTech and the digital economy: as put in the paper: "Trust is the cornerstone of the

digital economy... Without trust, digital businesses cannot gather consent from their clients to use and share the data that underpins their operations". In particular, two dominant principles are data privacy and cyber security.

It might be useful to delve a little deeper into this key issue of trust and confidence. Two dimensions can be identified: Integrity and Competence. Either without the other is of little value and the consumer can be put at risk. When I was a member of the board of the Personal Investment Authority (the regulator of retail investment and advisory services) in the UK we judged that consumer welfare was compromised more by incompetence of financial firms and advisers than by dishonesty. Clearly, both trust and confidence are needed.

And yet trust in the industry has been low and in some cases has been declining in recent years partly as a result of the banking crisis but also major episodes of mis-selling of inappropriate products. The breakdown of trust in financial institutions, and the perceived way they conduct business and interact with consumers, can seriously lower the effectiveness of the financial system (Haldane, 2009). Evidence arises from time to time of a lack of consumer confidence in three dimensions: in the ability to make rational decisions, in the integrity and competence of financial firms, and in the understanding of financial products. There is evidence of a lack of consumer awareness about issues such as the suitability of products, their risk characteristics, the nature of products and their return characteristics, and consumers' own requirements. This is potentially fertile ground for financial firms to exploit their asymmetric information advantages, and the evidence shows that in some areas they have done so.

3. CULTURE WITHIN FINANCIAL FIRMS

As with all aspects of bank behaviour, if we are to understand how banks respond to the digital age, and most especially how they behave towards their customers, we need to

understand the underlying culture within banks which encompasses four key elements: their values, ethical standards, internal incentive and reward structures, and fairness to customers. The underlying culture of financial firms (including banks) is of central importance because it creates business standards, influences employees' attitudes, and largely determines behaviour. It also has a close link with consumer trust and confidence.

Several high profile scandals in recent years in some countries have indicated that culture in some banks needs to change. This has also been highlighted by the Group of Thirty in its 2014 report:

"A major improvement in the culture of banks is now a matter of necessity, and is an imperative for regaining society's trust... The banking industry needs to repair the damage done by failures in culture, values, and behaviour".

A similar point has been made by Ignazio Angeloni of the European Central Bank: "...rules are necessary but not sufficient to restore trust; the underlying ethical behaviour in the financial sector has to improve". Culture also has an important bearing on the degree of consumer trust and confidence in finance. This also raises the issue of whether focussing on maximising shareholder value itself creates a particular culture and incentive structures that may produce hazardous behaviour to the detriment of customers.

In the major reform programme since the banking crisis, regulators have focused on regulatory and prudential issues in the name of systemic stability. Whilst this must be a part of any reform programme, it ignores the over-riding issue of bank culture and incentive structures. There are also problems with regulation: in particular, a voluminous structure of regulation has not prevented scandals arising over the past few years, and it often induces a box-ticking mentality within financial firms.

In practice, and unless regulation is to become draconian, there are limits to what regulation can achieve if the underlying culture and incentive structures within banks are hazardous. There is a limit to what regulation can achieve for consumer protection and the enhancement of consumer interests if the underlying culture is hazardous. In some cases there needs to be a major change in the underlying culture and ethos of banks, and a greater sense of corporate and individual responsibility in the banking industry based on substantive ethical values. These are likely to be even bigger issues in the digital age.

Change in underlying culture is difficult to achieve in any organisation. But an outline of a strategy can be given along the following lines in what might be termed a *cultural mission*:

- Financial firms need explicit ethical standards in their missions based on the general principle of «treating customers fairly».

- Training and Competence regimes within financial firms need to explicitly incorporate such standards.

- Whilst the cultural ethos needs to be established from the top of an organisation, it needs to be «owned» throughout the organisation.

- Ethical standards, and the principle of «treating customers fairly», need to be monitored and clear mechanisms established to enable systematic internal audits to take place.

- Internal reward structures need to be consistent with the ethical standards established within a bank's culture.

- There needs to be systematic and universal mechanisms to investigate the risk characteristics of products, contracts and services and this need to be clearly understood by front-line staff at all relevant levels.

- Credible complaints-handling mechanisms need to be established along with procedures which have the confidence of, and credibility with, customers.

In essence, the desirable culture must be one of strong ethical standards in dealing with customers and which have the principles of «treating customers fairly» as a central guiding principle. In a 2014 ResPublica report, Llewellyn *et al.* proposed that bankers should commit to a Bankers Oath where they commit «...to behave in a manner that prioritises the needs of customers... and to exhibit a duty of care above and beyond what is required by law... to conduct my business in an ethical manner».

4. ASSESSMENT

The paper by Jose Manuel Gonzalez-Paramo has raised powerful issues about digitalisation and the wider aspects of Fintech. They present formidable challenges with respect to consumer protection, consumer trust and confidence, culture within financial services firms, and ethical standards. The ethical dimension needs to be addressed with some urgency as the finance industry is in the midst of major structural change which is occurring at a fast pace.

COMMENT

MARKUS SCHULTE

1. INTRODUCTION¹

The digital revolution is the most important mega trend of our times. It compares in importance for economy and society with the industrial revolution. Digitisation raises numerous new legal and ethical questions. Upholding privacy, securing trust and enabling the widest possible inclusion, for instance, are key issues with relevance across the entire digital economy and society. The insightful paper by José Manuel González-Páramo has presented new ethical questions for finance². Here, they are discussed from the perspective of digital policy.

Policy makers are facing the challenge to provide the right framework conditions for digitisation to produce its beneficial effects while limiting potential risks. Providing these conditions is challenging partly because of the rapid development of technology and of business models and the comparatively slow process of law making. It is also challenging because introducing new or altering existing regulatory settings have impacts on the process of innovation, which is one important determinant of future overall welfare. Hence, policy makers tend to tread carefully before introducing regulation. Where a principles-based approach is followed it also leaves room for co- and self-regulation. In such a setting, ethical standards developed by market players can play an important role.

Retaining control and self-determination as regards the access to and use of personal (and non-personal) data is a central issue from the perspective of the person but also from

¹This note reflects the personal views of the author and is not attributable to the European Commission.

²JOSÉ MANUEL GONZÁLEZ-PÁRAMO, *Digital Impact on Payments, Credit and Financial Risk Management: New Ethical Questions?*, Madrid 2017.

the perspective of a well-functioning and innovative data economy. In a digitised world, financial inclusion itself depends on “digital inclusion”, i.e. sufficiently good access to the internet for everyone³. A focus of corporate social responsibility actions on areas such as digital skills and digital inclusion can support the success of a digitisation in line with the values of the Social Market Economy.

Fears of the uncertain impact of a globalised digitisation of the economy on employment and social cohesion could undermine the social and political acceptability of digitisation in the same fashion as resistance to globalisation has increased. The risk is that any attempt to block or slow down the digitisation of the economy or in specific sectors would likely produce the most negative effects in the areas where this is attempted. In a world marked by digitisation, digital exclusion would also imply economic, financial and to a large degree, also social exclusion. Hence, policy makers, social partners, entrepreneurs and finance must make the

digitisation of the economy as inclusive as possible, firstly through the widespread provision of access to the internet and through digital skills in schooling, academia and life-long-learning.

This note discusses in section 2 the nature of the digital revolution and its significance and in section 3 the impact of Fintechs for the financial sector. Section 4 describes the EU’s digital policy relevant for financial services. Section 5 concludes on the relationship between regulation and self-imposed ethical constraints by market players.

³The Commission has spelled out this objective in its Communication on a European Gigabit Society and has introduced a rule regarding digital inclusion in the provisions of the proposed European Electronic Communications Code as regards Universal Service. See EUROPEAN COMMISSION COMMUNICATION, *Connectivity for a Competitive Digital Single Market – Towards a European Gigabit Society*, COM (2016), 587 final, 14 September 2016, p. 11. Downloaded at http://ec.europa.eu/newsroom/dae/document.cfm?doc_id=17182.

2. THE DIGITISATION OF THE ECONOMY

The assessment of the nature of the digital revolution holds important implications for the way in which individuals, groups, enterprises, social partners and policy makers should approach the issue. Many believe that digitisation will affect and encompass all sectors of economy and society across the globe, that the process is unstoppable and that it is moving with ever-increasing speed. The conclusion is that this process of massive structural change must be embraced and – to the extent possible – shaped, as it cannot reasonably be slowed or stopped without missing important economic and social opportunities.

The digitisation of the economy is bringing disruption of many established business-models and dis-intermediation in many if not all value chains. It promises gains in productivity and overall welfare. Innovative platforms are increasingly placed at the top end of the value chain. They provide considerable value added to their users through easy and comfortable access to products and services. They have been a force of innovation. Control of user data along with network effects afford them considerable structural strategic and competitive advantages. Online platforms have the potential increasingly to concentrate value creation. Whichever enterprise has the chance to take on the innovative features of a platform will have an interest to do so. For enterprises, important factors in the decision to digitise their business are questions of trust relating to data protection, data security, data access etc. e.g. when using cloud services and when co-operating with business partners across the value chain in an automated fashion⁴. Without trust, digitisation cannot happen.

⁴See EUROPEAN COMMISSION COMMUNICATION, *Digitising European Industry. Reaping the full benefits of a Digital Single Market*, downloaded at: <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52016DC0180&from=EN>

The effects of the digitisation of the economy on employment and economic growth are not easy to predict. For the European economies, massive gains in terms of economic growth are being forecast⁵. As far as employment is concerned, the structural change associated with the so-called fourth industrial revolution will destroy some jobs and create new ones. With advances in automation and robotics, it is clear that repetitive tasks and heavy physical as well as dangerous tasks will increasingly/entirely be left to machines and robots. Many traditional blue-collar jobs as well as low-skilled jobs are therefore likely to be displaced to a large extent. However, with big data analytics and artificial intelligence, also large numbers of traditional white-collar and more highly-skilled jobs, including analytical and research jobs, will be displaced by self-learning robots and software. Many of the new jobs expected from digitisation are likely to be higher-skilled in nature. The overall balance is far from clear. “Re-shoring” (i.e. the return of jobs that were previously moved to lower-cost countries) could be the result of a combination of digitisation driving down marginal costs of production while enabling product personalisation thereby providing tailor-made products at mass-market prices. Thus production and jobs that in the past moved to low-wage countries could return to previous production locations in high-wage countries, raising the question of what such developments will imply for developing and emerging market countries. However, the potential benefits from digitisation for these countries should not be underestimated, in particular in view of the relatively low-cost options for broad-based financial inclusion and digital business opportunities that

⁵See EUROPEAN COMMISSION COMMUNICATION, *A Digital Single Market Strategy for Europe*, COM (2015), 192 final, 6 May 2015, p. 3. Downloaded at: <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52015DC0192&from=EN>

become possible once digital inclusion is secured⁶. Digitisation could therefore hold important gains also for people and businesses in these countries, in particular through access to the global digital marketplace, if they pursue a systematic digitisation strategy.

3. FINTECHS AS DRIVERS OF DIGITAL INNOVATION IN FINANCE

For the financial sector the digital revolution has come under the name of “Fintechs”, companies using digital technology to provide innovative financial services marked by the ease and comfort similar to that of any smart phone application. The success of the Fintechs is based on the harmonious interlinkages between hardware and software and the use of compatible and interoperable standards and technologies⁷. It is also the result of on their high degree of specialisation. Fintechs tend to focus on one specific type of financial service (such as payments services; crowdfunding-crowdinvesting-crowdlending; Robo Advice; automated portfolio management; social trading).

The competitive pressures exerted by the Fintechs have incentivised many traditional financial sector players to innovate and to adjust their business models. While there is considerable competition between Fintechs and “Insurtechs” on the one hand and banks and insurance companies on the other, there are also more symbiotic relations between them. For example, many Fintechs and banks cooperate closely in partnership, banks have acquired Fintechs and some banks have even established start-up incubators with a view to fos-

⁶See SUSAN LUND - LAURA TYSON, *Digital Globalization and the Developing World*, downloaded at <https://www.project-syndicate.org/commentary/digital-globalization-opportunities-developing-countries-by-laura-tyson-and-susan-lund-2016-03>

⁷See THOMAS F. DAPP, *Fintech reloaded – Die Bank als digitales Ökosystem*, Deutsche Bank Research 2015.

tering a Fintech ecosystem with which they in turn interact. The issue of a level playing field for the new and the traditional players remains relevant to the extent that some of the new players deliver comparable financial services but may escape the same regulatory requirements as banks and insurers, at times because they tailor their business models precisely to avoid falling under such obligations. There are however also Fintechs which have deliberately opted to register so as to be supervised as part of their business model with the aim to engender the trust and confidence of their potential clients. Among regulators and supervisors and most financial sector actors, the principle of “same service, same risk, same rule” appears to be generally supported. However, views on regulatory sandboxes for innovative newcomers tend to differ⁸. As regards electronic payments, the revised Payment Services Directive (PSD 2) has brought the new actors in the area into the fold of European regulation⁹.

4. ENABLING THE DIGITAL ECONOMY – THE EU’S POLICY APPROACH

Digital policy in Europe aims to bring about a vibrant digital economy by removing existing barriers to cross-border digital transactions, by providing a solid framework for privacy, personal data protection and for cybersecurity, by ena-

⁸See speech by BAFIN President Felix Hufeld opening the “BaFin-Tech 2016”, 28 June 2016, downloaded at: https://www.bafin.de/SharedDocs/Veroeffentlichungen/DE/Reden/re_160628_bafin-tech2016_p.html. For the FCA’s approach to sandboxes see: Speech by Christopher Woolard, FCA Director of Strategy and Competition, delivered at the Innovate Finance Global Summit on 11 April 2016, downloaded at: <https://www.fca.org.uk/news/speeches/innovate-finance-global-summit>

⁹Directive on payment services in the internal market, amending Directives 2002/65/EC, 2009/110/EC and 2013/36/EU and Regulation (EU) No 1093/2010, and repealing Directive 2007/64/EC, Official Journal of the European Union L337/35-27.

bling the platform economy and by clarifying the rules that should govern access to and use of data and enable the free flow of data across borders so that the data economy can thrive. One pre-condition to the success of digitisation is the provision of a top quality, very-high-capacity digital infrastructure¹⁰. All of these aspects of digital policy are relevant for financial services. Of practical importance is also the possibility securely to provide a valid signature electronically (e-identification)¹¹. The European Commission has been or is acting in all these areas in the context of its Digital Single Market Strategy¹².

The backbone of any well-functioning economy, in particular the digital economy, is trust. Without it, neither persons nor enterprises would be ready to engage in a framework where personal and business data are at stake. Trust in the digital economy requires strong data security and data protection. At European level, the General Data Protection Regulation (GDPR) has laid down a unified framework as regards the rules governing personal data which strengthen citizens' rights and build trust¹³. It establishes a "right to be forgotten", a right to data portability and the right to be informed of data breaches. Based on these common rules the GDPR thus enables the free flow of personal data within the European Union. Via adequacy decisions and a number of alternative tools,

¹⁰This has been the object of a major policy initiative and legislative proposals by the European Commission presented on 14 September 20016. See the press release on the Connectivity package. Downloaded at: http://europa.eu/rapid/press-release_IP-16-3008_en.htm

¹¹Regulation (EU) No 910/2014 on electronic identification and trust services for electronic transactions in the internal market and repealing Directive 1999/93/EC. Official Journal of the European Union, L257/73-114.

¹²See footnote 5 above.

¹³Regulation (EU) 2016/679 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation), Official Journal of the European Union, L119/1-88.

the international transfer of personal data is enabled based on equivalent protection standards¹⁴. The GDPR also provides easier access to one's own data and introduces the principles of data protection by design and by default, which require big data operators to make good data protection practices an essential building block of their business plan. The major value added of the GDPR is also that it establishes one single rule-book for data protection that is valid across the European Union and replaces the many different rules valid so far at the level of Member States or, in some cases, at the level of regions.

Maintaining cybersecurity will remain an ongoing challenge, given the increasing frequency, magnitude and impact of security incidents. At European Union level, the Directive on security of network and information system (NIS Directive) aims to bring about a high common level of cybersecurity across the EU by improving national cybersecurity capabilities, which are currently uneven across the EU; enhancing cooperation between the Member States, which so far takes place in small and closed circles; and by ensuring a high level of risk management practices in key sectors. In particular, the Directive requires companies in critical sectors – such as energy, transport, banking and health – as well as key internet services such as e-commerce platforms, search engines and cloud computing services to adopt risk management practices and report major incidents to the national authorities¹⁵. In addition, a Public Private Partnership on cybersecurity launched in July 2016 complements the NIS Directive¹⁶. It

¹⁴EUROPEAN COMMISSION COMMUNICATION, *Exchanging and Protecting Personal Data in a Globalised World*, COM (2017), 7 final, 10 January 2017.

¹⁵Directive (EU) 2016/1148 concerning measures for a high common level of security of network and information systems across the Union. Official Journal of the European Union, L194/1-30.

¹⁶See European Commission press release (IP/16/2321) downloaded at: http://europa.eu/rapid/press-release_IP-16-2321_en.htm

is important to note that responsibility for the transposition and implementation of the Directive rests with EU Member States. As regards online payments, PSD 2 introduced enhanced security measures to be implemented by all payment service providers¹⁷.

To enable an optimal business environment for online platforms, the European Commission has put forward a number of principles that will guide any future regulatory approach that may be taken in this area: *a)* a level playing field for comparable digital services; *b)* responsible behaviour of online platforms to protect core values; *c)* transparency and fairness for maintaining user trust and safeguarding innovation; *d)* open and non-discriminatory markets in a data-driven economy. Any future regulatory approach should be both flexible and future-proof in light of the evolving nature of the platform economy. In this context, principles-based self- or co-regulatory measures will have a role to play. This allows the core values of the Social Market Economy to be safeguarded while fully embracing the further deployment of online platform-technology across economic and social life¹⁸.

The European data economy is currently constrained by barriers to the free movement of data within the EU as well as by numerous legal uncertainties regarding access to and transfer of data, data portability and liability issues of non-personal, machine-generated data. Some of these issues also raise profound ethical questions, in particular as regards liability and privacy issues related to the use of automated systems, robots and artificial intelligence. In January 2017, the

¹⁷See European Commission Fact Sheet Payment Services Directive (MEMO/15/5793). Downloaded at: http://europa.eu/rapid/press-release_MEMO-15-5793_de.htm?locale=en

¹⁸EUROPEAN COMMISSION COMMUNICATION, *Online Platforms and the Digital Single Market Opportunities and Challenges for Europe*, COM (2016), 288 final, 25 May 2016, downloaded at: <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52016DC0288&from=EN>

European Commission declared its intention to address unjustified data localisation requirements imposed by public authorities, including in the financial sector¹⁹. Such restrictions relate to requirements imposed on the location of data for storage and processing purposes. The issue of the free movement of data concerns all types of data. Given that the GDPR has established unified rules on data protection, privacy concerns should not be used any more as a reason to restrict the free flow of data. At the current juncture and in view of the complexity of the issues, further consultation and evidence gathering will however be necessary before regulatory and enforcement measures may be launched.

The Commission also proposes options for discussion on the best way to ensure the access to and the re-use of data and data transfer. A future EU framework for data access should enable value creation through improved access to machine-generated data; by providing incentives for data sharing and taking account of differences in bargaining power between market players. Under such a framework legitimate interests of market players that invest in product development should be taken into account. At the same time, it should also ensure a fair sharing of benefits between data holders, processors and application providers with value chains. The framework should also minimise potential lock-in effects. Confidential data would obviously be protected. The options to deliver these objectives range from guidance on incentivising business to share data; fostering the development of technical solutions for reliable identification and exchange of data through Application Programming Interfaces (APIs); to the introduction of default rules for contracts relating to data and an unfairness control in B2B contractual rela-

¹⁹ EUROPEAN COMMISSION COMMUNICATION, *Building a European Data Economy*, COM (2017), 9 final, 10 January 2017, downloaded at: <http://www.kowi.de/Portaldata/2/Resources/fp/2017-COM-Building-a-European-Data-Economy.pdf>

tionships. They also encompass the option for public authorities to have access to data where this is in the “general interest”; the introduction of a data producer’s right, where the “data producer” would be the owner or long-term user of the device generating the data. Finally, there could be a framework based on fair, reasonable and non-discriminatory (FRAND) terms for data holders to provide access to the data they hold against remuneration after anonymisation. Important further elements of the Commission’s 2017 Communication on the data economy concern liability issues and data portability for non-personal data, building on the data portability right of the GDPR for personal data.

As regards data access in payment services, PSD2 allows new actors in the field (payment initiation services providers and account information services providers) access, under regulated and safe conditions, to the information stored on the account and initiate payments on behalf of the account owner. These new actors will be thus able to cooperate and compete with banks in the provision of innovative, user and e-commerce friendly solutions in banking and payments.

5. CONCLUSIONS – DIGITISATION AND ETHICAL QUESTIONS IN FINANCE

The digitisation of economy and society raises many new legal and ethical questions. They centre around the increasing role of data, both personal and non-personal; on issues of privacy, trust and cybersecurity; on competition and fairness in B2B relations in particular in the context of online platforms; and on questions of liability and safety in the use of automated systems. All of them also have direct relevance for financial services, as set out by José Manuel González-Páramo.

Digital technologies have brought about significant innovation in finance. They have helped enhance the range and quality of offers of financial services and their accessibility for

users. One of the most important ethical questions for society stemming from digitisation is that of inclusion. Without digital inclusion, financial, economic and social inclusion will be impossible or impaired in a society shaped by digital technologies. However, where digital inclusion is delivered, digital technologies will certainly be able to enhance financial inclusion and also the value added for persons, enterprises – in particular small ones – and society that can be provided by the financial services sector. A focus of corporate social responsibility actions on areas such as digital skills and digital inclusion can support the success of a digitisation in line with the values of the Social Market Economy.

European digital policy is acting as an enabler for the digital economy in all its aspects, starting with the right framework conditions for investment in high-capacity digital infrastructure²⁰. In order to achieve the overall objective of enabling the digital economy, policy and regulation has provided a clear and binding regulatory framework for the protection of personal data and for data security and has defined principles for a thriving platform and data economy. One central challenge for digital policy is the rapid pace of innovation, technological change and the creation of new business models. Hence, policy makers tend to tread carefully before introducing hard regulation.

Where a principles-based approach is adopted, it aims to advance and frame the ongoing debates on legal and ethical issues. It should provide clear direction on the course of action if the principles are not effectively put into practice. Such an approach leaves room for co- and self-regulation and thus for market players to develop and implement ethical standards. They can therefore play an important role. In the digital economy, all actors and in particular consumers and small enterprises are going to place a high premium on trust.

²⁰See footnote 3.

Hence, a strong, proactive and visible adherence to principles such as data protection by design and by default as well as good risk management practices and swift reporting on major security incidents will help engender trust and consumer confidence.

COMMENT

ROBERT TANN

1. In his paper, Professor González-Páramo has given us a thought-provoking review of some of the key ethical questions arising in our connected, digital economy. I would like to add some thoughts as a private citizen rather than an expert, and I hope they are not too simplistic.

Professor González-Páramo's insistence that financial institutions, and especially banks, must maintain a humanistic vision of their rôle in the economy and of their reason for existing is all the more important as it is so infrequently heard today. The algorithms which support and facilitate the new credit platforms leave no space for a "humanistic vision" and the sponsors of these ventures are also silent on the subject. Professor González-Páramo rightly reminds us that traditional bank lending brings with it an enormous impact and a heavy responsibility – in providing credit, retail banks are investing in human capital and helping individuals bring their projects to fruition. But in the digital marketplace, this is at best a side effect, rather than the guiding ambition of a credit scoring process.

2. The use of Big Data by banks is defended as a powerful tool for uncovering new correlations and for predicting customer behaviour. Certainly, credit institutions already have very valuable information about their customers' spending habits and spending intentions, and advanced data analysis has opened up far-reaching new uses for this information. The cross-filtering of customers' transactional data with other information, especially information about their on-line activity which may have been "offered" freely to service providers, then collated, "anonymised" and sold to third parties, is

particularly revealing. Advertising agencies expend much energy in arriving, with the help of overlapping filters, at the granularity that banks can easily obtain. All this is undeniably positive for the banks, but less so for their customers, and we may be too late to change it.

3. This brings us directly to the ethical questions of privacy and trust highlighted in Professor González-Páramo's paper.

It goes without saying that in the digital world, all business models are built on trust and privacy, and that banks, perhaps more than other service providers, must ensure that customer information is held securely even as hacking methods – and marketing tactics – improve. National and supranational regulators have a clear mandate to enforce this security with forward-looking standards. However, today's digital giants such as Google and Facebook owe their success precisely to their ability to extract, retain and monetize customer information in the teeth of any concerns about privacy and trust. All this has been achieved with the simple use (or misuse) of the concepts of "consent" and "permission". Faced with a monetary incentive, or with the threat of a service being withheld, most customers willingly hand over their right to privacy, without qualification and without compensation. It is the customers themselves who opt out of privacy protections, and they do it in a way that actually binds them more closely to their service providers.

Some of these issues have been tested recently in American courts, where plaintiffs have alleged (for example) that their messages were scanned even though their email addresses were with a different provider, or that a social media service was reading e-mails, using photos and accessing personal address books without permission. Earlier cases saw claims thrown out because the plaintiffs could not prove they had suffered harm, but more recently courts have ruled that companies were not disclosing enough details of how they

intended to use extracted information in their (lengthy) consent wordings. So far, penalties awarded appear to have been only in the tens of millions of dollars, which is hardly a strong deterrent in the context of annual on-line advertising revenues in excess of \$42 billion.

4. It seems incredible but it is true that before being caught in the act, some Google Street View cars with their 360 degree cameras were not only taking pictures of all the residential and commercial districts they visited, but were also extracting personally identifiable data from unencrypted Wi-Fi connections as they went along¹.

Gmail itself could be viewed as a supremely effective tool for invasive profiling, as Yasha Levine has argued²: “All communication was subject to deep linguistic analysis; conversations were parsed for keywords, meaning, and even tone; individuals were matched to real identities using contact information stored in a user’s Gmail address book; attached documents were scraped for intel – that info was then cross-referenced with previous email interactions and combined with stuff gleaned from other Google services, as well as third-party sources”... [Google then created profiles on Gmail users, based on] “concepts and topics discussed in email, as well as email attachments [including] the content of websites that users have visited; demographic information – including income, sex, race, marital status; geographic information; psychographic information – personality type, values, attitudes, interests, and lifestyle interests; previous searches users have made; information about documents a user viewed and or edited by the users; browsing activity; previous purchases.” With your permission, this is the value exchange for your free email account.

¹JOHN W. WHITEHEAD, *The Rutherford Institute*, 12 May 2014.

²*Ibid.*

5. The EU has been hard at work to strengthen the regulation of digital services and to protect the privacy of the consumer. The draft regulation, released on 10 January, updating the EU's ePrivacy law will supplement the General Data Protection Regulation, enacted last May and entering into application on May 25, 2018. The draft regulation is a high-quality and forward-looking instrument, requiring manufacturers and retailers to respect consumer privacy and requiring service providers to seek prior consent for many of their most profitable activities. It introduces a duty-of-care requirement to have user-friendly hardware and software default settings (for example, do-not-track settings) on the part of manufacturers and retailers of connected devices. It also brings up to date rules regarding spam, cookies and location-based services, and it allows providers to withhold content from users who browse with an ad-blocker. But in all these cases, the Achilles' heel of the proposed regulation is that users can choose to lose their privacy rights when asked to opt in or out. When the alternative is paying for a service that is otherwise free, or having a valued service withheld, experience shows that consumers vote for "transparency" instead of privacy. I suspect that if prior-consent wordings were less helpful to the service providers, they would respond with outright money offers to "purchase" user consents.

6. In short, consumers have already lost the battle for privacy, and if we look at where the internet is going, we may well conclude that this defeat cannot be overturned.

Consider the vision of the connected future reflected in the public utterances of Eric Schmidt of Alphabet and Mark Zuckerberg of Facebook, companies with market values of \$565 billion and \$370 billion respectively. The stock market puts quite a value on their ability to extract customer data.

a) The convergence of search, location and social is the next big narrative. Schmidt says that people who "opt in" to the system will begin experiencing a much richer relationship

with technology, aided by their computerised “personal assistant”. “We still think of search as something you type”, Schmidt said. “Perhaps a decade from now, you will think, well, that was interesting, I used to type but now it just knows. How does it know? Well, on mobiles we know where you are, down to the nearest foot. You’ve chosen to log in, with your permission, and it knows where you are and it can provide a personalised service... Technically, with your permission, we know where you are, we know your history, we can do data extraction and look at what it tells us”³.

b) “One day, I believe we’ll be able to send full rich thoughts to each other directly using technology. You’ll just be able to think of something and your friends will immediately be able to experience it too, if you’d like. This would be the ultimate communication technology... We’re working on Virtual Reality because I think it’s the next major computing and communication platform after phones... I think we’ll also have glasses on our faces that can help us out throughout the day and give us the ability to share our experiences with those we love in completely immersive and new ways that aren’t possible today”⁴.

“First, people are gaining the power to share in richer and richer ways. We used to just share in text, and now we post mainly with photos. In the future video will be even more important than photos. After that, immersive experiences like virtual reality will become the norm. And after that, we’ll have the power to share our full sensory and emotional experience with people whenever we’d like. Second, people are gaining the power to communicate more frequently. We used to have to be with someone in person. Then we had these bulky computers at our desks or that we could carry around.

³ERIC SCHMIDT, *Interview with Kamal Ahmed* (Daily Telegraph), World Economic Forum, January 2011.

⁴MARK ZUCKERBERG, *Facebook Q&A*, 1 July 2015.

Now we have these incredible devices in our pockets all the time, but we only use them periodically throughout the day. In the future, we'll have augmented reality and other devices that we can wear almost all the time to improve our experience and communication"⁵.

Not everyone perceives these pictures of the future as preserving human dignity or protecting a humanistic vision of society. To me they seem like its opposite, but no less inevitable for that. Professor González-Páramo aptly quotes Michael McFarland: "Losing control of one's personal information is to a large extent losing control of one's life and one's dignity". I fear the future that inescapably awaits us is one of "rich and immersive serfdom".

7. We still use the phrase "in the privacy of your own home", but in reality, this expression is already antiquated. Today there is almost nothing private about your own home, thanks to mobile phones, smart devices and internet tracking. Robert Shrimley of the FT jokingly quotes the head of Scotland Yard's Digital Forensics Unit as saying that your refrigerator might one day keep you out of jail (by providing your alibi and proving your innocence), but it is equally possible that your washing machine will prove your guilt and lead to a conviction⁶.

Consider Alexa, available with Amazon's Echo, a metal tube containing speakers and microphones which connects to the cloud, acts as a personal assistant, answers questions, streams music and orders things for you on-line, activating whenever it hears "Alexa". Echo's microphones *are always listening* unless physically switched off. The data collected is analysed and used for targeted advertisements and "an enhanced service". It may be sold to third parties without the speaker's knowledge. As journalist Rory Carroll points out,

⁵ *Ibid.*

⁶ *Financial Times*, 6 January 2017.

all of the recorded data is uploaded and stored in the cloud, once the Alexa trigger word is spoken⁷. A few days after Rorry's private discussion at home with his wife about babies, his Amazon Kindle device offered him unprompted adverts for diapers. When questioned, Alexa couldn't explain how that had happened. Anyone familiar with Stanley Kubrick's "2001" knows where this leads.

Mobile devices give away our location and our activities. Even when we change our system settings to turn off location services, our devices show approximately where we are, and we might discover that the location function has been restored, for example with an app update. Mobile phones can be activated remotely to record what we say, whether or not they are switched off.

Moreover, to quote Edward Snowden⁸, "Something that people forget about cellphones in general, of any type, is that you're leaving a permanent record of all of your physical locations as you move around... The problem with cellphones is they're basically always talking about you, even when you're not using them... Are you carrying a device that, by virtue of simply having it on your person, places you in a historic record in a place that you don't want to be associated with, even if it's something as simple as your place of worship?".

Today, to guarantee privacy you should be taking a Faraday Cage for your mobile phone to the confessional, but in the future you will have too many personal devices for you to confess in privacy.

8. Credit provision and financial risk management are affected directly by the digital revolution. In traditional banks, credit scoring, risk profiling and portfolio modelling have become more sophisticated, bringing the theoretical benefits of better resistance to market disruptions and lower

⁷*The Guardian*, 21 November 2015.

⁸*The Intercept*, 12 November 2015.

minimum capital requirements. However, only another financial crisis will prove whether these advantages are effective, and there are good reasons for caution. Many experts agree with Warren Buffett that risk management in banking should not be a bureaucratic dialogue between internal compliance resources and the regulatory authorities, but on the contrary, it should be the direct responsibility of the CEO, because it always involves critical business judgements, which cannot be delegated or bypassed.

As John Kay observed, “Risk management decisions are among the most important matters of business judgement in financial institutions. The devastatingly negative consequences of regulatory prescription in these areas is that such prescription has undermined business disciplines and the risk management responsibilities of senior executives”⁹.

Better analytics from the application of Big Data and advanced algorithms will not by themselves reduce the risk of another systemic financial crisis. Banks which were Too Big To Fail in 2008 are still Too Big To Fail in 2017, notwithstanding all the regulatory changes designed to avoid this outcome. Italy did not allow MPS to collapse in 2016, and I am sure Germany would not allow Deutsche Bank or Commerzbank to collapse if market conditions changed. In 2015 the combined gross notional derivative exposure of JP Morgan, Citi, Goldman Sachs, Bank of America, Morgan Stanley and Wells Fargo was more than \$278 trillion – more than 28x the size of their combined assets and 15x the US national debt. Nobody knows the total gross notional amount of derivative exposures worldwide, but one estimate ranges from \$630 trillion to \$1,200 trillion. Warren Buffett famously called these instruments “financial weapons of mass destruction carrying dangers that, while latent, are potentially lethal”¹⁰.

⁹JOHN KAY, *Narrow Banking*, 11 November 2009.

¹⁰WARREN BUFFETT, *Berkshire Hathaway Letter to Shareholders*, 2002.

Since the 2008 financial crisis, the Bank for International Settlements in Basel has led efforts to increase the proportion of OTC derivative contracts which must be centrally cleared, introducing higher capital and margin requirements. In the interest rate derivatives market, it is estimated that three quarters of all contracts are now standardised, but this still leaves an enormous number of non-standardised and illiquid contracts which are easily sufficient to undermine the banking system in any future financial crisis. A better way to prevent another banking meltdown might be to have international agreements (or tax incentives) to force banks gradually to close out most of their contractual exposures rather than merely carrying the notional net and gross amounts, and to introduce an unambiguous obligation on banks to ring-fence their retail activities, and to prevent managements from using their retail balance sheets to finance or backstop their speculative trading positions. Any serious attempt to contain this pervasive risk will require an attack on the “scourge of rehypothecation” and it will see the world’s major retail banks become more like regulated utilities, which is no bad thing.

9. Separately, payment services are exposed to new risks as a result of the digital revolution. Although not so much discussed, the biggest of these is the risk of cyber warfare attacks by hostile governments. There have been many cyber attacks in recent years and some of them may well have involved state controlled hacking teams. Examples of successful recent hacks at banks and retailers include Global Payments (1.5 million credit cards), Target (40 million credit and debit cards), Tesco Bank (40,000 out of 136,000 checking accounts), and the Central Bank of Bangladesh theft of \$100 million where apparently both SWIFT and the Federal Reserve of New York missed the red flags. The biggest customer data hack so far was the 2014 theft of 500 million user account details from Yahoo, also thought to be the work of a hostile state

team. In future these attacks will only become more sophisticated (although good old-fashioned employee fraud has never disappeared) and two or three stage biometric authentication might be the only defence for banks when quantum computing allows hackers to undermine all today's encryption systems.

Much has been made of the potential for gated blockchain technology to make payments systems more secure. Initiatives like the R3 Consortium and the Hyperledger Project show that the world's biggest banks are taking this possibility seriously¹¹. Experts have predicted that the introduction of Digital Identity protocols will protect global payments systems and make financial markets more secure¹², while Distributed Ledger Technology will allow more rather than less rehypothecation (and by implication, more systemic leverage)¹³. In the background is the lingering concern that providers such as Google or Apple would sweep aside the traditional banks, if ever they turned their customer firepower towards full-on competition in payment and credit services.

10. Gunther Oettinger (when he was EU Commissioner for Digital Economy and Society) suggested in a WEF panel in 2011 that "we need a convincing global understanding, we need a UN agency for data protection and security". This is an interesting idea. What if national governments offered secure browsing and free e-mail addresses to all their citizens, with strong encryption and no possibility of data extraction? This might be a part of their digital welfare arrangements or their national digital taxpayer systems. Individuals could be encouraged or even forced to use safe on-line searching and

¹¹ D.TAPSCOTT - A.TAPSCOTT, *Blockchain Revolution*, 2016, p. 69.

¹² WORLD ECONOMIC FORUM, *A Blueprint for Digital Identity*, 2016, p. 17.

¹³ WORLD ECONOMIC FORUM, *The Future of Financial Infrastructure*, 2016, p. 27.

browsing services, and safe e-mails as part of their personal digital identification. They would be no more exposed to government snooping than they currently are, but better protected from the predatory extraction and onward sale of their personal transaction and location based information by third parties. Apart from the cost, there is no great practical difficulty in implementing this. The consumer would still be free to use any additional search engine or browser desired. This would cause uproar of course, and unless prevented by law, today's big service providers would find ways of "compensating" people, perhaps even with hard cash, to opt out of such services.

11. Another interesting idea is Professor González-Páramo's suggestion that the digital revolution opens up new possibilities for philanthropic initiatives. For the big retail banks, this could grow into a sizeable activity. Just imagine an initiative which used a bank's data mining capacity to flag up to potential job candidates forthcoming employment openings, in large or SME businesses, that the corporate employer does not yet realise exist, but that the bank already sees from its data analytics. Or where new public or private contracts are announced and a bank's algorithms instantly identify the best-suited applicants, and can help to match both sides. Or where it is the bank, before anyone working with the corporate customer, that can already see a company's new export opportunity from its payments data analysis, and perhaps even from its deep knowledge of the potential counterparty. Projects like these might even qualify for government assistance and funding. The biggest European banks could do this and more with their existing customer information, if they had the right incentives.

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