

INDICE

- ILO: *L'iniziativa del centenario per il futuro del lavoro*, Rapporto del Direttore Generale, Conferenza Internazionale del Lavoro, 104ª sessione, Ginevra, 2015.
- Méda, D. 2016. *The future of work. The meaning and value of work in Europe*, ILO Research Paper No. 18 (Ginevra, ILO).
- ILO: *Technological changes and work in the future. Making technology work for all*, The Future of Work Century Initiative, Issue Note Series, 1 (Ginevra, 2016).
- ILO: *The future of labour supply. Demographics, migration, unpaid work*, The Future of Work Century Initiative, Issue Note Series, 2 (Ginevra, 2016).
- ILO: Social contract and the future of work. *Inequality, income security, labour relations and social dialogue*, The Future of Work Century Initiative, Issue Note Series, 4 (Ginevra, 2016).

ALTRI RIFERIMENTI

The Future of Work: pagina web dedicata sul sito dell'ILO

ILO: World employment and social outlook. The changing nature of jobs (Ginevra, 2015).



Conferenza	Internazionale	del Lavoro	104ª sessione	2015
Connenenza	IIILEITIAZIOHAIE	uei Lavoio.	104 565510116	. 2013

Rapporto del Direttore Generale

Rapporto I

L'iniziativa del centenario per il futuro del lavoro

Traduzione in lingua italiana non ufficiale

Le denominazioni usate nelle pubblicazioni dell'Ufficio internazionale del Lavoro, che sono conformi alla prassi delle Nazioni Unite, e la presentazione dei dati che vi figurano non implicano l'espressione di opinione alcuna da parte dell'Ufficio internazionale del Lavoro in merito allo stato giuridico di alcun paese, area o territorio, o delle sue autorità, o rispetto al tracciato delle relative frontiere.

Gli articoli, studi e altri testi firmati sono pubblicati sotto la responsabilità dei loro autori senza che l'Ufficio internazionale del Lavoro faccia proprie le opinioni che vi sono espresse. Qualsiasi riferimento a nomi di ditte, o prodotti, o procedimenti commerciali non implica alcun apprezzamento da parte dell'Ufficio internazionale del Lavoro; di converso, la mancata menzione di una ditta, o prodotto, o procedimento commerciale non significa disapprovazione alcuna.

Le pubblicazioni e i prodotti elettronici dell'OIL sono disponibili nelle principali librerie o presso gli uffici locali dell'OIL. Si possono anche ottenere direttamente, con un catalogo o una lista delle nuove pubblicazioni, presso: Publications du BIT, Bureau international du Travail, CH-1211 Genève 22, Svizzera, o tramite email a: pubvente@ilo.org.

Per maggiore informazione: http://www.ilo.org/publns

Prefazione

Il presente Rapporto si focalizza sull'idea di una iniziativa del centenario dedicata al futuro del lavoro che avevo proposto per la prima volta alla Conferenza Internazionale del Lavoro due anni fa. Questa proposta ha ricevuto grande attenzione. È opinione diffusa che l'iniziativa debba essere al centro delle attività che celebreranno il 100° anniversario dell'Organizzazione Internazionale del Lavoro nel 2019.

È giunto, pertanto, il momento di concretizzare la proposta e di sollecitare pareri e orientamenti da parte dei costituenti tripartiti in merito alla sua attuazione. L'interesse e l'impegno, dedicati da questi ultimi all'iniziativa, saranno decisivi per la sua riuscita.

Il presente rapporto propone un piano di attuazione, articolato in tre fasi, e discute una serie di tematiche che potrebbero costituire il fulcro di quattro «conversazioni sul centenario», i cui risultati verrebbero discussi da una commissione di alto livello e presentati alla 108ª Sessione della Conferenza nel 2019.

Sebbene il rapporto evidenzi tematiche fondamentali, esse non sono trattate in modo esaustivo o nel dettaglio. Spetterà all'iniziativa approfondire la discussione ai livelli appropriati di ambizione e di rigore intellettuale. Il presente rapporto non intende anticiparne i risultati. Al contrario, il rapporto cerca di affrontare le questioni di ordine organizzativo ed esplorativo come requisiti preliminari per il successo dell'iniziativa. La sua discussione nella seduta plenaria della Conferenza offre ai governi, e alle organizzazioni dei datori di lavoro e dei lavoratori, l'opportunità di dare corpo all'iniziativa e di diventare parte attiva nello svolgimento delle attività.

Oltre la dimensione puramente commemorativa del centenario dell'OIL, la nostra ambizione è quella di mettere in moto un processo che aiuterà a orientare il lavoro per la giustizia sociale nel secondo secolo dell'Organizzazione. I vostri pareri in merito a questo rapporto saranno un primo passo verso il perseguimento di questa ambizione.

Guy Ryder

Ringraziamenti

Si ringrazia la Confederazione Generale Italiana del Lavoro (CGIL) per aver curato la traduzione in italiano e la stampa di questo rapporto.

Indice

Prefazi	one	iii
1.	Iniziativa del centenario per il futuro del lavoro	1
2.	Il mondo del lavoro oggi	5
3.	Le conversazioni sul centenario	9
4.	Il futuro della giustizia sociale	19

Capitolo 1

Iniziativa del centenario per il futuro del lavoro

- 1. Il mio primo Rapporto, presentato alla Conferenza Internazionale del Lavoro due anni fa, esponeva alcune delle sfide di lungo periodo mentre ci si avvicinava al suo centenario.
- 2. L'idea centrale di quel rapporto era basata sul fatto che cambiamenti in corso avvengono ad una velocità e dimensione tale da trasformare il mondo del lavoro. Pertanto, l'OIL doveva comprenderle e rispondervi efficacemente al fine di far avanzare la causa della giustizia sociale.
- 3. Per tale ragione è stata proposta l'iniziativa dedicata al «futuro del lavoro» come una delle sette iniziative per il centenario dell'OIL nel 2019. Il dibattito sul rapporto, nella seduta plenaria della 102ª Sessione della Conferenza Internazionale del Lavoro (2013), ha evidenziato la condivisione della proposta da parte dei costituenti e raccolto ampia adesione al processo di riflessione sul futuro del lavoro, considerato come colonna portante del centenario dell'OIL.
- 4. Il Consiglio di Amministrazione ha successivamente approvato quest'iniziativa e le altre sei iniziative sul centenario definendo delle linee guida per la loro attuazione¹. Nel prosieguo del processo di riforma nell'OIL, e' opportuno discutere il presente rapporto in seduta plenaria della Conferenza per due ragioni: (i) dare visibilità all'iniziativa sul futuro del lavoro e promuovere il più ampio impegno a livello politico; e (ii) contribuire a strutturare e dare direzione a una riflessione che, a prima vista, tratta di questioni di straordinaria diversità e complessità. Questi elementi costituiscono due requisiti essenziali per la riuscita dell'iniziativa e non è inverosimile supporre che il suo successo condizionerà in modo sostanziale il lavoro dell'OIL nel secondo secolo della sua storia.

Il concetto

- 5. La ragione alla base dell'iniziativa sul futuro del lavoro deriva dalla difficoltà per l'OIL (o per qualsiasi organizzazione internazionale) di gestire tutte le implicazioni legate al mutamento delle sue attività ordinarie. Nonostante la loro rilevanza nel loro insieme, queste attività non potrebbero essere sufficienti, dato che per loro natura tendono ad essere dirette a fornire risposte specifiche alle sfide di politica di breve periodo.
- 6. Solo in rare occasioni si fa un passo indietro per avere una visione ampia e di lungo periodo, soprattutto per considerare le dinamiche del cambiamento e riflettere su quanto richiesto ad un'organizzazione. L'iniziativa del centenario può offrire quest'opportunità.

¹ L'iniziativa sulla "governance"; l'iniziativa sulle norme; l'iniziativa "verde"; l'iniziativa sulle imprese; l'iniziativa sulla fine della povertà; l'iniziativa sulle donne al lavoro.

- 7. L'iniziativa deve avere un alto livello di ambizione. Deve riguardare interamente e universalmente i costituenti tripartiti e deve anche rivolgersi al mondo accademico e a tutti gli altri attori rilevanti. Questo non costituisce una minaccia al tripartismo ma un collegamento con il resto del mondo.
- 8. Il successo dell'iniziativa dipenderà dai meccanismi, dall'impegno e, soprattutto, dal riconoscimento delle conseguenze per l'azione. Il centenario rappresenta l'occasione per guardare alla storia, ai risultati conseguiti e imparare da questi. L'efficacia dell'iniziativa sarà misurata dall'orientamento che darà nel concreto alle future attività dell'OIL.
- 9. A tale riguardo, l'iniziativa deve, per definizione, apportare un contributo alla causa della giustizia sociale. Quello che le attribuisce particolare rilevanza, e forse spiega il grande interesse che ha suscitato, è il contesto di grande incertezza e insicurezza nel quale viene intrapresa. Tale contesto è caratterizzato dalla paura che il cambiamento allontani invece che riavvicinare il mondo del lavoro e la giustizia sociale.
- 10. Questo timore trova conferma nell'incremento delle disuguaglianze ampiamente evocato ma raramente contrastato e nel paradosso che i progressi straordinari della capacità produttiva dell'economia mondiale forniscono i mezzi materiali per eliminare la povertà e far fronte ai bisogni umani come non mai, anche se, sorprendentemente, tali mezzi non vengono adoperati. In contemporanea, i meccanismi di funzionamento del sistema economico stanno generando, da un lato, disoccupazione e sottoccupazione di massa ed esclusione su larga scala, e, dall'altro, maggiore prosperità e progresso sociale, creando tensioni all'interno e tra le società.
- 11. Nel 1919, i fondatori dell'OIL dichiararono di sentirsi «spinti da sentimenti di giustizia e umanità, così come dal desiderio di garantire una pace duratura nel mondo». Nel 1944, la Dichiarazione di Filadelfia affermava che «la lotta contro il bisogno dev'essere perseguita con instancabile vigore». L'iniziativa che culminerà nel 2019 dovrebbe manifestare questi stessi sentimenti e definire le modalità attraverso le quali proseguire quella lotta con lo stesso vigore, espletando i compiti e applicando i metodi richiesti dalla trasformazione sostanziale del mondo del lavoro.

Attuazione dell'iniziativa

- 12. Al fine di raggiungere le suddette ambizioni, la Conferenza potrebbe voler considerare il processo di attuazione dell'iniziativa in tre fasi, così come approvato dal Consiglio di Amministrazione.
- 13. La prima fase, che sarebbe avviata immediatamente, consisterebbe nel raccogliere il più vasto impegno e contributo attraverso una riflessione sul futuro del lavoro. I costituenti tripartiti, organizzazioni internazionali, istituti di ricerca, università, società civile e personalità saranno invitate a partecipare, e gli Stati membri saranno incoraggiati ad attivare le proprie reti e meccanismi d'attuazione.
- 14. Le manifestazioni di interesse sembrano indicare che, se condotta adeguatamente, questa fase dell'iniziativa potrà potenzialmente garantire un elevato numero di contributi. La sfida consisterà nell'organizzare e utilizzare tali contributi durante le fasi successive dell'iniziativa. A tal fine, viene proposto di organizzare le diverse manifestazioni d'interesse in quattro «conversazioni sul centenario» descritte nel capitolo 3 del presente rapporto. La modalità proposta non intende limitare le tematiche da considerare. Al contrario, l'iniziativa trarrà beneficio dall'eterogeneità dei contributi che sarà in grado di raccogliere. Lo scopo è piuttosto di garantire che questi

contributi non vengano dispersi, rischiando di perderne il loro valore. Ogni conversazione potrebbe essere sintetizzata in rapporti da pubblicare alla fine del 2016.

- 15. La seconda fase comporterebbe l'istituzione di una commissione di alto livello sul futuro del lavoro. Questa commissione avrebbe il compito di esaminare i risultati delle conversazioni del centenario, e li svilupperebbe attraverso una serie di audizioni pubbliche e altre attività volte a colmare quelle lacune o quei deficit di conoscenza messi in evidenza. Il risultato del lavoro della commissione si concretizzerebbe in un rapporto da sottoporre alla 108ª Sessione della Conferenza nel 2019.
- 16. L'anno del centenario dell'OIL, il 2019, sarebbe dedicato all'attuazione della terza fase dell'iniziativa. Tutti gli Stati membri verrebbero incoraggiati ad organizzare eventi sul centenario dell'OIL nella prima parte dell'anno. I costituenti tripartiti nazionali vorranno dare spazio alla parte storica e commemorativa sulla base della loro specifica esperienza maturata nel corso degli anni con l'OIL. Sarebbe anche importante che ciascuno di loro desse spazio alle problematiche che emergeranno dall'iniziativa sul futuro del lavoro.
- 17. La 108ª Sessione (2019) della Conferenza rappresenterebbe l'evento conclusivo dell'iniziativa. Sarebbe opportuno dedicare gran parte, se non la totalità, del programma di questa Conferenza all'iniziativa sul centenario, nei limiti stabiliti dalla Costituzione e dalle diverse necessità di lavoro. In questa fase sarebbe importante ottenere delle linee guida sull'organizzazione di quest'evento.
- 18. Il rapporto della commissione di alto livello sul futuro del lavoro rappresenterebbe il documento presentato alla Conferenza. Sarebbe possibile esaminarlo nella sua interezza in un dibattito in seduta plenaria, o trattare i temi specifici emersi dalle commissioni tecniche o da altre sedute interattive.
- 19. In ogni caso, le decisioni relative all'organizzazione della 108ª Sessione della Conferenza nel 2019 dovrebbero essere guidate dalla necessità di garantire il raggiungimento dell'obiettivo primario di guidare l'azione futura dell'OIL nel suo secondo secolo di vita. Tenendo conto di questi elementi, la domanda cruciale è se la Conferenza dovrebbe adottare una solenne «Dichiarazione del centenario». L'occasione sembrerebbe richiederlo. Per superare il mero valore simbolico o cerimoniale di tale dichiarazione, è necessario avviare in anticipo una seria riflessione sul suo contenuto e sulle sue finalità politiche.

Alcune considerazioni pratiche

- 20. Saranno necessari notevoli sforzi organizzativi per realizzare le ambizioni descritte nel presente rapporto sull'iniziativa per il futuro del lavoro. Nonostante la maggior parte delle attività non saranno svolte presso l'Ufficio, sarà necessario avviare, coordinare e sviluppare la fase iniziale di riflessione, supportare la Commissione e, come sempre, organizzare la 108ª Sessione della Conferenza del 2019.
- 21. Di conseguenza, sarà necessario istituire un'unità specifica sul futuro del lavoro all'interno dell'Ufficio, presieduta da un consigliere, e mobilitare le risorse finanziarie necessarie per far fronte ai costi e ad altri aspetti connessi all'attuazione dell'iniziativa. La portata delle attività sarà correlata sia al livello d'impegno dei costituenti e degli altri soggetti coinvolti, sia ai mezzi materiali disponibili per la trasformazione di questo coinvolgimento in azioni concrete.
- 22. Ad ogni modo, il sostegno degli Stati membri sarà decisivo.

Capitolo 2

Il mondo del lavoro oggi

23. Il miglior punto di partenza per effettuare una corretta valutazione sul futuro del mondo del lavoro consiste nell'analisi della situazione corrente dello stesso. Quali sono le condizioni in cui si trovano i circa tre miliardi d'individui che costituiscono la forza lavoro del nostro pianeta? Dove si osservano i deficit più marcati di lavoro dignitoso?

Lavoro, povertà e protezione sociale

- 24. Il pianeta ha raggiunto un livello di prosperità mai visto., Allo stesso tempo, la crescita economica globale rimane tendenzialmente inferiore rispetto alla situazione precedente la crisi finanziaria del 2008. Oggi la disoccupazione nel mondo si attesta a un valore leggermente superiore ai 200 milioni d'individui, circa 30 milioni in più rispetto al 2008. Quando si prendono in considerazione coloro che hanno abbandonato il mercato del lavoro, emerge un «divario occupazionale» di circa 62 milioni di posti di lavoro. Questo è indicativo della severità dell'impatto della crisi sull'occupazione. La disoccupazione giovanile si attesta ad un livello molto più elevato rispetto al tasso di disoccupazione del totale delle popolazione in età lavorativa. In molti casi è superiore del doppio. Inoltre, sono occupati più uomini che donne. Nonostante il tasso di partecipazione delle donne nel mercato del lavoro sia aumentato significativamente nel corso dell'ultimo secolo, esso resta inferiore di circa 26 punti percentuali rispetto a quello degli uomini. Sulla base dei dati più recenti, il divario retributivo di genere rimane del 20 per cento, e niente lascia prevedere una sua rapida riduzione. Inoltre, le donne continuano a essere sovra-rappresentate sia nelle forme atipiche di lavoro sia nel lavoro domestico non retribuito.
- 25. Le attuali tendenze demografiche indicano che ogni anno circa 40 milioni di persone entreranno nel mercato del lavoro; ciò significa che da oggi fino al 2030 l'economia mondiale dovrà creare 600 milioni di nuovi posti di lavoro. Questi posti di lavoro saranno, con molta probabilita', soprattutto create dal settore dei servizi, il quale attualmente rappresenta circa il 49 per cento dell'occupazione totale a livello mondiale. Il settore agricole e quello industriale forniscono il 29 e il 22 per cento del lavoro. Con la percentuale di popolazione mondiale di età superiore ai 65 anni destinata a passare dall'attuale 8 per cento a quasi il 14 per cento entro il 2040, i lavoratori dovranno sostenere un crescente numero di persone anziane.
- 26. Il numero di lavoratori in condizioni di povertà estrema è diminuito notevolmente negli ultimi decenni, ma circa 319 milioni di donne e di uomini che lavorano vivono ancora con meno dell'equivalente di 1,25 dollari statunitensi al giorno. Per la maggior parte, questi lavoratori risiedono in paesi in via di sviluppo, specialmente in quelli meno sviluppati. La povertà è fonte di preoccupazione anche di molti paesi industrializzati. In base ai dati² di cui disponiamo, le disuguaglianze sono aumentate in molti paesi nel corso degli ultimi 40 anni, mentre la quota di lavoro del

² ILO: World Employment and Social Outlook: Trends 2015, Ginevra, 2015.

prodotto interno lordo nei paesi sviluppati è diminuita significativamente, passando dal 75 per cento della metà degli anni '70 al 65 per cento nella metà degli anni 2000.

27. Legata alla povertà è la questione della protezione sociale: solo il 27 per cento della popolazione mondiale dispone di un livello di protezione adeguato. L'ambizione di fornire un sistema di protezione minima a tutti ha ottenuto un ampio sostegno a livello internazionale. Nonostante, i livelli di protezione sociale stiano aumentando, la strada da percorrere è ancora lunga prima che questa ambizione si realizzi. Inoltre, molti sistemi consolidati di protezione stanno affrontando complesse sfide riguardo la loro sostenibilità e adeguamento.

Internalizzazione della produzione

- processo 28. La globalizzazione ha comportato un d'internazionalizzazione del sistema di produzione, e il numero crescente delle filiere di fornitura globali rende complesso individuare un unico paese d'origine per i prodotti finiti, i quali diventano sempre più «made in the world». Questo fenomeno ha aperto nuovi percorsi di sviluppo economico e permesso a milioni di persone di affrancarsi dalla povertà attraverso il lavoro, ma ha anche aumentato i rischi legati alla concorrenza a livello mondiale che potrebbe esercitare pressioni al ribasso delle condizioni di lavoro e diritti fondamentali dei lavoratori. Durante questo processo d'internazionalizzazione della produzione, le istituzioni del mercato del lavoro, la legislazione e le procedure sono rimaste essenzialmente circoscritte all'ambito nazionale, con evidenti conseguenze per la futura governance del lavoro.
- 29. L'internazionalizzazione dei mercati del lavoro è anche evidenziata dalle migrazioni internazionale di un numero sempre crescente di individui in cerca di lavoro. Il numero di donne e uomini migranti internazionali è oggi pari a 232 milioni. Questo numero corrisponde ad una percentuale complessiva superiore al 50 per cento rispetto al numero dei migranti nel 1990. Nonostante contribuiscano in modo significativo al mercato del lavoro dei paesi ospitanti, i migranti sono spesso esposti ad elevati tasso di disoccupazione e notevole insicurezza, e talvolta xenofobia e il razzismo. Inoltre, la tensione creata da questa situazione ha spesso dato origine a profonde controversie politiche.

La qualità del lavoro

- 30. A livello mondiale, la metà della forza lavoro è coinvolta nell'economia informale³. Sebbene più diffusa nei paesi in via di sviluppo, l'informalità persiste e cresce anche nei paesi industrializzati.
- 31. Ogni anno si registrano 2,3 milioni di decessi nei luoghi di lavoro, ai quali si aggiungono le pesanti conseguenze delle malattie professionali. Il costo sociale ed economico elevato sia per i lavoratori che per i datori di lavoro e i sistemi di protezione sociale nel loro complesso è pari al 4 per cento del prodotto interno lordo (PIL) globale. Inoltre, c'è una crescente consapevolezza dei costi umani ed economici connessi agli attuali livelli di stress legato al lavoro. In numerose economie avanzate, il numero di persone in età lavorativa che non può più svolgere le proprie mansioni a causa di problemi legati alla salute e disabilità ha ormai superato il numero delle persone disoccupate.

6 ILC.104/DG/I

,

³ ILO: *Transitioning from the informal to the formal economy*, Report V(1), International Labour Conference, 103rd Session, Ginevra, 2014.

32. Il rispetto universale dei principi e dei diritti fondamentali sul lavoro rimane una prospettiva lontana. Nonostante notevoli progressi, non sono mancate battute d'arresto negli ultimi anni. La metà dei lavoratori di tutto il mondo vive in paesi che non hanno ancora ratificato la Convenzione n. 87 del 1948 sulla libertà sindacale e la protezione del diritto sindacale; ci sono ancora 168 milioni di bambini che lavorano e 21 milioni di vittime del lavoro forzato; il mondo del lavoro è ancora colpito da un processo di discriminazione profondamente radicato, per motivi di sesso, come è stato già osservato, di etnia, religione e disabilità.

I possibili sviluppi futuri

33. Qualunque sia la nostra opinione, le condizioni insite nel mondo del lavoro costituiscono la risultante di una miriade di decisioni assunte nella sfera pubblica e privata, a livello nazionale e internazionale, e concernenti tutti i settori della politica. Allo stesso modo, e indipendentemente dalle dinamiche di cambiamento in corso e da alcune complesse realtà, il futuro del lavoro dipenderà dalle scelte che adotteremo. La sfida consiste nel modellare il lavoro sulla base di ciò che vogliamo.

Capitolo 3

Le conversazioni sul centenario

- 34. Come indicato nel capitolo 1, è necessario sviluppare un ampio quadro di riflessione per dare all'iniziativa del centenario sul futuro del lavoro la struttura e la direzione necessarie e al fine di produrre risultati concreti.
- 35. Ai fini operativi, si potrebbero raggruppare i contributi forniti durante la prima fase di riflessione in quattro «conversazioni sul centenario», ognuna delle quali dedicata ad una tematica rilevante. Le quattro conversazioni qui suggerite devono essere considerate indicative e non esclusive; i contributi possono riguardare più di una conversazione. Tutti gli apporti relativi al futuro del lavoro dovrebbero trovare posto all'interno di queste conversazioni.

Lavoro e società

- 36. L'idea che il lavoro sia fondamentale per raggiungere la giustizia sociale presuppone una definizione e collocazione della sua funzione nella società. L'OIL si sofferma raramente a esaminare questo concetto, anche se è la bussola di cui ha bisogno per trovare la strada da percorrere.
- 37. Da sempre, lo scopo del lavoro è stato quello di soddisfare i bisogni umani fondamentali. Originariamente, il lavoro si limitava a fronteggiare le sole necessità connesse alla sopravvivenza degli individui. In seguito, con la crescita delle capacità produttive e il manifestarsi delle prime eccedenze, il lavoro ha esteso le proprie funzioni al soddisfacimento di altre esigenze, in particolare attraverso la specializzazione e lo scambio diretto o monetizzato.
- 38. Nonostante lo straordinario sviluppo della produzione attraverso le rivoluzioni tecnologiche, il lavoro rimane un imperativo basilare per l'età contemporanea. I bisogni umani essenziali sono ancora insoddisfatti e la «lotta al bisogno» deve continuare finché persiste la povertà. Una gran parte della forza lavoro a livello mondiale è ancora impiegata nell'economia di sussistenza.
- 39. Quest'anno la comunità internazionale ritorna sulla suddetta realtà attraverso l'adozione dell'agenda per lo sviluppo post-2015. In quest'occasione, è stata dedicata un'attenzione crescente al presupposto secondo il quale il soddisfacimento dei bisogni umani dipende per definizione dalla crescita economica, e la capacità di soddisfare questa condizione, dal prodotto interno lordo pro-capite. Si sta radicando l'idea che criteri alternativi possano meglio misurare il benessere e la felicità degli esseri umani, non come un semplice concetto astratto ma come un parametro concreto da prendere in considerazione nell'elaborazione delle politiche internazionali. E le considerazioni ambientali che si pongono all'attenzione con l'avvicinarsi della Conferenza delle Nazioni Unite sul cambiamento climatico a Parigi del mese di dicembre rafforzano ulteriormente quest'idea, partendo dalla consapevolezza che, date le attuali condizioni di produzione, il pianeta non sarà in grado di sopportare una crescita illimitata del PIL.

- 40. Questa evoluzione del pensiero potrebbe comportare una riorganizzazione del ruolo che tiene il lavoro nella società.
- 41. In questo contesto generale e per sviluppare una maggiore comprensione della situazione, occorre esaminare il valore delle esperienze lavorative nella società. Sappiamo che il lavoro ha la capacità di distruggere vite; 2,3 milioni di persone muoiono ogni anno a causa del lavoro⁴, 21 milioni di persone sono vittime del lavoro forzato⁵ e 168 milioni di bambini lavorano. L'OIL ha la responsabilità di porre fine a tali situazioni e di contrastare la persistenza della povertà in ambito lavorativo.
- 42. Queste responsabilità vanno ben oltre. La Dichiarazione di Filadelfia fa riferimento alla necessità di agire al fine di garantire che i lavoratori «abbiano la soddisfazione di mostrare tutta la loro abilità e conoscenza e di contribuire a migliorare il benessere comune» e successivamente fa riferimento al diritto di perseguire il «loro benessere materiale» e il «loro sviluppo spirituale». Il mandato dell'OIL incorpora l'idea che il lavoro debba essere un atto di auto realizzazione, permeato da finalità personali e collettive. Il lavoro deve certamente soddisfare le esigenze materiali dell'individuo, ma deve anche rispondere alla ricerca di un percorso volto alla realizzazione personale e al desiderio istintivo di contribuire a qualcosa di più grande del mero benessere proprio e della propria famiglia.
- 43. Sigmund Freud ha detto che il «lavoro rappresenta la connessione tra l'individuo e la realtà» e che l'interruzione di questo collegamento, a causa della disoccupazione, produce per conseguenze gravi nell'individuo talvolta devastanti nel lungo periodo, mettendo a rischio la salute personale e la longevità. L'accesso al lavoro è una precondizione per la realizzazione personale e l'inclusione sociale. Il grado di soddisfazione raggiunto dipende dalla natura e dalle condizioni alle quali è sottoposto il lavoro. L'individuo vuole trovare un senso e un fine nel proprio lavoro e un compenso materiale che gli permetta di diventare un attore indipendente e valorizzato a tutti gli effetti dalla società. Inoltre, il posto di lavoro è un luogo in cui si consolidano i processi di socializzazione avviati a scuola e dove si creano e si mantengono le relazioni umane. Questo spiega perché il futuro del lavoro detterà le tante sfaccettature del futuro delle nostre società.
- 44. È interessante ma sbagliato estrapolare dall'esperienza delle economie avanzate la nostra visione del futuro, in quanto le economie in via di sviluppo e le economie emergenti potrebbero seguire percorsi molto diversi rispetto alle economie industrializzate. Tuttavia, alcune considerazioni sembrano assumere una rilevanza generale.
- 45. La prospettiva di un lavoro unico durante l'intera vita lavorativa appartiene ormai al passato. La domanda è, quindi, in che misura quest'archetipo (se mai sia davvero esistito come norma generale) sarà sostituito da forme di lavoro sempre più flessibili, di breve termine e transitorie, con lavoratori sempre più mobili dal punto di vista fisico e funzionale, e quali saranno le conseguenze per la loro integrazione sociale. Contemporaneamente, le unità lavorative stanno diventando sempre più piccole e frammentate e i luoghi di lavoro sono scollegati dalle comunità. Si teme che le solide reti sociali basate su una comune esperienza professionale, su relazioni personali formatesi nel corso degli anni e sugli impegni che emergono da rapporti di lavoro stabili, rischino di indebolirsi a vantaggio di situazioni in cui l'individuo rimarrà privo dell'identità sociale conferitagli dal lavoro, sentendosi isolato, privo di sicurezza e poco considerato.

⁴ ILO: Safety and Health at Work: A Vision for Sustainable Prevention, XX World Congress on Safety and Health at Work 2014: Global Forum for Prevention, 24–27 August 2014, Frankfurt, Germany, (ILO, Ginevra, 2014).

⁵ ILO: Profits and poverty: The economics of forced labour, Ginevra, 2014.

- 46. Una visione meno pessimistica del futuro del lavoro mette in luce le libertà e le opportunità inerenti a un mercato del lavoro dinamico, in grado di offrire scelte e vantaggi senza precedenti agli individui che sono pronti a raccogliere queste opportunità, avendo le competenze necessarie per farlo. L'economia, sempre più basata sulla conoscenza, valorizza le capacità cognitive e offre nuove prospettive per l'arricchimento dei contenuti e del significato del lavoro dando all'individuo un maggiore controllo. Ciò costituisce un notevole miglioramento rispetto al carattere frammentato e ripetitivo, se non addirittura faticoso, del lavoro nell'era industriale o preindustriale. In questo caso, per mediare il rapporto tra lavoratori e società, l'accento è posto sull'iniziativa individuale e sulla propria responsabilità, piuttosto che sui soliti meccanismi collettivi.
- 47. Nessuna di queste due visioni rappresenta una conseguenza necessaria del futuro delle attuali dinamiche del mondo del lavoro. Esse non si escludono a vicenda e possono facilmente coesistere nei mercati del lavoro sempre più segmentati e disuguali. Occorre affrontare il rischio che l'aumento della segregazione e delle disuguaglianze sul lavoro produca una società divisa e ingiusta.
- 48. Il compito della conversazione dedicata a questi aspetti e ai temi collegati non sarà facile, in quanto si tratta dei problemi più difficili che abbiamo davanti a noi.

Un lavoro dignitoso per tutti

- 49. Da dove proverranno i posti di lavoro e come saranno? Per il pubblico e per i leader politici di tutto il mondo, preoccupati per il futuro del lavoro, non esistono domande più stringenti. E con il rischio per l'economia globale di scivolare verso un prolungato periodo di bassa crescita, tali preoccupazioni sono del tutto fondate. Le previsioni attuali di un ulteriore peggioramento del tasso di disoccupazione, che ha raggiunto livelli inaccettabili, si diffonde il timore che si sia rotta la "macchina globale" che crea posti di lavoro, o quanto meno che essa funzioni male.
- 50. Il semplice fatto che il mondo abbia bisogno di creare 600 milioni di nuovi posti di lavoro entro il 2030 (la stragrande maggioranza nei paesi in via di sviluppo)⁶ per tornare ai livelli di occupazione pre-crisi, per accogliere i giovani che entrano nel mercato del lavoro e per aumentare il tasso di partecipazione delle donne, in linea con gli obiettivi concordati a livello internazionale, sarebbe di per sé motivo di rassegnazione. Eppure, a livello nazionale, nessun governo e nessun candidato ad una carica elettiva può rinunciare all'obiettivo della piena occupazione, né dire all'elettorato che non ci saranno abbastanza posti di lavoro: si possono evidenziare gli ostacoli, segnalare che la strada da percorrere sarà lunga e impervia, ma l'obiettivo rimane quello.
- 51. Tale imperativo politico coincide con l'obbligo costituzionale dell'OIL di promuovere la piena occupazione e di innalzare gli standard di vita. Inoltre, la nostra Organizzazione è impegnata a garantire che le diverse occupazioni rispondano ai criteri di qualità del lavoro dignitoso.
- 52. Seppur lodevole, l'adesione solo apparente ad un obiettivo politico lo rende irraggiungibile poiché non ci si sforza di perseguirlo nella pratica. Un tale atteggiamento erode la credibilità e porta al fallimento. Non solo per questi motivi ma soprattutto perché agire diversamente sarebbe una rinuncia ad una responsabilità fondamentale, l'OIL deve considerare la promozione del lavoro dignitoso per tutti come un obiettivo essenziale, realizzabile e prioritario, e non come un atto di fede.

⁶ ILO: World Employment and Social Outlook: Trends 2015, op. cit.

- 53. Detto ciò, l'esperienza degli ultimi decenni, in particolare quella del periodo post-crisi, pone una domanda legittima a chi aspira al raggiungimento di una condizione di piena occupazione in futuro: quella di sapere se, per effetto di qualche trasformazione tettonica, il funzionamento dell'economia globale sia cambiato al punto che gli strumenti dei decisori di politica nazionali e internazionali non siano più in grado di creare sufficienti posti di lavoro di qualità. Tale questione è strettamente connessa alla necessità di capire se l'evoluzione attuale della crescita e dell'occupazione sia imputabile all'impatto ciclico della crisi o a fattori strutturali.
- 54. In breve, dobbiamo continuare a utilizzare gli strumenti di politica di cui disponiamo, potenziandone l'uso attraverso una maggiore cooperazione e un adeguato coordinamento internazionale, o dobbiamo sostituirli o integrarli con approcci e politiche completamente nuove e innovative? In entrambi i casi, non è immaginabile rinunciare all'obiettivo della piena occupazione. Su questa base, la conversazione del centenario sulla creazione di posti di lavoro dignitoso per tutti dovrà prendere in considerazione i numerosi aspetti delle politiche per l'occupazione.
- Nel caso in cui fossero necessari strumenti interamente nuovi, la stessa conversazione dovrà dimostrare di poter muoversi su un terreno impervio per concepirli. L'idea che l'economia globale non possa garantire la creazione di posti di lavoro sufficienti sulla base dei parametri politici attuali potrebbe avviare una riflessione su metodi innovativi di distribuzione e remunerazione del lavoro. Sia nei paesi in via di sviluppo sia in quelli industrializzati, vengono generalmente individuate due fonti di creazione di occupazione: l'economia verde («green economy»), in virtù della necessità di investire significativamente in una produzione e in infrastrutture più efficienti sul piano energetico, e in servizi di cura, in considerazione dell'invecchiamento della popolazione in gran parte del mondo. Ma come sarà possibile realizzare questo potenziale? Per quanto riguarda i servizi di cura, sappiamo che attualmente molte necessità rimangono insoddisfatte per mancanza di mezzi finanziari, oppure che tali servizi vengono prestati da assistenti sottopagati o non pagati. Per quanto riguarda invece l'economia verde, il mondo fa fatica a rispondere all'imperativo di finanziare equamente la transizione verso un modello di crescita sostenibile.
- 56. La conversazione dovrà anche esaminare le tendenze occupazionali di lungo periodo e, soprattutto, l'impatto dell'innovazione tecnologica. Il dibattito relativo agli effetti dirompenti del cambiamento tecnologico risale a circa due secoli fa. La conclusione incoraggiante da trarre oggi è che, nonostante inevitabili difficoltà, l'innovazione tecnologica ha creato più occupazione di quanto ne abbia distrutto e ha innalzato il livello di vita su scala mondiale.
- 57. E oggi? Ci dobbiamo chiedere se la rivoluzione tecnologica descritta da molti osservatori e simboleggiata dall'arrivo nell'industria manifatturiera dei «big data», dalla stampa 3D e dalla robotica possiede enorme potenziale di distruzione dell'occupazione che la porti a divergere dalle rivoluzioni precedenti, al punto di inibire, piuttosto che favorire, la creazione di lavoro dignitoso.
- 58. Ogni tentativo di resistere all'innovazione andrebbe non tanto considerato come sbagliato o controproducente, ma semplicemente come impossibile. Un tale atteggiamento non può essere considerato plausibile. La sfida politica consiste piuttosto nel gestire il cambiamento, garantendo che i benefici derivanti dall'utilizzo delle nuove tecnologie, fondate sulla conoscenza e su capacità straordinariamente avanzate, siano ampiamente diffusi all'interno dei paesi e nel contesto internazionale, senza favorire divisioni che rischierebbero di accrescere ulteriormente il divario tra paesi privilegiati e paesi in condizioni svantaggiate.

- 59. È dunque necessario affrontare l'ampia questione dell'acquisizione delle competenze e della formazione che, sebbene non sia una panacea, deve rappresentare l'elemento chiave di ogni progetto destinato ad assicurare la piena occupazione dignitosa in tutti i paesi, includendo quelli meno avanzati. Le espressioni «inadeguatezza delle competenze» e «occupabilità», divenute popolari negli ultimi anni, hanno evidenziato un problema abbastanza chiaro ma non hanno stimolato un'azione tale da poter fornire una risposta efficace. Nel processo, tuttavia, è emerso un maggiore apprezzamento verso la complessità delle questioni in gioco e la natura degli ostacoli che si frappongono al progresso. Certamente, è necessario investire in competenze d'avanguardia, indispensabili per la nuova economia basata sulla conoscenza, e stabilire una migliore connessione tra i sistemi educativi e le esigenze aziendali. Per molti, l'accesso al mercato del lavoro è ostacolato dall'assenza di competenze trasversali, e da comportamenti e da atteggiamenti causati dall'esclusione sociale e da uno svantaggio profondo.
- 60. Questa situazione evidenzia la profonda necessità per le politiche mirate a fornire una risposta ai bisogni di gruppi la cui posizione di svantaggio nei mercati del lavoro è così assoluta e così marcata da poter essere solo il risultato di fattori strutturali profondi. I gruppi tristemente noti sono quelli dei giovani, delle donne e dei disabili anche se l'elenco delle posizioni svantaggiate non si esaurisce con questi gruppi, i quali hanno motivo di ritenere che le risposte alle loro specifiche situazioni siano gravemente in ritardo.
- 61. Alla base di tutti questi problemi c'è la gestione macroeconomica dell'economia mondiale. Nella misura in cui tale gestione riuscirà a ripristinare una crescita sostenuta, forte ed equilibrata, ci si avvicinerà maggiormente al raggiungimento dell'obiettivo di fornire un lavoro dignitoso a tutti, mentre una stagnazione secolare si aggiungerebbe alle dimensioni attuali già difficili della sfida. Quest'agenda macroeconomica globale per l'occupazione, la crescita e lo sviluppo, insieme al mandato e al contributo dell'OIL, costituiscono una variabile di vitale importanza per la conversazione. E non si deve dimenticare che, se persistono le tendenze attuali, i diversi livelli di sviluppo nazionali e regionali, oltre a evoluzioni demografiche divergenti e ad altri fattori, continueranno ad ampliare il divario tra le aree geografiche in cui sono disponibili posti di lavoro dignitosi e le aree dove si trovano effettivamente le persone che ne hanno bisogno. Di conseguenza, l'agenda dell'OIL per una migrazione equa dovrà essere inserita in questa conversazione complessa sul centenario fitta di temi da trattare –ma cruciale.

L'organizzazione del lavoro e della produzione

- 62. Un'economia sempre più globalizzata, sta generando sviluppi importanti nell'organizzazione del lavoro e della produzione. Quest'economia ha conosciuto cambiamenti rapidi e profondi sotto l'impulso dell'innovazione tecnologica e della ricerca costante di una maggiore competitività, condizionata da un'agenda politica in evoluzione e, più recentemente, da rinnovate tensioni geopolitiche.
- 63. Tali sviluppi sono il risultato dell'interazione tra le decisioni assunte in materia di politiche pubbliche e l'iniziativa privata. Lo Stato, individualmente a livello nazionale, e collegialmente a livello regionale o globale, definisce il quadro normativo. Come datore di lavoro del settore pubblico, lo Stato ha prodotto ampie riforme. Ma è soprattutto nel settore privato, che crea e raccoglie la maggior parte dei posti di lavoro, che è possibile osservare l'impatto e il vero slancio del processo di riorganizzazione del lavoro e della produzione. L'impresa è il vettore del cambiamento, e questa

conversazione sul centenario dovrebbe aiutare l'OIL a comprendere meglio le dinamiche dell'impresa e il modo in cui l'impresa modellerà il futuro del lavoro.

- 64. Nel dibattito pubblico e nell'OIL, le imprese tendono ad essere collocate in due distinte categorie: micro, piccole e medie imprese da un lato, e grandi imprese e multinazionali dall'altro. Tale classificazione non rende giustizia alle varie esperienze imprenditoriali presenti nella vita reale, specie nell'ambito dell'economia informale. Questa sessione della Conferenza segue con attenzione le piccole e medie imprese ma, seppure con modalità differenti, il cambiamento ha un impatto su tutte le imprese. Nonostante sussistano pochi dubbi sul fatto che l'impresa continuerà ad essere l'unità essenziale per il lavoro e la produzione, le sue configurazioni future e le sue modalità di funzionamento generano domande di fondamentale importanza.
- 65. Nel corso dell'ultimo secolo, svariati fattori interdipendenti hanno definito la comprensione generale della natura dell'impresa, ad esempio il modello dell'impresa che produce beni e servizi attraverso l'assunzione diretta di lavoratori in base ad una relazione stabile e di lunga durata. Tuttavia tale modello è sempre più messo in discussione dagli attuali processi di cambiamento.
- 66. Oltre a dare per scontato che il legame permanente a un'unica impresa non costituisce più un'aspettativa generalizzata della società, si mette in discussione l'esistenza di un rapporto di lavoro basato su un normale accordo contrattuale tra l'impresa e il lavoratore. Laddove presente, quel rapporto di lavoro può variare dal classico rapporto a tempo pieno, a quello a tempo indeterminato, fino ad assumere una varietà di forme «atipiche», tra cui i contratti a tempo parziale, a tempo determinato e flessibile. Oltre a questi, ci sono anche casi d'imprese che fanno a meno di un gran numero di forza lavoro assunta direttamente. Queste imprese si avvalgono di processi di subfornitura, di esternalizzazione, attraverso l'utilizzo di agenzie intermediarie e di filiere di fornitura. I modelli aziendali apparsi negli ultimi anni grazie anche al supporto di tecnologie basate sull'utilizzo della rete Internet connettono direttamente la domanda e l'offerta di beni e servizi in un rapporto commerciale transitorio che dura quanto il tempo impiegato per consegnare tale prodotto o fornire il servizio.
- 67. Il continuo cambiamento e l'incertezza che caratterizza le dinamiche aziendali non permettono di trarre conclusioni premature o generalizzate, visto il numero limitato di esempi. Sono tuttavia evidenti alcune questioni chiave che ci si dovrebbe porre. Nel passato, la percentuale dei lavoratori dipendenti nella popolazione attiva tendeva ad aumentare nel lungo termine. Oggi questa tendenza si è invertita. Questo dimostra che sono in atto processi importanti e diffusi nel mondo del lavoro e che il percorso professionale non segue necessariamente, come si pensava, una strada a senso unico che parte dall'informalità per raggiungere l'occupazione formale. È sempre più probabile che diverse forme di lavoro autonomo permanenti possano diventare soluzioni alternative.
- 68. Occorrerà quindi interrogarsi sulle eventuali conseguenze e sul loro significato per l'OIL e per la prosecuzione del suo mandato di giustizia sociale.
- 69. Dato che le imprese sono l'elemento motore del'economia, sembrerebbe logico che questi sviluppi avvengano a loro vantaggio ma ciò non è una condizione necessaria. Qualora fossero in gioco competenze specializzate e ricercate, i datori di lavoro cercherebbero di trattenere i dipendenti. Inoltre, i lavoratori che s'identificano e sono legati all'impresa contribuiscono in modo fondamentale alle sue prestazioni di quest'ultima. Se è vero che i sistemi di lavoro ad alto coinvolgimento migliorano la performance aziendale, i datori di lavoro saranno certamente sensibili al rischio derivante dall'indebolimento o dal dissolvimento di tale coinvolgimento dei dipendenti.

- 70. Per i lavoratori, l'enfasi è posta frequentemente sugli svantaggi delle forme «atipiche» di organizzazione del lavoro, dove non esistono ad esempio la sicurezza dell'impiego e del reddito. Il complesso dibattito in corso che coinvolge l'OIL, su come conciliare le esigenze delle imprese con gli interessi dei lavoratori, perfettamente riassunto nell'idea di «flessicurezza», non deve oscurare gli altri aspetti delle nuove forme di lavoro. Le possibilità di telelavoro offerte dalle tecnologie dell'informazione e della comunicazione permettono di meglio conciliare le responsabilità professionali e familiari, soprattutto a beneficio delle donne. Ma anche in questo caso coesistono preoccupazioni e speranze. L'assottigliamento dei confini spazio-temporali tra la sfera professionale e quella privata può essere destabilizzante e potrebbe riesumare alcune forme organizzative pre-industriali. Infatti, per alcuni, le innovazioni che consentono di combinare il domicilio con il luogo di lavoro non comportano unicamente vantaggi.
- 71. Più in generale, questi sviluppi pongono alcune sfide politiche di ampia portata alla società. È evidente che i sistemi fiscali e di protezione sociale che erano stati progettati in base al modello di un rapporto di lavoro e di un nucleo familiare tradizionale dovranno adeguarsi alle nuove realtà. In assenza di tali adeguamenti e aldilà degli effetti immediati sul mercato del lavoro, le mutazioni in corso rischiano di perturbare gravemente delle sfere fondamentali della politica pubblica. Ciò ha delle implicazioni anche per tanti paesi che sono tuttora in fase di adozione di sistemi di protezione sociale sostenibili.
- 72. La crisi finanziaria globale del 2008 ha generato una recessione rapida e generalizzata, le cui conseguenze drammatiche per l'occupazione e per gli standard di vita si avvertono ancora oggi in tutto il mondo, sia nei paesi in via di sviluppo sia in quelli industrializzati. Questa crisi ci ha ricordato in modo brutale e doloroso l'impatto della finanza sul mondo del lavoro.
- 73. L'esistenza di questa relazione non è né nuova né sorprendente. Non è mai stato contestato il ruolo cruciale delle istituzioni finanziarie nel finanziamento delle attività produttive. In virtù della Dichiarazione di Filadelfia, l'OIL ha la responsabilità di esaminare e prendere in considerazione le politiche e le risorse finanziarie alla luce del loro contributo all'obiettivo di giustizia sociale dell'Organizzazione.
- 74. Tuttavia, si teme che il notevole aumento dell'influenza della finanza sull'economia reale, evidente non solo nelle crisi sempre più frequenti e gravi che sono indotte dal sistema finanziario, ma anche nella «finanziarizzazione» permanente del mondo del lavoro che nuoce al funzionamento delle imprese e dell'economia produttiva. La ricerca di profitti nel breve periodo a scapito della sostenibilità delle imprese e dell'occupazione ne è una conseguenza. Nel periodo post-crisi si sono prosciugate le fonti di finanziamento delle imprese sostenibili, soprattutto di quelle di piccole e medie dimensioni. Il finanziamento collettivo («crowdfunding») può dare un certo sollievo in casi specifici, ma in futuro la finanza dovrà svolgere un ruolo essenziale nel funzionamento del mercato del lavoro. Occorre quindi dedicare a questo aspetto un capitolo specifico in questa conversazione.

La governance del lavoro

75. Le società governano il modo in cui è organizzato il lavoro attraverso svariati strumenti: leggi e regolamenti, accordi stipulati volontariamente, istituzioni del mercato del lavoro e dialogo tra governo e organizzazioni dei datori di lavoro e dei lavoratori. Questi strumenti sono stati generalmente elaborati conformemente a norme sociali — rappresentazioni collettive non scritte ma potenti — di ciò che è giusto e accettabile e di cosa non lo sia. A livello internazionale, queste norme sono state

incorporate nell'obiettivo dell'OIL di giustizia sociale, un mandato universale che include una grande varietà di circostanze nazionali pur senza perderne la sua forza.

- 76. Il ruolo unico e storico dell'OIL è stato quello di prendere questi strumenti di governance e di applicarli a livello internazionale, con un ambito di azione che si è allargato a seconda dell'aumento del numero degli Stati membri, fino a raggiungere quasi l'universalità. Questo ruolo storico rimane ancora oggi estremamente ambizioso. Nel corso degli anni l'Organizzazione è stata confrontata a grandi sfide generalmente affrontate con successo.
- 77. Al centro della governance internazionale del lavoro c'è l'adozione, attraverso il negoziato tripartito, delle convenzioni internazionali del lavoro che, una volta ratificate, assumono forza di legge internazionale e sono sottoposte al controllo dell'OIL. Questo sistema poggia su un ragionamento a tre livelli che prende in considerazione: la necessità di stabilire una parità di condizione tra gli Stati membri sulla base di norme comuni; l'obiettivo condiviso del rispetto universale dei principi fondamentali e dei diritti del lavoro come stabilito nella Dichiarazione dell'OIL del 1998 sui principi e diritti fondamentali nel lavoro; e l'idea che le norme internazionali del lavoro, che includono anche le raccomandazioni non vincolanti, debbano fornire un quadro di orientamento agli Stati membri per aiutarli a coniugare la crescita economica con il progresso sociale.
- 78. A partire dal 2012, la controversia sul diritto di sciopero ha rivelato il fermo sostegno dei governi, dei datori di lavoro e dei lavoratori alla funzione di governance globale dell'OIL basata sulle norme internazionali. Essi vogliono che l'OIL sia efficace, rispettata e rafforzata. Attraverso l'iniziativa del centenario sulle norme, l'OIL sta facendo fronte a problemi certamente complessi, i cui recenti sviluppi inducono all'ottimismo.
- 79. Occorrerà affrontare una serie di domande fondamentali concernenti il grado di precisione, la natura e il contenuto della regolamentazione del mercato internazionale del lavoro e i mezzi per renderla più efficace, ad esempio nel quadro del meccanismo di esame delle norme. Da un lato, la tendenza negli ultimi decenni è stata la deregolamentazione in molti paesi nonostante il gran numero di lavoratori opera nell'economia informale e quindi non rientra nella sfera della governance. Dall'altro, le norme sul lavoro sono sempre più riconosciute come elementi chiave nei processi di integrazione regionale e sub-regionale, come pure in un numero crescente di accordi commerciali stabiliti a vari livelli. Inoltre, le trasformazioni che stanno cambiando il mondo del lavoro sono motivo di una rinnovata attenzione verso le norme e, in particolare, verso la loro adozione o revisione in funzione di nuovi bisogni e circostanze.
- 80. Parallelamente a questi processi giuridici, il periodo di accelerazione della globalizzazione ha visto la crescita senza precedenti di iniziative generalmente raggruppate sotto la denominazione di «responsabilità sociale delle imprese» (RSI). A prescindere dal fatto che queste iniziative vengano considerate come elementi della governance vera e propria, esse orientano indiscutibilmente il comportamento delle imprese e, di conseguenza, le condizioni di realizzazione delle attività economiche.
- 81. L'OIL ha avuto difficoltà a definire il suo ruolo nei confronti della RSI, anche se le sue norme vengono frequentemente citate negli accordi volontari delle imprese. Il futuro della RSI è sicuramente rilevante per il futuro del lavoro. La rapida evoluzione della RSI registrata nel corso della sua esistenza relativamente breve dovrebbe proseguire. Per godere di un minimo di credibilità presso il pubblico, la RSI è stata sottoposta a una forte esigenza di rigore, ed è interessante rilevare che, sempre di più, i governi e la comunità internazionale specificano cosa si aspettano dalle imprese, aldilà del semplice rispetto della legge. Questo può essere osservato nelle politiche nazionali

16

- e regionali di RSI come pure nei Principi Guida delle Nazioni Unite su Imprese e Diritti Umani. La distinzione tra quanto è strettamente giuridico e quanto è puramente volontario sembra si stia attenuando, anche perché i meccanismi di responsabilizzazione e di informazione sono rafforzati. Questa situazione ha un precedente nell'adozione della Dichiarazione tripartita di principi dell'OIL sulle imprese multinazionali e la politica sociale del 1977, e la discussione sul lavoro dignitoso nelle filiere di fornitura globali. Su queste ultime, la sessione della Conferenza dell'anno prossimo potrebbe aggiungere nuovi elementi ancora sconosciuti.
- 82. È evidente dalla sua struttura tripartita che l'OIL consideri i governi, le organizzazioni dei lavoratori e dei datori di lavoro e il dialogo sociale che li accomuna come elementi fondamentali per la governance del lavoro. L'OIL e gli Stati membri hanno beneficiato del tripartismo per quasi un secolo, ma non mancano le sfide e le opposizioni al tripartismo.
- 83. Uno dei rimproveri più frequenti è che il dialogo bipartito o tripartito tende ad agire contro i requisiti di rapidità e incisività del processo decisionale. Qualora la rapida evoluzione di una situazione, oppure una crisi, richieda adeguamenti importanti e complessi, i compromessi derivanti dal dialogo possono sembrare troppo prudenti o poco efficaci. Peggio ancora, nelle posizioni assunte, le parti sociali possono essere accusate di difendere interessi particolari a scapito del bene comune.
- 84. Il bilancio del tripartismo, a livello nazionale e internazionale, contraddice ampiamente tali argomenti, anche alla luce delle complesse condizioni imposte dall'attuale crisi mondiale. Tuttavia, la critica ha guadagnato terreno a partire dal calo del numero dei membri di alcune organizzazioni dei lavoratori e dei datori di lavoro. Questo continuerà se dovesse proseguire la tendenza al calo del numero di membri. Se, per mancanza di rappresentatività, la legittimità delle parti sociali è messa seriamente in discussione, lo sarà anche il ruolo del tripartitismo come chiave di volta della governance.
- 85. La questione del futuro dei sindacati e delle organizzazioni dei datori di lavoro dovrà, pertanto, far parte di questa conversazione sul centenario. Resta inteso che l'interazione, in un clima di fiducia e di rispetto reciproco, tra organizzazioni forti, democratiche, indipendenti costituisce un prerequisito essenziale di un dialogo sociale credibile. La domanda che si pone è quindi la seguente: quale parte il futuro mondo del lavoro riserverà a tali organizzazioni, e come esse contribuiranno a costruire il futuro del lavoro?
- 86. Alla base di tutte queste considerazioni riguardanti la governance del lavoro c'è la semplice realtà che, per la maggior parte delle imprese e dei lavoratori, la governance viene esercitata dalle istituzioni del mercato del lavoro, come i ministeri, i comitati tripartiti, le agenzie per l'impiego, gli ispettorati del lavoro, le autorità responsabili della salute e sicurezza e gli enti di formazione professionale. Queste istituzioni svolgono il proprio ruolo in modo molto diverso negli Stati membri; alcune possiedono notevoli capacità istituzionali, altre ne sono prive. Inoltre, la loro organizzazione e il loro funzionamento hanno subito evoluzioni nel tempo, anche attraverso una redistribuzione delle loro responsabilità tra il settore pubblico e il settore privato. Anche queste istituzione contribuiscono non poco a determinare il futuro del lavoro.

Capitolo 4

Il futuro della giustizia sociale

- 87. Le turbolenze economiche, sociali e politiche dei nostri tempi giustificano più che mai l'obiettivo della giustizia sociale. Il sentimento d'ingiustizia è tra le principali cause dell'instabilità, soprattutto nelle società nelle quali la pace è minacciata o compromessa. Le considerazioni che hanno portato i fondatori dell'OIL a fare della giustizia sociale l'obiettivo ultimo di un'Organizzazione la cui attività è dedicata al mondo del lavoro hanno investito questa Organizzazione di una responsabilità che rimane immutata dopo quasi 100 anni. Di conseguenza, quando i governi, i datori di lavoro e i lavoratori si riuniscono presso l'Ufficio Internazionale del Lavoro per cercare un consenso sulle tante questioni che si pongono nel mondo del lavoro, essi devono sempre essere guidati dall'esigenza di giustizia sociale.
- 88. Ciò significa che l'iniziativa del centenario sul futuro del lavoro riguarda anche il futuro della giustizia sociale. I risultati concreti che ne conseguiranno, qualunque forma essi assumano, devono fornire all'OIL precisi elementi di orientamento, in particolare sul modo di portare avanti la causa della giustizia sociale. Questa è chiaramente un'agenda dettata da valori radicati nel mandato immutabile dell'OIL. Una tale agenda rappresenta un interesse maggiore per i governi, i datori di lavoro e i lavoratori, i quali devono tutti contribuire con molto impegno. Il mondo ha bisogno che tale agenda abbia successo.
- 89. Sono quelle le ragioni che possono incitarci a unire gli sforzi nell'iniziativa del centenario sul futuro del lavoro.

ILO Research Paper No. 18

The future of work: The meaning and value of work in Europe

Dominique Méda*

October 2016
International Labour Office

^{*} Professor of Sociology at Université Paris-Dauphine, Paris; PSL Research University; and Director of IRISSO (Institut de Recherche Interdisciplinaire en Sciences Sociales). For further enquiries, please contact the author at: dominique.meda@dauphine.fr

Copyright © International Labour Office 2016 First published 2016



This is an open access work distributed under the Creative Commons Attribution 3.0 IGO License (http://creativecommons.org/licenses/by/3.0/igo). Users can reuse, share, adapt and build upon the original work, even for commercial purposes, as detailed in the License. The ILO must be clearly credited as the owner of the original work. The use of the emblem of the ILO is not permitted in connection with users' work.

Translations – In case of a translation of this work, the following disclaimer must be added along with the attribution: This translation was not created by the International Labour Office (ILO) and should not be considered an official ILO translation. The ILO is not responsible for the content or accuracy of this translation.

Adaptations – In case of an adaptation of this work, the following disclaimer must be added along with the attribution: *This is an adaptation of an original work by the International Labour Office (ILO). Responsibility for the views and opinions expressed in the adaptation rests solely with the author or authors of the adaptation and are not endorsed by the ILO.*

All queries on rights and licensing should be addressed to ILO Publications (Rights and Licensing), CH-1211 Geneva 22, Switzerland, or by email to rights@ilo.org.

ISSN 2306-0875 (web pdf)

The designations employed in ILO publications, which are in conformity with United Nations practice, and the presentation of material therein do not imply the expression of any opinion whatsoever on the part of the International Labour Office concerning the legal status of any country, area or territory or of its authorities, or concerning the delimitation of its frontiers.

The responsibility for opinions expressed in signed articles, studies and other contributions rests solely with their authors, and publication does not constitute an endorsement by the International Labour Office of the opinions expressed in them.

Reference to names of firms and commercial products and processes does not imply their endorsement by the International Labour Office, and any failure to mention a particular firm, commercial product or process is not a sign of disapproval.

Table of contents

Acknowledgements

Abstract

1	Introduction	1
2	The importance of work in European's lives	1
	2.1 A historical overview of the concept of work	1
	2.2 How Europeans relate to work	3
	2.3 Expectations versus realities	8
3	The effects of automation on work and on employment	10
	3.1 Employment is dying out; the nature of work is changing: the technological revolution marches on	10
	3.2 The impact of digitalization, computer platforms and Uberization on employment and work	12
	3.3 What should our labour and employment policies be in the face of the expansion of digitalization and automation?	14
4	Three scenarios for the future of work	16
	4.1 Two scenarios in vogue: dismantling labour law, and the technological revolution	17
	4.2 The scenario of ecological conversion: an opportunity to recover full employment and change work	20
	4.3 What are the conditions for an ecological conversion that fosters employment and decent working conditions?	23
5	Conclusion	27
Re	erences	28

Acknowledgements

I would like to thank Guillaume Compain for his help in researching the bibliography and to Gabrielle Varro for the translation. My heartfelt thanks to Uma Rani and the two anonymous reviewers. I alone am responsible for any errors or omissions.

Abstract

This paper looks at the notion of work historically and how new meanings have enriched this notion over centuries. It then analyses the importance Europeans give to the concept of work, and presents the ongoing discourse on technological revolution and its impact on work and employment. The paper then examines the future of work in the coming decades in the light of three broad scenarios, which are competing to present a mid-term view of the future of work. First, the consequences of a scenario called "dismantling the labour law" are considered. Second, the validity of the propositions announcing the end of work within the scope of automation and digitalization (scenario of the technological revolution) are examined. Finally, a third scenario, the "ecological conversion", which seems to be the most compatible with the need to combat the unbearable features of our present model of development and seems capable of satisfying the expectations placed on work is examined. It is this third scenario – "ecological conversion" – that seems best able to respond to the high expectations that Europeans continue to place on work while ensuring the continuation of our societies.

Keywords: Automation, digital revolution, ecological conversion, future of work, importance of work, work

JEL classification: J08; J53; J81; J83; J88; O17; O47

1 Introduction

Most of what is written or said about the future of work points to the radical novelty of the ongoing changes – the globalization of communications and production chains on the one hand, the dramatic advances in automation on the other – along with demands for the rules governing European labour markets to be drastically revised and adapted to worldwide competition. Ideally, labour as a factor of production should not represent an obstacle for firms, which more than ever requires flexibility, versatility, and adaptability. But at the same time, individual expectations related to work have never been so intense, the desire for it to be fulfilling so strong. In addition, ecological risks force us to completely revamp our system of production.

This paper seeks to answer some of the questions being asked today about the future of work. In Section 2, we will look at the long history of the notion of work, considering the fact that new meanings have enriched it over the centuries as a bountiful literature testifies. We examine how the multiplicity of meanings has created a diversity of ways of relating to work, sketching a rapid panorama of Europeans' expectations and how they are (or are not) satisfied with the reality of work as we know it. Section 3 will deal with the effects on work and employment of the discourse currently in vogue according to which the technological revolution under way is leading inevitably to radical transformations, questioning in particular the technological determinism underlying that view and analysing the policies it implies. In Section 4, we present the three broad scenarios in which the future of work might take shape: the first scenario emphasizes the technological revolution, the second scenario envisions the possibility of drastic reduction of systems of employment protection, while a third – the scenario of ecological conversion – could represent a major opportunity to reconnect with full employment, the meaning of work and the concept of "decent work", which is of much importance to the International Labour Organization. This leads to an exploration of the conditions for such a scenario to become reality. The final section concludes.

2 The importance of work in Europeans' lives

This section accounts for the long history of the idea of "work", bringing to light how the various aspects attached to the notion today emerged little by little, creating the modern concept. It then moves on to examine the way those different aspects now function together and are valued by Europeans, before measuring the abyss existing between the expectations and current perceptions of work in Europe. The notion has been enriched while it has also diversified, and this has obvious implications in terms of expectations.

2.1 A historical overview of the concept of work

Our modern idea of work has a history: over the centuries, the term has not always meant the same thing nor always been valued to the same extent (Méda, 2010). Anthropological and ethnological research on ways of life in pre-economic societies shows that it is impossible to find an identical meaning for the word "work" in the various societies examined (Sahlins, 1968; Descola, 1983; Chamoux, 1994). Some of them do not even possess a separate word for activities of production that differ from other human activities, nor a word or notion that might synthesize the idea of work in general (Chamoux, 1994). In Greece there are crafts, activities, tasks, but it is vain to look for work, adds Vernant (1965): activities

are classified in an indivisible set of diverse categories, including distinctions that prevent work from being seen as a *single function*. The value of labour, embryonic in the Old and New Testaments, emerged little by little during the Middle Ages, but the word itself only became synonymous with a productive activity in the seventeenth century (Rey, 2012). Our modern idea of work then gradually evolved throughout the eighteenth and nineteenth centuries, passing through several phases, each one depositing a sediment of extra meaning (Meyerson, 1955).

2.1.1 The invention of abstract work

The eighteenth century is when the term "work" crystallized: from the moment a certain number of activities were considered sufficiently homogeneous to be encompassed by a single word it became possible to speak of "work" in a general sense. But in exchange, the actual content of the activities it covered disappeared and work became an intangible notion; what was understood was *work in the abstract*, and commodities were detached from the people who produced them. Describing the category of objects that can be rented out, for instance, Pothier (1764), a jurist, mentions houses, pieces of land, furniture, movable goods, and the services of a free man. However, though considered – by Locke (1690) in particular – a source of individual autonomy, work as an activity did not confer any value in itself. According to Smith (1776) and his contemporaries, work remained synonymous with torture, effort, and sacrifice, a view for which Marx (1979) would later reproach the author of *An Inquiry into the Nature and the Causes of the Wealth of Nations*, claiming that Smith did not understand the true nature of work.¹

2.1.2 Work as the essence of humanity

At the start of the nineteenth century, many texts corroborated this transformation: work was no longer considered only a hardship, a sacrifice, an expense, an "inutility", but turned into "creative freedom" whereby humans could transform the world, reorganize it, make it habitable, leave their mark on it. Work was considered the *essence of humanity*, on a parallel with a work of art: I put something of myself in what I am doing; through it, I express what I am. Marx (1979) defended the idea that when work is no longer alienating and we are allowed to produce freely, we will no longer need "the mediation of money", and the goods or services we produce will reveal us to one another, expose our true selves: "Let us suppose we are able to produce as human beings [...] Our products would be so many mirrors in which we saw reflected our essential nature". But work will become that "primary, vital need" only when we can produce freely, i.e. when waged employment has disappeared and prosperity is attained.

2.1.3 A society of wage-earners

However, at the end of the nineteenth century, instead of doing away with wage employment – which on the contrary was in the process of consolidation – the words and deeds of social democrats presented it as the main road to riches, the way to a fairer, truly collective ("associated producers") social order

[&]quot;[...] to consider work simply as a sacrifice, thus as a source of value, as the price of things that give things a price according to the amount of work they cost, means keeping to a purely negative definition [...] Work is a positive, a creative activity" ("Work as sacrifice and as free labor" in Marx, 1979, pp. 289–293. Translated from French).

² "Notes de lecture", in Marx 1979, p. 33 (translated from French).

(based on hard work and individual capacities), which (they claimed) would gradually fall into place. It was – particularly in France and Germany – around the *salary or wages linking employer to employee* that labour laws and welfare gradually developed, reinforcing the system and rendering it indispensable. In Germany, for instance, labour laws and social protection grew out of that link between wage earner and employer, due to the insurance laws enacted by Bismarck between 1883 and 1889. But this also reinforced the relationship of subordination. Work was thus supposed to be self-fulfilling even though better wages, consumerism and social benefits, far from eradicating waged employment, made it pivotal and turned the heretofore unworthy waged worker into the most desirable social status (Castel, 1995).

The twentieth century, especially in Europe, witnessed the ultimate metamorphosis: increasingly distancing itself from its more painful connotations - the etymology suggests that the French word travail comes from "tripalium", a three-pronged spike used to contain animals and often considered an instrument of torture – the word "work" has ended up representing a highly desirable activity, both because of the benefits to which a particular job gives access but also because, in an ever-greater number of cases, it opens the door to self-expression and self-realization, giving a person the possibility of demonstrating their capabilities both to others and to themselves. It is as if, with the advent of the twenty-first century, developed countries had once again overcome a hurdle, one more step in the multisecular switchover from travail-tripalium to travail-self-fulfilment. Voswinkel (2007) argues that the development of "post-Taylorism" and the intense mobilization of subjectivity on the job that has prevailed since the 1980s have contributed to replacing the ethics of obligation (to work) with a subjective ethics of professional self-fulfilment that brings the individual to the front of the stage and bases recognition on admiration more than on appreciation. The prospect of being admired, i.e. being seen as a subject, is therefore concomitant with choosing work as the locus for self-realization, the place where individuals can exhibit all their worth and all their grandeur, one of the main arenas where they can best perform.

Our idea of work today is made up of all these dimensions: work is considered *at the same time* – to varying degrees depending on the country and the individual – a factor of production, the essence of humanity, and the pivot of the system of distribution of wealth, benefits and protection, dimensions that collide and are the reason why so many interpretations affect the concept of "work" today. We present in the next sub-section our analysis of the way Europeans juggle with and give value to the various dimensions that constitute work.

2.2 How Europeans relate to work³

The analysis of the available surveys on Europeans' relationship to work sheds light on the importance attached to it in comparison with other fields of activity or other values, as well as on the common trends and the variety of opinions people give when asked to say what aspect of work they most appreciate.

³ The analysis for this section largely comes from Davoine and Méda, 2008; Méda and Vendramin, 2013.

2.2.1 Importance of work

The European Values Study (EVS), which has periodically analysed the ways Europeans relate to their values since 1981, notably enables people to account for the importance of work in their lives.⁴ One of the questions asked is: "How important is work in your life?" Respondents can choose from four responses: very important, quite important, not important, and not at all important. Of course, the word "important" can have several meanings: work may be important because it is central to one's existence, because it is a source of income, because it is all-absorbing, because it is a source of happiness or of suffering, because there is not enough work, etc. But these surveys have many other limitations; which are well known, for instance, that the impulse to use extreme evaluations (such as "very" important) varies by country (Davoine and Méda, 2008). But all things being held equal, the results of the survey of 2008 stand out clearly: in all of Europe, work is considered quite important or very important (see Figure 1). Fewer than 20 per cent in 2008 of the people surveyed declared that work was not important or not at all important – except in Great Britain and Northern Ireland.

In those two places, as well as in Finland, the response "work is very important" was chosen less frequently than elsewhere, whereas in another group – composed of southern European countries (Greece, Italy, Spain,), two continental countries (France and Luxembourg) and several new (since 2004) member states of the European Union (Cyprus, Malta, and Slovenia) – the proportion of people declaring that work is "not, or not at all, important" was under 10 per cent; in fact, between 58 per cent and 75 per cent of the population in those countries declared that "work is very important".

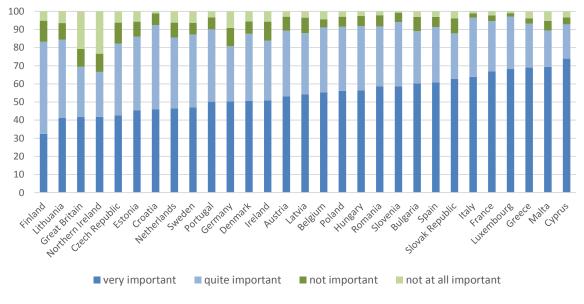


Figure 1: The importance of work in Europeans' lives, 2008 (%)

Source: EVS survey, 2008.

⁴ The EVS was launched in 1981 by a group of researchers led by Jan Kerhofs of Louvain University and Ruud de Moor of Tilburg University. The survey has comprised four waves – 1981, 1990, 1999 and 2008 – for 47 countries. The EVS questionnaire, a large part of which does not vary from wave to wave, addresses, inter alia, the importance of major values such as work, family or religion, but also religious practices, political opinions in people's lives and the importance attributed to each facet of work (wages, security, personal fulfilment, etc.). The interview, which lasts almost an hour, therefore covers numerous topics.

The situation was comparable in 1999 (see Figure 2): only 40 per cent of Danish, British and Northern Irish respondents at the time declared that work was "very important", while that proportion neared 50 per cent in Germany, the Netherlands and Sweden, but also in Croatia, the Czech Republic and in Estonia, and was much larger in France and some new member countries (Latvia, Malta, Poland, and Romania).

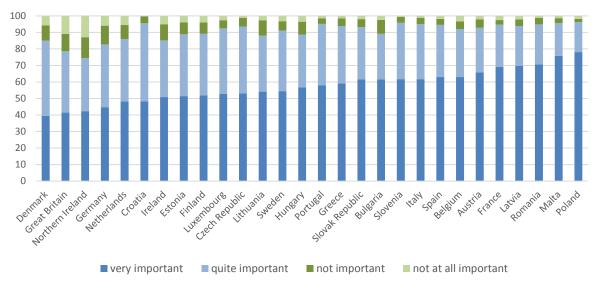


Figure 2: The importance of work in Europeans' lives, 1999 (%)

Source: EVS survey, 1999.

Even when the effects of the composition of populations are taken into account,⁵ the gaps between countries remain significant (see Figure 3). The composition is in itself difficult to interpret since in the various countries people occupying different levels of employment respond to the question differently. Figure 3 clearly shows that in France nearly two-thirds of full-time workers and three-quarters of part-time workers, unemployed and retired people declare that work is very important, while in Great Britain and in Germany that opinion was mainly held by full-time workers and the self-employed.

Cultural, religious, and economic factors have been advanced to explain these differences but none

Composition of a population refers to its structure by age group, proportion of working population, or level of qualification. For example, women at home and people with higher education declare less often that their work is very important. Conversely, employers, the unemployed and the self-employed attribute more importance to work. Yet, these categories are very unevenly distributed in European countries: education levels are, for example, higher in the Nordic countries, and women participate less frequently in employment in southern European countries.

⁶ In psychology and management in particular, the cultural dimensions highlighted by Hofstede (2001) are systematically used to try to explain relationships to work (see, for example, Parboteeah and Cullen, 2003). For example, French and Belgian people are more likely to accept a power distance, whereas a close relationship with the hierarchy is appreciated in Denmark, Sweden, Austria, and Finland.

[&]quot;A split between protestant and catholic countries seems to be taking shape: contrary to what Max Weber teaches us, work seems less important in many protestant countries (Denmark, UK, Netherlands, Germany, Finland) and more important in catholic countries (France, Belgium, Spain, Italy, Austria), with the exception however of Ireland. But the effect of the individual practice of a religion must be clearly distinguished in the work relationship from the effect of belonging to a country or of a group belonging to a given religion. At the individual level, religion clearly has an impact on the relationship to work: compared with atheists, interviewees

are fully satisfactory: nevertheless, it has been shown that the influence of both GDP per person and the rate of unemployment were significant for understanding the importance attributed to work (Clark, 2005; Davoine and Méda, 2008; Méda and Vendramin, 2013).

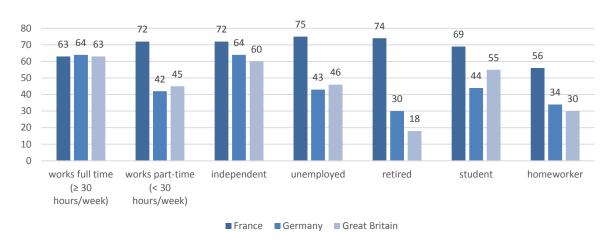


Figure 3: Proportion of individuals who feel work is "very important", by occupation (France, Germany and Great Britain; in %)

Source: EVS survey, 2008-2010, processed by CREDOC (Bigot, Daudey and Hoibian, 2013).

In earlier research, we suggested that people in some countries, particularly France, attach more importance to work than those in others such as Great Britain or Denmark. According to the EVS surveys – where people seem to have a more pragmatic approach – it is probably necessary, as sociologist d'Iribarne (1989) suggests, to see this in relation to the national systems of education and the status attributed to work. In France, one's craft and the sort of work one does go into shaping a person's "status", which indicates the sort of schooling they have had and, ultimately, their position in society. Taking into account the other dimensions identified with work allows this analysis to be refined, as we observe later.

2.2.2 The different dimensions of work

Three factors are significant to understand the different dimensions of work. In the first place, the *ethics* of duty (work is considered a duty to society), which a certain number of studies have claimed are of diminishing importance (Inglehart, 1990; Riffault and Tchernia, 2002), but are still very present in Europe. According to the EVS Survey (2008), 64 per cent of Europeans consider that "working is an obligation". The *instrumental dimension* of work (also known as its "extrinsic dimensions", mainly with reference to the bread-winning function of work and job security) remains dominant. Over 84 per cent of Europeans in the EVS survey mentioned that making a good living was one of the important aspects of work, though opinions varied according to country: while 89 per cent of Portuguese and 74 per cent of British people said that having a well-paid job was an important factor, only 55 per cent of respondents in Denmark, 57 per cent in France, 60 per cent in Belgium and 61 per cent in Sweden had the same opinion. We previously noted that the level of GDP per person influenced people's preferences

who said they were christian or muslim attribute more importance to work, and within this category protestants are amongst those who attribute the greatest importance to work" (Davoine and Méda, 2008, p.11).

for a good salary but institutions are also important: for instance, a generous system of social security may diminish the importance of salary and of promotions. According to the EVS, in countries where expenditures for social protection are high, workers do in fact less often declare that salary and promotions are important. The diversity of preferences in Europe therefore partly reflects the diverse nature of the prevailing economic and institutional contexts. Salary being a lesser priority could pass for a cultural trait but is in fact partly explained by the comparative levels of wealth and of social benefits available.

Finally, the rise of the *expressive dimensions* of work (also called "post-materialistic" or "intrinsic" with reference to work as a means of self-fulfilment) is verified all over Europe: Europeans attribute more and more importance to the contents and interest of a job, as well as to the atmosphere in the workplace. Even if there are great differences between countries, most people also consider that in order to develop one's capabilities to the hilt, one must work. Far from replacing each other, as a hasty review of the literature might suggest (Inglehart and Baker, 2000; Riffault and Tchernia, 2002; de Witte, Halman and Gelissen, 2004; Ester, Braun and Vinken, 2006), those different dimensions endure and evolve side by side (Méda and Vendramin, 2013).

100 91 90 92 ⁸⁹87 90 80 67 70 64 63 60 55 50 39 40 30 20 10 0 family religion politics ■ Belgium ■ Italy ■ Germany ■ Hungary ■ Great Britain ■ Sweden

Figure 4: Proportion of individuals feeling that the following domains are "very important" in their lives (%)

Source: EVS survey, 2008, processed by CREDOC (Bigot, Daudey and Hoibian, 2013).

Though country-level effects do exist, largely linked to educational levels and national policies and institutions, there is also diversity within countries due to other factors. We have shown this through the secondary analysis of European surveys, but also through interviews carried out in various European countries and by taking national research results into account (Zoll, 1999; Davoine and Méda, 2008; Vendramin, 2010; Méda and Vendramin, 2013), that among respondents today, the youngest, best educated and women – more than others – had expectations of employment characterized by the desire to do something meaningful (defined by its intrinsic interest, its contents, the workplace) and compatible with their other commitments (e.g. family, friends, personal pursuits, leisure activities).

2.3 Expectations versus realities

Are these great expectations, both of a material and an expressive nature, met by the present-day organization of work? This to a large extent depends on the country, its national policies and the institutions that it has developed.

2.3.1 Rise of flexibility

The "economic miracle" ("trente glorieuses", 1945–1974) saw the advent of a form of organization allowing for mass production based on standardized products and methods of production as well as on the rationalization of work processes. Since the mid-1980s, flexibility has replaced standardization: the new forms of organization are supposed to meet the challenge of a globalized world economy and permit industries to adapt. The changing economic context and policies that discard internal flexibility in favour of external flexibility have produced growing job insecurity among employees. New models of production have sprung up, typified by the conjunction of technological and organizational innovations and principles of labour organization based on versatility and individual initiative "post-Taylorism". But the development of a multi-skilled, autonomous workforce has gone hand in hand with the overall persistence – the amplification even – of prescriptions and control: though work has become more autonomous, it is a controlled autonomy. At the same time, firms have broadened the scope of their executives' responsibilities, and they have spelled out what was expected of them and adopted even more clearly new ways of monitoring their objectives, which explains the increase of formal systems of individual assessment (ever more automated and computerized) as well as the incitements and mechanisms set up to reward and punish individual performance.

2.3.2 Rise of unemployment and stress

In parallel with transformations of work, most European countries have had to face a strong rise in unemployment and atypical forms of employment, as well as intense criticism of the rules prevailing in the job market that firms see as an obstacle to competition. All these changes have ended up making work increasingly strenuous and stressful, more or less obviously depending on the country in question, but which the 2010 wave of the European Working Conditions Survey clearly underlined. A considerable proportion of European employees questioned in the survey declared that they had suffered from stress in their job. More than one in four wage-earners said that they were regularly under stress: nearly 10 per cent "always", 17 per cent "most of the time", 40.5 per cent "sometimes", slightly over 18 per cent "rarely", and 15 per cent "never". As to regular exposure to stress on the job, there were sharp differences between, for example, Germany (12 per cent) and Hungary (40.5 per cent). France elicited very high percentages for three symptoms: depression or anxiety, general fatigue, and insomnia; 38 per cent of European wage employees declared that they would be unable to continue doing the same job after the age of 60.

The answers given by French respondents to the Working Conditions Survey provide further evidence for the existence of this deterioration – the last wave pointed to high levels of stress, harsher measures and less leeway for personal initiative – but we find the same picture in an important British survey carried out in identical conditions in 1992 and 2000 by the Economic and Social Research Council in a research programme entitled "the Future of Work". Taylor (2002, p. 9) wrote in conclusion: "Today's

world of work is much less satisfying to employees than the one they were experiencing ten years ago. It has also grown more stressful for all categories of employees without exception – from senior managers to manual workers. Most people say they are working much harder in intensity and clocking on for more hours of work than in the recent past. [...] This key finding is overwhelming and perhaps the most important to be found in the survey". The same can be said of the research carried out by Green (2006), who argues that work has certainly become more "demanding" in recent years: "In the affluent economies of the industrialized world, life at work in the early twenty-first century has evolved in a curious and intriguing way. Workers have, with significant exceptions, been taking home increasing wages, exercising more acute mental skills, enjoying safer and more pleasant conditions at work, and spending less time there. Yet they have also been working much more intensely, experiencing greater mental strain, sometimes to the point of exhaustion. In many cases, work has come under increased and unwelcome control from above, leaving individual employees with less influence over their daily work lives and a correspondingly less fulfilling experience than before. In these ways, work in the recent era has become more demanding" (ibid., p. 20).

2.3.3 Types of working organizations

It is as if the promises made by the firms, at the same time as they asked employees to become more personally involved in their job, have not been kept, as if the new forms of the organization of labour, supposed to be a departure from Taylorism (though Taylorism still prevails in many workplaces), have reinforced and sharpened the supervision and individualization of work.

From this point of view, there are nevertheless still striking differences between European countries, as recent research carried out by Gallie and Zhou (2013) on the last wave of the European Working Conditions Survey demonstrates. These authors classify the different types of labour organization according to their capacity to allow employees to participate in day-to-day decision-making or to influence issues pertaining to their job. The types of organization that best do so are known as "high involvement working organizations".

The authors show us that in Europe, ⁸ 38 per cent of workers are in "low involvement organizations", 27 per cent in "high involvement organizations" and 35 per cent in organizations that offer "intermediate levels of involvement", and they further expose the differentiated distribution of those models of labour organization in Europe, indicating that "high involvement organizations" are associated with greater well-being, less absenteeism, and greater job satisfaction. One group of countries in particular stands out – the Nordic countries, particularly Denmark, Finland and Sweden – where the likelihood of being employed in that sort of company is much greater than elsewhere. Looking for the factors that might explain the probability of encountering such an organization, the authors came up with a correlation implicating one single factor: the strength of labour unions.

This result clearly illustrates the fact that the organization of labour is vital for the quality of peoples' working lives, reminding us that the possibility of controlling one's work, both on a daily basis but also more generally in relation to the decisions made by one's employer, is decisive. It shows that some countries are far more advanced than others on this score, once again challenging the thesis that international competition renders a preoccupation with the quality of life on the job anachronistic.

⁸ Here Europe refers to the 34 countries covered by the European Working Conditions Survey.

To sum up, the expectations that Europeans place on work today are many and varied. There have also been more instrumental aspirations, hopes ushered in by the nineteenth century but have not truly materialized. In the twentieth century, the 1980s and 1990s witnessed the development of new forms of organization of labour, some being more compatible than others with the contemporary hope that work will permit self-expression. Nevertheless, issues pertaining to "job quality" are today brutally challenged by some prospective studies that predict nothing less than the disappearance of a large number of jobs and the end of wage employment due to the ongoing technological revolution.

3 The effects of automation on work and on employment

While Europeans place powerful expectations on work, some prospective studies have shown that the quantity of employment is dwindling and the nature of work changing due to the dawning of the new era of automation. Though the results of these studies must be treated with some scepticism, some transformations have already taken place in several sectors; as yet peripheral, they do however play a role in transforming working conditions. Depending on the diagnosis of the ongoing changes and the objectives to be attained, very different policies have been suggested to speed up, accompany, or, on the contrary, slow down the process. Technological changes in any case represent a major factor behind the current and future transformation of work.

3.1 Employment is dying out; the nature of work is changing: the technological revolution marches on

Since the start of the 2010s, saying that automation is about to do away with existing jobs and to revolutionize labour has become extremely common and the fact is now considered self-evident, a fait accompli - a view that the most recent World Economic Forum (WEF) report (2016) presented in Davos, confirms. That view, prevalent in academic and journalistic circles, alludes to the simultaneous publication of influential books or articles which, though few in number, are regularly quoted. The first such opus is by Brynjolfsson and McAfee (2011) who contend that it is high time Jeremy Rifkin's (1995) thesis – The End of Work⁹ – was given the credit it deserves. For, according to them, computers have become capable of doing what up till now only humans were able to do. We are on the verge of a "Great Restructuring", entering "the second part of the chess game", i.e. the era when the advances that digital technologies have made possible will mushroom, as suggested by Moore's law. 10 Computers are part of the "General Purpose Technologies" category – i.e. at the root of a multiplicity of incremental innovations (Lipsey, et al., 2005; Field, 2008), which interrupt the normal course of events that unfold along with economic progress. These authors stress that henceforth, even in the realm of purely intellectual labour or in activities that contain no physical component at all, computers will monopolize the field. But such technologies create considerable value: they permit improvements in productivity and therefore collective wealth. The risk is that they will bring about sweeping transformations and doubtless a polarization of society too (Autor and Dorn, 2013; Collins, 2014; Dorn, forthcoming), not

In his book, Rifkin explains that automation and technological progress will inevitably destroy jobs and cause soaring unemployment. Only a few professionals specializing in the manipulation of symbols will be able to keep their jobs. A quaternary sector will develop to maintain social ties.

¹⁰ According to Moore (1965), the power of popular computerization doubles every two years. Moore has nevertheless conceded since that his law would become obsolete in approximately 2020.

to mention a general skills mismatch (Beaudry et al., 2013), which would demand radical organizational innovations, with entrepreneurs at the helm and massive investments in "human capital".

3.1.1 The end of work?

Frey and Osborne (2013) in their study of 702 occupations, draw an even more graphic picture of how jobs will be affected and estimate the probability of intelligent machines replacing them. Certain sectors, such as education and health, are at small risk of being mechanized. On the other hand, occupations such as selling, administration, agriculture and even transportation are very much at risk. In the United States, the authors estimated that 47 per cent of the workforce were in sectors highly exposed to unemployment and that their jobs could be done by robots or "intelligent" machines within 10 to 20 years. Since then, many other authors have dealt with this theme (e.g. Ford, 2015; Benzell et al., 2015; Boston Consulting Group, 2015).

Other prospective studies, founded less on mathematical projections than on testimony provided by – or on surveys done among – consultants, managers and CEOs of large firms, paint a picture of what the consequences of these developments, and particularly the development of digital technologies, will be for the nature of work (see Bollier, 2013; WEF, 2016). 12 According to these sources, work, which has already become collaborative, will become more and more so. Crowdsourcing is one of the most widespread ways of working, emphasizing co-production; this way of working will no longer be confined to large, hierarchically structured companies, but will also invade value-producing platforms. The classical unity of time and space that has characterized work until now is becoming a thing of the past: work will no longer be situated in a well-defined, predetermined time and place. There will be less and less difference between work and non-work, professional life and private life. Work will occupy the entire day, and a career will consist of a series of jobs that everyone will be responsible for managing on their own. A large number of occupations are being automated and specific competences are becoming rapidly obsolescent; what will really count are individual dispositions, and particularly the aptitude to provide leadership, to communicate, to constantly be on the lookout for new solutions, to innovate. It will be the end of the pecking order and salaried work: everyone will be their own boss, become their own business. Managerial logics based on results will go hand in hand with the "720 degree" assessment on which reputations are built. In short, the technological revolution is ongoing and will be the way to prevent our societies from falling into a century-long stagnation (Teulings and Baldwin, 2014). But its effects on the rate of growth and productivity are as yet unknown: both as to the time lag and given the fact that (according to the expounders of these ideas) the existing tools available for measuring growth and productivity are not adapted to the new situation.

For some authors, the digital sector is at the forefront of these changes, revealing how labour legislation have not been adapted to it – unable to give businesses the flexibility they need and at the same time to protect workers against excessive workloads. Following the Commission of the European Communities (2006) report, some have demanded that the rules governing employment be made more flexible – e.g. by extending the French system of days worked to a greater number of categories of workers (Mettling,

¹¹ "47 percent of total US employment is in the high risk category, meaning that associated occupations are potentially automatable over some unspecified number of years, perhaps a decade or two" (Frey and Osborne 2013, p. 38).

¹² The report submitted in Davos, 2016, *The future of jobs*, went in the same direction, asking 371 executives and human resource directors of large firms throughout the world to respond to an online survey.

2015) or revising the EU directive on working time in a way that would more readily permit exemptions, opt-outs and augmentations of the number of autonomous workers. Furthermore, such commentators have demanded that para-subordination (already implemented in Italy and Spain) be developed, for if this is not done, there will be adjustments in the form of a massive expansion of atypical forms of employment already in high gear (freelancing, casual work, self-employment, etc.).

Promoting such changes in labour laws – which would make a reduction of the measures protecting wage labour seem acceptable – often goes together with an idealized discourse on the virtues of collaborative economies, extolling their capacity to create social ties and avoid commodification, as well as on young people's hypothetical aspirations to bypass wage employment, supposedly synonymous with unwieldy hierarchies, as opposed to creating one's own start-up which is often presented as the ideal road, combining both flexibility and autonomy. Thus, what is known as the "Uberization" of society (allowing those offering and those requesting a service to connect directly through computer platforms) is very often seen as one of the best solutions for putting an end to the monopolies and protections surrounding certain professions and for surmounting the so-called rigidities of some European "job markets".

The scenario of the technological revolution appears particularly well suited therefore to dismantling the systems of labour and employment protection still prevalent in Europe. Its effects on employment and work require further analysis.

3.2 The impact of digitalization, computer platforms and Uberization on employment and work

First, we must be careful not to take the predictions concerning the effects of digitalization on employment discussed above at face value. In fact, the studies are very controversial: for example, analysing what has taken place in 17 countries over 15 years, Graetz and Michaels (2015) show that robotization has permitted the gaining of close to half a percentage point in annual growth without harming employment. A study by Deloitte (Stewart, De and Cole, 2015) based on 140 years of statistics from England and Wales has shown that the process of robotization is in fact a "great job-creating machine". Gadrey (2015), an economist, reminds us, tongue in cheek, of the alarmist predictions contained in the Nora-Minc (1978) report on the computerization of society, published in France: "They announced that the creation of jobs in the service industry would come to an end (p. 35). But the part of services in overall employment has risen from 57 per cent in 1980 to over 70 per cent in 2000. According to them, we were going to witness an unavoidable drop in the number of secretaries, but their number increased between 1980 and 2000; a strong decline in employment in banks and insurance companies, but employment in those branches continued to rise during the 1980s; and if more recently there has been a slowdown, it has not been due to computerizing but above all to the context of the 1990s, i.e. to "de-intermediation" [...] The part of service jobs in employment is nearly 80 per cent today. Practically all the sectors and professions the Nora-Minc report claimed would become "the steelworks of tomorrow" are those where employment increased the most". 13 During a conference organized by the European Trade Union Institute, "Shaping the New World of Work", Loungani (2016) presented a graph showing that the number of automated teller machines increased at the same rate as

¹³ See http://alternatives-economiques.fr/blogs/gadrey/2015/06/01/le-mythe-de-la-robotisation-detruisant-des-emplois-par-millions-1/ (translated from French).

the number of clerks. Moreover, a recent study showed that the estimate of 47 per cent jobs lost in the next 10 years had to be re-evaluated considerably to a low of approximately 9 per cent (Arntz, Gregory and Zierahn, 2016). Criticism has also been levelled at the methodology used by Frey and Osborne in their study (Vendramin and Valenduc, 2016).

We can only agree with Gadrey (2015) when he explains why forecasters make these mistakes: they generalize entire sectors or segments where machines have replaced humans. Reasoning "all things being equal", the results they predict are inevitable but they forget that when the content of an activity and production change radically, a process of enrichment driven by the emergence of new services is generated – which then also leads to employment. They also do not pay enough attention to the resistance of populations. The *technological determinism* typical of all these predictions is striking, as if everything that is possible were fated to happen and as if populations would just stand by and allow half of the jobs that exist to be eliminated in 10 years or accept being cared for, accompanied, educated or driven by robots. Such research also forgets that simply replacing humans by robots is not the only solution: cooperation and "cobotization" that permit a considerable alleviation of harsh working conditions and organization could lead to complementary collaboration between humans and robots, which is a likely option.

3.2.1 Workers on tap

Nevertheless, the development of digitalization and a computer economy has in fact already begun to disrupt working styles. Important research has in recent years revealed the de-structuring effects of the new types of organizations on work (Head, 2014). The de-intermediation brought about by digital platforms leads not only to competition against a large number of regulated or organized professions but also, and especially, to mobilizing people's activity in ways which are not, or at least seem no longer to be, either wage employment or a classical form of self-employment. Digital platforms provides access to those offering work and those requesting a service, thus contributing to cutting up the work into individualized services, fragmentary tasks, to dismantling groups working collectively and to individualizing already shaky labour relations.

Even though giving formal "orders" does not enter the picture, this sort of arrangement allows platforms to profit from the work of others and to manage it. They obtain the same results as they would in providing wage employment – giving orders, controlling work and penalizing shortcoming – without, however, having to shoulder the responsibilities traditionally attached to that of employer. It is work "on demand" or "on tap", piece work done by workers who are neither employees – platforms refuse the role of employer and call workers their "partners" – nor real entrepreneurs (Levratto and Serverin, 2013). In order to access a platform and stay on it, they must in fact fulfil a great number of obligations in contradiction with the status of a self-employed. Available research shows reinforced control and supervision, permanent assessment – including by clients – and very little or no leeway in deciding how the work should be done, all this being made possible by "algorithmic management" (Rosenblat and Stark, 2015). Some authors point the finger at the dumbing-down provoked by computer-directed labour (Amazon) and the end result, which is over emphasis on low skills (Head, 2014). It is the return of labour as a commodity in its worst form: they call it platform capitalism (Lobo, 2014), sweatshops, digital labour (Cardon and Casilli 2015). The non-respect of national labour legislation is facilitated by the transnational character of the platforms and the difficulty, when all relations are mediated by computers, of controlling them.

3.2.2 The end of wage employment?

While some people welcome the fact that "privileges" and undeserved lifetime incomes – or at least the monopolies and protections enjoyed by regulated professions – are being called into question, the very people who work "for" or "with" these platforms are drawing attention to what is euphemistically known as "classification errors", i.e. the fact that workers are clearly treated like employees - whose work is supervised, because, even if it is an algorithm that does it, very precise orders are given and must be observed – but do not even have a contract. It is as if the creators of these platforms, for whose profit value is created and retained, have refused to take on the responsibilities incumbent not only on those who supervise wage labour but also on those who pay for a job done by a self-employed worker under a commercial contract, as if the disappearance of hierarchical companies had caused the employer him/herself to disappear. The people who do the work are neither employees nor often even acknowledged as entrepreneurs with the protections, insurance or qualifications traditionally required. This being the case, although such work relationships allow for the elimination of entrance barriers (as when trade guilds were abolished in France, first in 1776 and then in 1791), and bring greater flexibility to some segments of the labour market, these new actors play a role in dismantling it and jeopardizing the mechanisms that, as of the end of the nineteenth century in Europe, enabled the stabilization of work and made it more secure – not, however, without rousing the ire of the imperilled professions, as, for example in several European countries the complaints of taxi companies and their drivers against Uber and of hotel owners against Airbnb.

3.3 What should our labour and employment policies be in the face of the expansion of digitalization and automation?

How the development of automation, digitalization and digital platforms affect growth, employment and work is therefore subjected to diametrically opposed interpretations. Some authors stress their extra-financial benefits: the fact that collaborative economies permit the extension of free services and the reinforcement of social links; the general loosening of entrance barriers and thus the greater fluidity of the "labour market"; and the fact that leaving behind hierarchical companies and employee status makes for more autonomy at work. Other analysts, on the contrary, underline the perils attached to the extension of forms of work which are officially neither wage employment nor self-employed, particularly the loopholes in workers' health and social coverage; the risks attached to the fact that they are being exploited (overly long working hours, health hazards); the unfair competition that platforms represent for traditional organizations (taxi drivers, artisans, hotel owners, etc.); the fact that activities which were voluntary until then have been commodified; that the differences between amateur and professional disappear; the explosion of *digital* labour (data handlers "forced" to work for free); the risk that once rules and regulations are suppressed, extremely powerful monopolies once again might emerge; and so on.

3.3.1 A new status for self-employed?

Those who share the idea that automation and digitalization have already begun to disrupt working conditions and will continue to do so exponentially, propose adapting the existing rules and regulations, generally to make the ongoing changes smoother. The Mettling (2015) report, which was submitted by the director of human resources of Orange to the French Minister of Social Affairs and Employment in 2015, stressed that "digital transformation disrupts the traditional organization of labour in a thousand

ways" (ibid., p. 8), pointing out that "all over the world flexibility, adaptability but also the business model of a digital economy rests on the multiplication of unwaged jobs. In France, in addition to having reached the symbolic million self-employed in summer 2015, we estimate that one in 10 digital workers is already operating without a salary and that the trend will continue. In 2014, freelancers – persons carrying out their activity as self-employed – represented 18 per cent of the service sector in the Netherlands, 11 per cent in Germany and 7 per cent in France, an increase of 8.6 per cent in that year" (ibid., p. 8). Like other authors, Mettling seems to support the idea that the expansion of the digital sector logically spurs new ways of working, which could also make headway among wage-earners if the days-worked system – which allows for standard statutory working time to be disregarded and certain *maxima* (maximum weekly working hours) to be applied – is extended to them, or if the new forms of independent labour (freelancing, self-employment) become more widespread.

Since the publication of the Commission of the European Communities' (2006) report, several other reports have recommended developing a para-subordinate working status that implements a third way of working, between wage employment and self-employment, the traditional summa divisio of working for others. In Italy, contracts of coordinated and continuous collaboration have existed since 1973. In this system, the collaborator provides a service for an employer who is not his/her superior and, since 2013, contracts for cooperative projects have been drawn up for the carrying out of a specific project in a given amount of time. In Spain, an autonomous work status has existed since 2007. It includes a set of benefits common to all autonomous workers as well as collective benefits, and specific systems for economically dependent autonomous workers. In Germany, economically dependent workers have benefited since 1974 from the same protection as wage workers. In the United Kingdom, workers who work for an employer without being under his/her authority benefit from protections concerning minimum wage, working time and paid vacations. In France, hybrid systems have been created under labour laws that combine wage-earning and self-employed activity: in exchange for not requesting the status of wage earner, the law grants non-wage managers various social benefits (working time, rest periods, vacations, health care and security on the job). Since 2010, a type of special "service contract" (portage salarial) has permitted unemployed executives to carry out projects for a firm, while continuing to receive social benefits and paying into retirement funds. Though these systems do give workers certain rights, the drawback is nevertheless that they are deliberately prevented from qualifying as employees, even though the activity in question is usually overseen by someone, so that the worker often finds him/herself in the position of mere executor of an organized task. This process means that part of the risk has been transferred from the company to the worker and that those who profit from others' work and capitalize on it can sidestep the risks attached to being a manager.

3.3.2 The persistence of wage employment

But is this really the "end of wage employment"? It would seem to be less of a reality than an aspiration for some: para-subordinate work, as well as forms of poorly protected, atypical labour, and self-employment is on the rise in Europe. In 2012, the main occupation of 15 per cent of the active workforce fell into that category, including in agriculture. But though this was the case for 32 per cent in Greece and over 20 per cent in Italy, Portugal and Romania, it accounted for less than 15 per cent of the workforce in the United Kingdom, 11 per cent in France and Germany, and less than 10 per cent in Estonia, Luxembourg, Denmark and Latvia (INSEE, 2015).

¹⁴ Translated from French.

Moreover, it is not at all clear why developing jobs in the digital sector should necessarily come with new forms of work disconnected from wage employment, nor why the latter should not be compatible with a digital economy. Wage employment is characterized, on the one hand, by subordination and thus by an external source of control over the job that goes together with coordination, and, on the other hand, by the existence of rules that give workers a certain number of rights, the protection of their health above all. Working at a distance, due to digital applications – in 2010, 24 per cent of European workers were considered "digital nomads", i.e. spent more than 25 per cent of their working time away from their office or traditional workplace (Méda and Vendramin, 2013) – does not account for all systems permitting a loosening of the hold of work on life; quite the contrary. Serverin (2011), a sociologist specialized in law, maintains that even if certain forms of labour organization foster autonomy more than others, the idea that autonomy lies mainly outside the realm of wage employment – in self-employment for example – is not really borne out by the facts: being one's own enterprise often leads to a form of self-exploitation (Abdelnour, 2014). These self-employed workers are under the illusion of being free but often they must work long hours and no longer distinguish their private from their professional life, for incomes that remain on average extremely modest.

Other ideas today centre on attempts (at least) to come up with rules that put some order back into the currently chaotic development of collaborative economies and platforms: either by ensuring that the incomes derived from platform activities are declared, through fiscal reform, as suggested in a report recently presented by the French Parliamentarian Pascal Terrasse (2016), or by extracting the profits from the capitalist and commodity system and making them serve as a societal good – a cooperative such as "Coopaname" in Paris or the "Platform Cooperativism" that aims to give citizens collective ownership of the digital platforms they use in order to benefit integrally from the economic value produced (Scholz, 2016); or yet through a collective such as a city designating itself as a collaborative social ecosystem (e.g. the Bologna Regulation on collaboration between citizens and the city for the care and regeneration of urban commons). Finally, some authors argue that the implementation of a universal income, which might take several forms, would be the only way to counter the damage caused by automation (Conseil National du Numérique, 2016). The future of work will thus depend in part on the policies implemented to support, speed up or delay the ongoing changes.

4 Three scenarios for the future of work

In the context of future of work, there are three main scenarios that emerge from the available literature, and we examine these scenarios questioning their capacity to meet the expectations attached to work. A first scenario consists in pursuing the present policy of "dismantling labour law", which risks being accompanied by the deterioration of working conditions. But the most fashionable scenario today is without a doubt the "technological revolution" which, despite the much feared loss of jobs, is expected to trigger economic growth and a profound change in the ways of working (Brynjolfsson and McAfee, 2014). It is nevertheless far from certain that this will materialize, for several reasons, which we will explain later. A third scenario, the "ecological conversion", seems to be the most compatible with the need to combat the unbearable features of our present model of development and seems capable of satisfying the expectations placed on work. We will detail the conditions of its implementation. For reasons of clarity, the three scenarios are presented one after the other, somewhat like ideal-types, but they are not mutually exclusive.

4.1 Two scenarios in vogue: dismantling labour law, and the technological revolution

Since the start of the 1980s, the OECD has furthered policies that dismantle the rules governing labour relations on the pretext that they hamper the ability of firms to compete in the global arena. Whether it involves the rules setting the minimum wage, controlling hiring procedures or terminating an employment contract, a standard current economic thought (not only in the OECD) supports the idea that only flexibility of salaries and social protections will allow developed countries to adapt to the new conditions of international competition. The OECD (1990, p. 22) report shows that: "Employment legislation impinges on levels of employment by imposing constraints on employers' freedom to hire and employ labour either directly or indirectly [...] Redundancy legislation imposes constraints on employers' freedom to discharge workers at will". The OECD's doctrine changed at the start of the twenty-first century: instead of underlining a strong correlation between the rate of unemployment and job security, it stressed a weak correlation between the latter and the length of unemployment of certain categories of workers. For about 30 years now, at different tempos and sometimes shuttling back and forth, mostly depending on the political colour of the governments in place, policies have spread across Europe that are based on a reduced cost of labour and a powerful benchmarking – reminiscent of the "Doing Business" indicator of job security developed by the OECD – targeting the rules on hiring and termination of work contracts and considering them as obstacles to the necessary mobility of the "work factor".

4.1.1 Should we burn the Labour Code?

Despite the about-turn in OECD doctrine, many economists continue to promote the idea that weakening the labour law is essential, they see it as the only way to jump-start the job market and create employment. In the United Kingdom, then in Germany, at the end of the 1990s and beginning of the 2000s, somewhat later in Italy and Spain, reforms of the "job market" got under way, particularly aimed at facilitating lay-offs. In France, two reports in particular concentrated their critiques on the rules concerning lay-offs: the Blanchard and Tirole (2003) report, which proposed replacing the intervention of a judge by a tax; and the Cahuc and Kramarz (2004) report, which defended the idea of a single contract instead of the existing fixed-term and open-ended contracts, marked by a lower level of job security during the first two years. In the end, it was not a single contract but a "new recruitment" contract that saw the light in 2005 and was presented as the first French system of flexicurity. While it was meant to improve flexibility for firms (of under 20 employees) by allowing them to fire their employees without having to give a reason for the first two years of employment, and security for employees with a bonus in case of breach of contract and reinforced assistance in finding a new job, surveys have pointed out the adverse effects caused by such a measure (which in the end was not favoured by the ILO). Surveys were able to show that not only did the process take place at the expense of security - reinforced assistance had simply not been established and the bonus was rarely attributed - but above all, the measure caused work relations to break down and become radicalized, the threat of being laid off weighing heavily on employees and causing an imbalance in favour of employers (Gomel et al., 2007).

It is to be feared that the reforms aiming to deregulate labour relations will almost systematically have negative consequences for working conditions and thus lead to a downward spiral with regard to social benefits, aside from giving poor results in matters of employment, as a study carried out by the ILO (2015) has shown: according to this study, covering 119 countries, deregulating work contracts systematically generates a drop in the employment rate and a rise in unemployment.

4.1.2 The technological revolution

The other scenario that seems to be the most popular among economists, businessmen and governments is to all intents and purposes a technological revolution. Teulings and Baldwin (2014) present the views of some of the most influential economists in the world today. Although in it Gordon (2014) reiterates his doubts as to a possible return of growth due to headwinds, including the exhaustion of technological innovation, he nevertheless expresses a determined belief in the ability of the technological revolution to boost productivity and stimulate a new wave of growth. This can be summarized as: "the economy may be facing some headwinds, but the technological tailwind is more like a tornado" (Mokyr, 2014, p. 88). If, according to several contributors, we have not as yet seen the benefits of the "tornado", it is not only because innovations have not yet all seen the light of day but also, and above all, because our instruments of measurement are not capable of revealing them. The WEF (2016) report presented in Davos confirms that these ideas have gained official status.

Is this scenario the most likely to develop? It could come up against three considerable hurdles and has in any case many drawbacks. In the first place, it is based on a powerful technological determinism: all that is possible is destined to occur... which means ignoring the resistance of those groups that would have to face the consequences of the loss of jobs connected to such a development - true, the Luddites lost their battle, but it could have turned out differently – or to unfair competition (see the suits brought against Uber, particularly in California, and the fact that the company was banned from working in several large German cities), or to ethical opposition to certain products or processes (drive-it-yourself hired cars) that trained the spotlight on the question of responsibility and accidents, as was the case during the first industrial age, or again the de-humanization implied by the large-scale publicity given to automated processes. In some countries, such as France, moves to install automatic cash registers in large department stores are being hampered mainly by the customers, elderly people in particular, who complain that they only have a machine to talk to. There are many who feel that to save employment, enrich work (especially concerning human relations) and uphold social cohesion, automation should be contained within certain, very precise limits. De Jouvenel (1968), an economist, criticizing the all-out race for greater productivity, wrote that, though it meant progress for the consumer, it implied a "regression" for the producer (p. 55).

4.1.3 The limits of the technological revolution scenario: production without coordination?

Developing this scenario comes up with two serious limitations. In the first place, it seems to rest on dubious assumptions, at least in the cases presented by the books quoted above (automation, job cuts and the end of wage employment; see Section 2.1). Second, it might be recalled that, as Coase (1937) pointed out, the choice between production based on work contracts and freelancing (commercial contracts) used to depend on the price of the transaction. Those promoting an automated and dematerialized vision of production follow Rifkin (2015) and claim that the cost of transactions is so low today that implementing a hierarchy and work contracts is no longer justified, which makes it possible to imagine the end of wage-earning and finally the end... of firms. But if that is true of certain components or processes, can one be sure that it will be the same for all goods, products and services?

Might not the contrary occur, i.e. an uncontrollable rise in the cost of transactions for certain materials, jobs and operations? Above all, can one imagine production without coordination, managed at a distance by an algorithm? Besides, would that cause the employer to disappear? A large amount of production is carried out worldwide through extremely fragmented and computerized value chains (ILO, 2015). But companies that ensure coordination exist too (even if it is delegated to an algorithm) and in the final analysis they capture the value. Is a vision of society where production is undertaken by a platform pooling services found on the market, devoid of all coordination, even thinkable when it comes to constructing aircraft or buildings? If we all become self-employed or freelance, will digital platforms suffice to coordinate our actions, or will production become completely individualized, for instance through three-dimensional (3D) printing? Despite the optimism of research scholars such as Anderson (2012), for whom 3D printing represents a bona fide disruptive technology, it does not seem that large-scale production of aircraft or buildings could take place in that ultra-personalized way, and it is also uncertain that such an industrial revolution would save materials and energy.

4.1.4 The limits of the technological revolution scenario: forgetting the ecological question

An automated and dematerialized vision of production does seem to be totally at odds with the fact that the global level of consumption of materials has never been so high (Krausmann et al., 2009). That is the scenario's third weakness, and the most decisive: the fact that it chooses to completely ignore the escalation of the quantities and costs of raw materials and energy consumed to which we risk being rapidly exposed; and, generally speaking, the need for an ecological conversion that we should be embarking upon as fast as possible, if the scientific evidence of the ecological threat, climactic in particular, hanging over our societies is to be believed; and if we take seriously the injunction validated by the twenty-first session of the Conference of the Parties to the United Nations Framework Convention on Climate Change (COP 21) to reduce the rise in temperature to 2°C by the end of the century. Broadly speaking, the scenario totally rejects the legitimate suspicion contaminating growth and the effects of growth today. Yet, the scientific evidence that has come out in the past few years (Rockström et al., 2009; Barnosky et al., 2012; IPCC, 2014) forces us to review the past and become conscious of just how ambiguous growth is. True, growth has been enormously beneficial and brought previously unsuspected and undeniable progress, but it has also been, particularly in the second half of the twentieth century, the cause of ills such as deterioration of and damage to our natural heritage, social cohesiveness and working conditions (Beck, 1992; Méda, 2000, 2013; Gadrey, 2010; Heinberg, 2011). In developed countries, that awareness was expressed and much thought given to those issues during the 1970s: de Jouvenel (1968), Baudrillard (1970), Meadows et al. (1972), Daly (1972), Illich (1973) and Hirsch (1976) all raised the question of the risks connected to our shared belief that growth is society's main objective and that GDP is the instrument by which to measure it. We understand today that growth might not return but above all that it is probably not desirable that it should return, in Western countries, at the same rhythm as it did during what Maddison (2006) calls the "Golden Age" - when greenhouse gases and other pollutants and ecological devastation had become so intense that the term Anthropocene was created for the era dominated by the human capacity to modify the conditions of life on earth (Crutzen and Stoermer, 2000).

Technology plays a decisive role in research that aims to find a model for the future development of our societies: the destructive impact of growth on our natural heritage is thrown into perspective by many economists who, after Solow (1986), consider that technological progress will allow diminishing energetic intensity (the volume of CO₂ emitted per unit of GDP), and obtain "green" or "clean" growth,

rendering the technological revolution perfectly congruent with the ecological imperative. Several studies nevertheless show that the technological progress needed to decarbonize growth will be disruptive if one aims for absolute "uncoupling", i.e. separating prosperity from growth (Jackson, 2009). Husson (2010) has shown, for instance, that attaining the Intergovernmental Panel on Climate Change (IPCC, 2014) objectives (an 85 per cent reduction of CO₂ emissions between 2000 and 2050 to limit the rise in temperatures to 2°C by the end of the century) is incompatible with sustained growth, even given a veritable technological disruption. This is because if the CO₂/GDP ratio ¹⁵ continued to diminish at the same rate as it has over the last 40 years (1.5 per cent per year), world GDP would be reduced by 3.3 per cent/year by 2050. If it were to be multiplied by two (3 per cent per year), the rate of growth of GDP would be reduced by 1.8 per cent per year.

4.1.5 The inadequacies of GDP

The commission established at the behest of French President Nicolas Sarkozy in 2008 to measure economic performance and social progress (Stiglitz, Sen and Fitoussi, 2009), confirmed the view that GDP is not an appropriate tool for accounting for a nation's wealth or warning about ongoing social and environmental damage (Méda, 2000, 2013; Gadrey and Jany-Catrice, 2005; Gadrey, 2010; Cassiers, 2014); it validated the idea that GDP cannot play the role of whistle-blower. Use of GDP as a measure became a convention in the mid-twentieth century, becoming the official marker of countries' performances according to the *System of National Accounts*, 2008 (European Commission et al., 2008); but in reality it has many limitations: it ignores many activities – linked to the home, family, friends, voluntary work, civic participation, leisure, etc. – that are essential for the continuation of society; it is impervious to inequalities in consumption or participation in production; it is based on an accounting that pays no heed to legacy, thus making it impossible to visualize, as well as the totality of added values, the inherited possessions that were brought into play and affected during the process of production and consumption. If one believes that our main priority emergency is to guarantee the durable quality – physical first and foremost – of our societies, then our primary objective must be to establish environmental norms and take a relative view of the exclusive use of GDP to measure progress, and of growth per se.

4.2 The scenario of ecological conversion: an opportunity to recover full employment and change work

The technological revolution scenario does not take into account the destruction caused by economic growth and it does not seem to be able to meet the tremendous expectations placed on work and employment today (see Section 1.2). What scenario could develop "quality work" and oppose the loss of meaning and the deterioration of working conditions, noted both in developed and in developing countries, albeit to obviously very different degrees? Stress, burn-out, intensification, atypical contracts (Parent-Thirion et al., 2012) in developed countries, unfair working conditions, dramatic labour accidents (like the one in Rana Plaza) and sweatshops in developing countries – where part of the dirty and filthy production has moved because social and environmental norms are less strict and the cost of labour lower – have increased. In most cases, trade unions are powerless to oppose these developments, though it has been demonstrated that higher levels of union membership go hand in hand with well-

¹⁵ The amount of CO₂ emitted to produce one dollar of GDP.

being in the workplace (Gallie and Zhou, 2013) and slow the advance of inequalities (Jaumotte and Buitron, 2015).

Can one hope for a process such as the one described by Crawford (2009) in *Shop class as soulcraft:* An inquiry into the value of work. The author deplores the fact that our societies have forgotten what makes for a good job and that a good job is an ingredient of the good life, and he places the responsibility for the loss of the meaning of work on the obsession with profitability and productivity as well as on the implementation of managerial tools, which are supposed to reinforce them even more, alienate workers from their productions and prevent them from being recognized by those for whom the work is being done. In the short term, Crawford proposes to promote a kind of work fully contained within a human scale of face-to-face interactions. More generally, Crawford pleads for a "Republican" attitude towards work, aiming to develop the economic conditions that would guarantee workers' independence above all else, a position that, to his great regret, Americans have abandoned. Crawford would like to see a return to the time before the liberal and capitalistic "drift" of the mid-nineteenth century. But for that to happen, Crawford clearly indicates that we must return to a former state of being: prior to the development of capitalism, of wage employment, factories, and the division of labour.

4.2.1 Taking seriously the imperative of responsibility

Such a process today seems barely imaginable. On the other hand, aspiring to enhance the quality of employment and of decent work *might* become one of the central elements of the scenario that would appear to be the logical outcome of the Paris Agreement adopted during COP 21: the scenario of ecological conversion. It consists in taking seriously the complete set of scientific works at our disposal and adopting the maxim suggested by Jonas in *The imperative of responsibility* (1985, p.11): "Act so that the effects of your action are compatible with the permanence of genuine human life". Jonas imagines that we will adopt strict social and environmental norms at an international level and organize rationally and rapidly to adapt our societies to those new constraints, and that our guiding light will no longer be the indicator calculating in exclusively monetary terms the greater amounts produced and the added human value, but physical, biological and social markers of the goods produced to satisfy social needs, framed in social and environmental norms compatible with the reproduction of society.

One of the great merits of this scenario is that it enables the ecological question to be solved at the same time as the social question. Some maintain that ecological conversion is synonymous with the loss of jobs and steeper prices; and that if ecological conversion demands that the objective of growth be relativized and that reasoning "beyond growth" becomes our way of thinking, we risk jeopardizing employment since it seems to be particularly dependent on growth. Here one would like to defend the point of view that we must in any case commit ourselves most urgently to the ecological conversion without expecting it to deliver a "double dividend", but that it is also possible to see it as a formidable opportunity both for retrieving full employment and for transforming work.

4.2.2 Sharing jobs

We must first of all remember that it is possible to create jobs without growth, simply by sharing the stock of jobs that in an economy are available at all times. Of the two million jobs created between 1997 and 2001, for instance, between 350,000 and 400,000 have been put down to the reduction of legal working time in France (Assemblée Nationale, 2014). True, they were created at a moment when growth

had picked up again both in Europe and France, but the results were due to the very fact that state aid depended on reducing working time and creating jobs. To answer economists who maintain that the notion of work sharing is flawed, they should be reminded that at all times in an economy a given number of hours are distributed over the entire population old enough to work and that this can be modified and done in different ways. Thus, while working time in France and Germany has diminished approximately to the same extent since the 1990s (in actual weekly or annual working hours the French today work more than the Germans), a week of full-time employment in Germany is today longer than in France but part-time jobs are much more numerous and working weeks of shorter duration than in France: 27 per cent of German jobs are in part-time work versus only 18 per cent in France; and 8 per cent of the occupied workforce in France puts in less than 20 hours per week versus 18 per cent in Germany. Part-time workers in both countries are almost exclusively women. Reducing the legal number of working hours in France – considered in a report by a parliamentary investigative committee in 2014 to be one of the least expensive employment policy measures (9,000 euros net per job created) (Assemblée Nationale, 2014) – sharply curtailed the development of part-time employment, mainly done by women and whose consequences in terms of professional inequalities are well known. It also allowed the start of a process to better balance the occupational, domestic and family investments of men and women (Méda and Orain, 2002; Méda, 2015) and retrospectively appears to have been one of the main conditions for creating gender equality. We must also not forget that in most countries, women still have lower rates of economic activity and employment than men, and that they give less time to occupational activities than men and more to domestic and family occupations. That might be the reason the policy unleashed such passionate confrontations. However, to summarize, it is possible to create employment in the absence of growth.

4.2.3 The need for a fair transition

Ecological conversion implies shutting down or diminishing certain sectors of activity and developing others, which should, according to existing international, European or national studies lead to a positive balance of jobs in 2020, 2030 and 2050 (UNEP, 2008; ADEME, 2013; ILO, 2013; Quirion, 2013; Horbach, Rennings and Sommerfeld, 2015; Neale, Spence and Ytterstad, 2015). This is because the economic activities that will be stimulated – building insulation, renewable energies, public transportation, etc. – represent many more jobs than those that disappear. But the synthesis of the United Nations Environment Programme (UNEP) report addressed to decision-makers stresses that, even if the net balance is positive, "Not everybody will gain from such a change, however. The typically positive job balance from greening an economy is the result of major shifts often within sectors. While some groups and regions are gaining significantly, others incur significant losses. These losses raise questions of equity, which if not addressed, can make green economy policies difficult to sustain." (UNEP, 2008, p. 16). Whether we consider countries, sectors, or categories of workers, ecological conversion will be an extremely delicate operation demanding powerful security mechanisms to prevent restructuring from leading to the eviction from the labour market of a large part of the workers employed in the sectors guilty of producing the most greenhouse gases. The "fair transition" promoted by trade unions seeks to defend the idea that ecological conversion must be carried out in a civilized manner, by pooling the gains and losses and developing real solidarity among all the members of society involved, so that the cost of the transition should be equitably shared by everybody (ITUC, 2015).

To achieve a system of production that can guarantee the same level of comfort as we are used to, without fossil fuels or nuclear energy, requires that we completely overhaul our energy infrastructure

(Bardi, 2015), mainly by using renewable energy (sun, wind, hydraulics, biomass), and programming the gradual prohibition of other sources (including underground reserves). It is a rich source of employment. Aside from the production of energy itself, the transformation of the whole system of production is brought into play – transportation, construction, industry and services – which implies both renewing the heating systems of buildings, putting up new sorts of edifices in which to produce or live, setting up new means of production, and developing public transportation, all with low emissions of greenhouse gases. Agriculture has a large part to play in the transformation, since it contributes to greenhouse gas emissions and other sorts of pollution and environmental degradation (excess use of water, fertilizers, overexploitation of soils, pesticides, etc.). Filling social needs, underestimated until now, is another source of employment: working in cultural centres and care centres for children and for seniors, providing education for all and services dedicated to people's well-being and comfortable living, all represent employment for millions of individuals in the 20 years to come, according to Gadrey (2014) in his blog entry "We can create millions of jobs in a durable perspective". ¹⁶

4.2.4 Breaking with productivism

Following Gadrey (2014), it is also possible to see ecological conversion not only as a chance to retrieve a form of full employment (entailing the redistribution of the total stock of working hours available and reducing the norms of full-time work) but also as a chance to surmount the loss of meaningful work. Seizing that chance implies breaking with our most cherished economic beliefs, and considering the idea put forth by Fourastié (1979) to be the most important: the idea that productivity is the heart of progress. Gadrey (2010) defends the idea that in several sectors – particularly due to the tertiarization of the economy - productivity gains per se, as they are (badly) measured have become counterproductive and destructive, both to jobs and to the meaning of work. What if the real question was no longer about the *distribution* of productivity gains but whether they are relevant or not? What if true progress today no longer depended on having the highest productivity gains but on achieving gains in quality and durability? What if a retrospective analysis of the productivity gains during the "economic miracle" were to reveal the overexploitation of workers and the environment that we are now being called upon to repair? What if these productivity gains are largely explained by the dilapidation of sources of energy and non-renewable resources (Pessis, Topcu and Bonneuil, 2013)? We would then need to bring all our efforts to bear on deploying productive ventures whose objectives would no longer be efficacy measured by the classical notion of productivity - that Adam Smith praised in his presentation of the pin factory – but quality and durability measured by other markers.

4.3 What are the conditions for an ecological conversion that fosters employment and decent working conditions?

Present-day accounting – whether of a nation or a firm – does not allow for gains in quality and durability to be measured.¹⁷ Alternative accounting systems have been suggested in recent years, and there is ongoing competition to find an indicator capable of complementing that of GDP: The Adjusted

Available at: http://alternatives-economiques.fr/blogs/gadrey/2014/11/30/on-peut-creer-des-millions-d%E2% 80%99emplois-utiles-dans-une-perspective-durable-5/ [Sept. 2016]

Richard (forthcoming) also writes: "the way private and public firms keep their books – the importance of which Max Weber pinpointed as an instrument codified by a firm's right to rationality – is one of the main causes, if not the major cause, of the dramatic situation affecting the human race today" (translated from French).

24

Net Savings plan, the Inclusive Wealth Index, the Better Life Index... Like their ancestor, the Indicator of Human Development (currently in the process of being revamped), they are made up of key variables supposed to give us a better idea than GDP of the state of health or wealth of a society. This competition opposes nothing less than world views; it is thus crucial to grasp their significant features ¹⁸ (Méda, 2013). Proposals to redesign firms' accounting methods have also been forthcoming, as in CARE (*Comptabilité Adaptée au Renouvellement de l'Environnement* [Accounting adapted to the Renewal of the Environment]; see Richard, 2012) which, were it applied, would oblige firms to assume responsibility for damage caused to our natural capital and to human labour and make provisions in their budgets to compensate for them (thus slashing their profits), or in "Triple Bottom Line", which aims to account for the impacts of organizations on the environment and on "stakeholders".

4.3.1 The need to care

Those approaches are supposed to allow the substitution of productive efficacy (measured solely by the greater amount of quantities produced) by another form of effectiveness that takes into account (internalizes) the probable impacts of production on the environment and on workers (those in the firm, stakeholders or all of society). Some authors –including me – propose gathering part of these thoughts under an alternative paradigm baptized "Care", thereby signifying that, from now on, production must obligatorily care for and care about our natural heritage, social cohesiveness and human labour. This would mean framing the act of production in a set of rules (social and environmental norms), that might constitute a new normative and accounting framework, thus triggering the development of new organizations of work at the service of quality (of the products and the work). Adopting such an alternative paradigm congruent with the objective of decent work – the aim of the ILO – obviously entails many changes, both the definition and function ascribed to a firm and the application of new rules on an international level.

Weber (2001) defended the idea that capitalism was a permanent quest for maximum profit and therefore implied a specific sort of firm: "But capitalism is identical with the pursuit of profit, and forever renewed profit, by means of continuous, rational, capitalistic enterprise" (p. 17). If such a configuration seems perfectly suited to the national objective of ever-increasing rates of growth, does not the objective of decent production and working conditions require the development of a different sort of dynamics and a different sort of firm? Robé (2012), a Jurist has shown that Milton Friedman's definition of a firm (which has the exclusive responsibility of making a profit) does not allow it to contribute in any systematic manner to the common good. The work of many economists, jurists, sociologists, managers and philosophers has in recent years highlighted the fact that other objectives should be considered to be legitimate pursuits for a firm and also that it is necessary to demonstrate and promote different forms of organization, enabling the unique character of a firm to be that of a project of collective creativity different from the classical forms of commercial exchange (Baudoin, 2012).

Net Savings Plan, for instance, rests on a lukewarm interpretation of sustainability that leads us to accept the idea that human intelligence is capable of creating, in the place of natural capital, an artificial capital that could be just as satisfying.

4.3.2 Reintroducing ethics into economics

Producing "cleanly" or "decently" – ecologically and socially – imposes the need to respect strict rules across a sufficiently large geographic area so as to minimize the risks of dumping, and a control system. During the nineteenth century, it was precisely such a system of social rules and regulations over the entire territory (particularly concerning working time and actual working conditions) that allowed improvements to be made in working conditions and workers' health care. It is high time the rules were refreshed, adapted to our times and to the new risks threatening our societies, in particular by honouring agreements on maximum greenhouse gas emissions and pollution levels. In these new accounting conventions, instead of a currency and "added" value in terms of money, the principal unit of measure could be the kilogram or a tonne of greenhouse gas. Similarly to carbon quotas but excluding the possibility of operating an exchange, each "unit" could be indexed on an emission quota calculated on the basis of a national endowment. Production would be obliged to respect those norms, without intensifying work.

This process would require a large number of countries to be compelled to respect the rules: if not, there would be a risk of social or environmental dumping, already the case today with the offshoring of dirty and filthy production to countries where the rules and regulations are not as strict. The ideal situation would obviously be one where worldwide institutions would prescribe the norms, organize their distribution, control their application and punish those who violate it. One can imagine a World Organization for the Environment that would set greenhouse gas quotas, as well as the International Labour Organization having more power than it has today and a specific body to monitor conflicts modelled after the World Trade Organization's (Delmas-Marty, 2004) that supervises social norms. Another solution might be to apply those rules to a single zone, the EU for example. Objectives decided for that zone would be adapted to the territories and the different units of production and consumption concerned.

Such an arrangement also supposes new rules for international trade. From our point of view – taking ecological risks seriously, especially the threat of climate change – it is impossible to allow international trade to continue driving ever-increasing production and consumption worldwide and allowing competing countries to compete for the largest parts of the market. A group of associations have recently proposed setting up an alternative commercial mandate in the EU: this would be a totally new procedure, initiating, negotiating and concluding trade agreements that afford civil society and parliaments an important place, organizing Europe's self-sufficiency in food production and leading it to reduce its imports of raw materials and manufactured goods, to give precedence to human rights over commercial interests, and to organize corporate responsibility (AITEC, 2014).

4.3.3 Beveridge back?

Such a process – the ethical control of production, converting polluted sectors to clean sectors, dematerializing and decarbonizing the economy, securing transfers of manpower, setting up public policies and institutions to organize the transition by stressing the quality of work and employment – would doubtless require a wartime or crisis economy similar to the one described by Lord Beveridge in his 1944 book, *Full employment in a free society*. Many authors point to the magnitude of the threefold crisis we are facing – economic, social and ecological – stressing that it requires policies and means radically different from the ones prevailing in normal times, in particular because it is necessary to

organize the coordination of myriad operations on several different levels. As a liberal, Beveridge considered that, in order to secure individual freedoms, the state must establish very strict rules, which would alone be capable of guaranteeing the sustainability of society. Considering that full employment was one of the central pillars of a free society, Beveridge listed the four criteria to make it possible: organization of massive public spending and investment to uphold economic activity, applying a policy of low prices for basic consumer goods and promoting a vigorous redistribution of income through social security and progressive taxation; controlling the localization of industry; organizing the mobility of the workforce; and entertaining trade relations only with countries that apply a policy of full employment, balance their accounts and avoid deficits as well as surplus, exercising absolute control over trade through tariffs, quotas or by other means. Far from considering that individual freedom was menaced by the state exercising the responsibilities that such circumstances placed on it, Beveridge saw it as the major determining factor for upholding freedom.

Committing our countries to the ecological transition today demands a steering capacity of the state probably as resolute as that during the Second World War and the reconstruction that followed, when national accounting and planning were developed in close association, and the issue was to rebuild our societies on new foundations. How can one imagine that defining the sectors whose conversion must get under way as quickly as possible would not demand serious planning by the state? How could it be done without defining the outlook for occupations and ambitious qualifications, conceived after much brainstorming with social partners and scholars from all disciplines in order to identify both the sectors of activity and the trades of the future? Stronger state intervention means a more collective definition of priorities in terms of social needs; it is the result of citizens deciding together what socially useful production is. Taking ethical considerations into account as part of the new definition of progress means exactly that: the need to re-establish production in a process of collective choice, within a framework of precise criteria.

Far from being contradictory, the solutions to social and ecological questions constitute a formidable opportunity to recover full employment and transform work. They suppose a clear break with the growth paradigm (Bailleux and Ost, forthcoming), adopting a new representation of the world – especially a renewed anthropology and cosmology, henceforth centred on incorporating and embedding human societies in nature – and abandoning the simplistic categories which have guided us. They also demand the adoption of international rules to guide our actions, new accounting systems and the reinvention of productive institutions whose main vocation is not just plain efficacy (ignoring their effects on nature, work and social cohesiveness), but the satisfaction of human needs with the obligation to respect ethical norms. Through a high-level of mobilization of civil society, one might be capable of spurring such a change, it still supposes an alliance between consumers preoccupied with the quality of products, and workers (as well as their representatives) preoccupied with the quality of work, and, in firms, breaking with the theory of value for the shareholder and corporate governance. It also supposes perhaps, as the French jurist Adéodat Boissard suggested in 1910 when the first Labour Code was being written, that - as was the case for the three types of political regimes that came in succession (patriarchy, monarchy and democracy) – the same might occur for the three types of economic regimes: that the family communism of the past and the conventional regime of capitalist, unequal sharing of today, be followed by a regime of proportional or cooperative sharing, one "that is applied more or less completely in production cooperatives" (Boissard, 1910, p. 4), where the most complete form of sharing is carried out by, or at least, within a stabilized wage employment regime, where the representation of workers is assured to the same extent as that of those who provide the capital.

5 Conclusion

The paper has provided the notion of work in a historical perspective, considering the fact that new meanings have enriched it over the centuries. We then examined the multiplicity of meanings, which have created a diversity of ways of relating to work, sketching a panorama of Europeans' expectations and how they are (or are not) satisfied with the reality of work as we know it. The paper then provides the effects of these changes on work and employment and the discourse currently in vogue according to which the technological revolution under way is leading inevitably to radical transformations, questioning in particular the technological determinism underlying that view and analysing the policies it implies. The paper then analysed the future of work in the coming decades in the light of the three broad scenarios, which are competing to present a mid-term view of the future of work. The most popular – the technological revolution – predicts both many job losses and a world-shaking change in the nature of work and suggests that major adjustments are needed for the wage employed society to be able to adapt. It is perfectly compatible with another scenario, also much debated: the reduction of the welfare state and of the systems of protection from which labour has benefited until now but which appear to be contradictory to the need to be competitive.

Neither of these scenarios is of the sort that could meet the huge expectations placed on work today. Both also choose to bypass the immense ecological challenges that confront all societies. However, far from succumbing to technological determinism, we can, in some conditions, transform that threat into an opportunity and turn ecological conversion into a chance to reconnect with the objective of full employment and to reduce the intensity of work. Such a programme demands that the Philadelphia Declaration or the Havana Charter be updated, i.e. by aiming not to separate economic efficacy from social justice.

In this paper, for heuristic reasons, each scenario and its consequences for work was examined individually, as well as its capacity to meet the expectations placed on work. But we might realistically imagine that they could develop simultaneously, to varying degrees and in various combinations. Though the scenarios of dismantling labour laws and of the technological revolution are perfectly compatible, one can also imagine them developing in such a way as to accommodate programmes of investment in the ecological transition; and it is possible that the technological revolution is particularly geared to sustaining a programme of ecological conversion. Changing labour laws could very well take place at the same time as the latter.

If we adopt the specific viewpoint of this article, which aimed to take the measure of present-day expectations concerning work and to grasp which strategies could best succeed in satisfying them, the answer seems obvious. Dismantling labour laws is accompanied by poor working conditions, which is contradictory to the expectations for self-fulfilment and personal development placed on work. Thus, the technological revolution as well as the ecological conversion may lead either to improvement or to decline. Though the emphasis placed on the ecological emergency seems, more than the two other scenarios, liable to bring about a relocalization of activities and a reduction in the intensity of work that should also not be taken for granted. Being concerned by one's natural heritage does not automatically imply being concerned by one's "social heritage", and particularly by the quality of work. We must consequently end by suggesting that at any rate, be it a question of technological evolution or of taking ecological questions seriously, their impact on human labour must be a priority and decent work a self-evident aim, and guaranteed in all cases.

References

- Abdelnour, S. 2014. "Quand l'auto-entreprenariat se substitue au salariat : pourquoi et comment payer le prix de l'indépendance ?", in S. Célérier (ed): *Travail indépendant : santé et conditions de travail*, Rapport de recherche No. 85 (Noisy-le-Grand, Centre d'études de l'emploi), pp. 21–34.
- Agence de l'Environnement et de la Maîtrise de l'Energie (ADEME). 2013. L'évaluation macroéconomique des visions énergétiques de l'ADEME 2030–2050 (Paris).
- Anderson, C. 2012. Makers: The new industrial revolution (New York, Crown Business).
- Arntz, M.; Gregory, T.; Zierahn, U. 2016. *The risk of automation for jobs in OECD countries: A comparative analysis*, OECD Social, Employment and Migration Working Papers, No. 189 (Paris, OECD Publishing).
- Assemblée Nationale. 2014. Rapport fait au nom de la Commission d'enquête sur l'impact sociétal, social, économique et financier de la réduction progressive du temps de travail. Available at: http://www.assemblee-nationale.fr/14/rap-enq/r2436.asp
- Association Internationale de Techniciens, Experts et Chercheurs (AITEC). 2014. *Pour un Mandat Commercial Alternatif de l'Union européenne*. Available at: http://aitec.reseauipam.org/IMG/pdf/Mandat_commercial_alternatif_Aitec.pdf [Sept. 2016]
- Autor, D.H.; Dorn D. 2013. "The growth of low-skill service jobs and the polarization of the US labor market", in *American Economic Review*, Vol. 103, No. 5, pp. 1553–1597.
- Bailleux, A.; Ost, F. Forthcoming. De la guerre des disciplines à celle des paradigmes : 6 hypothèses à l'épreuve du paradigme croissanciel.
- Bardi, U. 2015. Le grand pillage (Paris, Les Petits Matins/Institut Veblen).
- Barnosky, A.D. et al. 2012. "Approaching a state shift in Earth's biosphere", in *Nature*, Vol. 486, pp. 52–58.
- Baudoin, R. 2012. L'entreprise, formes de la propriété et responsabilités sociales (Lethielleux, Collège des Bernardins).
- Baudrillard, J. 1970. La société de consommation, ses mythes, ses structures, (Paris, Éditions Denoël).
- Beaudry, P.; Green, D.; Sand, B. 2013. *The great reversal in the demand for skill and cognitive tasks*, NBER Working Paper No. 18901 (Cambridge, MA, National Bureau of Economic Research).
- Beck, U. 1992. Risk society. Towards a new modernity (London, Sage Publications).
- Benzell, S.; Kotlikoff, L.; LaGarda, G.; Sachs, J. 2015. *Robots are us: Some economics of human replacement*, NBER Working Paper No. 20941 (Cambridge, MA, National Bureau of Economic Research).
- Beveridge, W.H. 1944. Full employment in a free society (London, Allen and Unwin).

- Bigot, R.; Daudey, E.; Hoibian, S. 2013. "La société des loisirs dans l'ombre de la valeur travail", CREDOC cahier de recherche No. 305 (Paris, Centre de recherche pour l'étude et l'observation des conditions de vie).
- Blanchard, O.; Tirole, J. 2003. *Protection de l'emploi et procédures de licenciement* (Paris, La documentation Française).
- Boissard, A. 1910. Contrat de travail et salariat : introduction philosophique, économique et juridique à l'étude des conventions relatives au travail dans le régime du salariat (Paris, Bloud et Cie éditeurs).
- Bollier, D. 2011. The future of work: What it means for individuals, businesses, markets and governments (Washington, DC, The Aspen Institute).
- Boston Consulting Group. 2015. The shifting economics of global manufacturing: How a takeoff in advanced robotics will power the next productivity surge. Available at: http://fr.slideshare.net/TheBostonConsultingGroup/robotics-in-manufacturing
- Brynjolfsson, E.; McAfee, A. 2011. Race against the machine: How the digital revolution is accelerating innovation, driving productivity, and irreversibly transforming employment and the economy (Lexington, MA, Digital Frontier Press).
- —; —. 2014. The second machine age (New York, NY, W.W. Norton & Company).
- Cahuc, P.; Kramarz, F. 2004. *De la précarité à la mobilité : vers une sécurité sociale professionnelle,* Rapport au ministre de l'Economie, des Finances et de l'Industrie et au ministre de l'Emploi, du Travail et de la Cohésion sociale (Paris, La documentation Française).
- Cardon, D.; Casilli, A. 2015. *Qu'est-ce que le digital labor?* (Bry-sur-Marne, INA).
- Cassiers, I. (ed). 2014. *Redefining prosperity*, Routledge Studies in Ecological Economics (Abingdon and New York, NY, Routledge).
- Castel, R. 1995. Les métamorphoses de la question sociale (Paris, Fayard).
- Chamoux, M.-N. 1994. "Sociétés avec et sans concept de travail", in *Sociologie du travail*, hors série (Montrouge, Dunod).
- Clark, A. 2005. "What makes a good job? Evidence from OECD countries", in: S. Bazen, C. Lucifora and W. Salverda (eds): *Job quality and employment behaviour* (Basingstoke, Palgrave Macmillan), pp. 11–30.
- Coase, R.H. 1937. "The Nature of the Firm", in *Economica*, New Series, Vol. 4, No. 16, pp. 386–405.
- Collins, R. 2014. "Emploi et classes moyennes: la fin des échappatoires", in I. Wallerstein, R. Collins, M. Mann, G. Derluguian and C. Calhoun (eds): *Le capitalisme a-t-il un avenir?* (Paris, La Découverte Editions), pp. 61–115.
- Commission of the European Communities. 2006. *Modernising labour law to meet the challenges of the 21st century*, Green Paper (Brussels).

- Conseil National du Numérique (CNNum). 2016. *Travail, emploi, numérique. Les nouvelles trajectoires* (Paris).
- Crawford, M.B. 2009. *Shop class as soulcraft: An inquiry into the value of work* (New York, NY, The Penguin Press).
- Crutzen, P.J.; Stoermer, E.F. 2000. "The 'Anthropocene", in *Global Change Newsletter*, No. 41, pp. 17–18.
- D'Iribarne, P. 1989. La logique de l'honneur. Gestion des entreprises et traditions nationales (Paris, Seuil)
- Daly, H. E. 1973. Toward a steady-state economy (San Francisco, CA, W.H. Freeman)
- Davoine, L.; Méda, D. 2008. *Importance and meaning of work in Europe: A French singularity*, Centre d'études de l'emploi working paper No. 96-2 (Noisy-le-Grand, Centre d'études de l'emploi). Available at: https://basepub.dauphine.fr/bitstream/handle/123456789/7016/work_europe_96_va.pdf?sequence=1&isAllowed=y [8 Sept. 2016].
- —; —. 2010. "Importance and meaning of work in Europe: Trends and differences among countries", in P. Vendramin (ed): *Generations at work and social cohesion in Europe*, Collection Work & Society No. 68 (Brussels, P.I.E. Peter Lang), pp. 47–72.
- de Jouvenel, B. 1968. Arcadie. Essais sur le mieux-vivre, Futuribles, (Paris, Sedeis).
- de Witte, H.; Halman, L.; Gelissen, J. 2004. "European work orientations at the end of the twentieth century", in W.A. Arts and L.C.J.M. Halman (eds): *European Values at the Turn of the Millennium*, No. 7 (Leiden, Brill), pp. 255–279.
- Delmas-Marty, M. 2004. Les forces imaginantes du droit : le relatif et l'universel (Paris, Editions du Seuil).
- Descola, P. 1983. "Le Jardin de Colibri. Procès de travail et catégorisations sexuelles chez les Achuar de l'Equateur", in *L'Homme*, Vol. 23, No. 1, pp. 61–89.
- Dorn, D. Forthcoming. "The rise of machine: How computers have changed work", in *Revue Française des Affaires sociales*.
- Ester, P.; Braun, M.; Vinken, H. 2006. "Eroding work values?" in P. Ester; M. Braun; P. Mohler (eds): *Globalization, value change and generations: A cross-national and intergenerational perspective* (Leiden, Brill), pp. 89–113.
- European Commission, International Monetary Fund, Organisation for Economic Co-operation and Development, United Nations, World Bank. 2009. *System of national accounts 2008* (New York, NY).
- Field, A.J. 2008. "Does economic history need GPTs?" Available at: http://ssrn.com/abstract=1275023
- Ford, M. 2015. *Rise of the robots: Technology and the threat of a jobless future* (MP3 Una edition, Brilliance Audio).
- Fourastié, J. 1979. Les trente glorieuses (Paris, Hachette).

- Frey, C.B.; Osborne, M.A. 2013. *The future of employment: How susceptible are jobs to computerization*. Available at: http://www.oxfordmartin.ox.ac.uk/downloads/academic/The_Future_of_Employment.pdf [9 Sept. 2016].
- Gadrey, J. 2010. Adieu à la croissance (Paris, Les petits matins).
- —. 2014. On peut créer des millions d'emplois utiles dans une perspective durable (5). Available at: http://alternatives-economiques.fr/blogs/gadrey/2014/11/30/on-peut-creer-des-millions-d%E2% 80%99emplois-utiles-dans-une-perspective-durable-5/ [Sept. 2016]
- —. 2015. Le mythe de la robotisation detruisant des emplois par millions. Available at: http://alternatives-economiques.fr/blogs/gadrey/2015/06/01/le-mythe-de-la-robotisation-detruisant-des-emplois-par-millions-1/ (translated from French).
- Gadrey, J.; Jany-Catrice, F. 2005. Les nouveaux indicateurs de richesse (Paris, Editions La Découverte).
- Gallie, D.; Zhou, Y. 2013. *Work organisation and employee involvement in Europe* (Luxembourg, Publications Office of the European Union).
- Gomel, B.; Méda, D.; Schmidt, N.; Dalmasso, R. 2007. "Le CNE: retour sur une tentative de flexicurité", *Connaissance de l'emploi*, No. 49 (Noisy-le-Grand, Centre d'études de l'emploi).
- Gordon, R.J. 2014. "The turtle's progress: Secular stagnation meets the headwinds", in C. Teulings and R. Baldwin (eds): *Secular stagnation: Facts, causes, and cure* (London, Centre for Economic Policy Research Press), pp. 47–59.
- Graetz, G.; Michaels, G. 2015. *Robots at work*, CEP Discussion Paper No. 1335 (London, London School of Economics and Political Science).
- Green, F. 2006. *Demanding work. The paradox of job quality in the affluent economy* (Princeton, NJ, Princeton University Press).
- Head, S. 2014. *Mindless: Why smarter machines are making dumber humans* (New York, NY, Basic Books).
- Heinberg, R., 2011. *The end of growth: Adapting to our new economic reality* (Gabriola Island, New Society Publishers).
- Hirsch, F. 1977. The social limits to growth (London, Routledge and Kegan Paul Ltd).
- Hofstede, G. 2001. Culture consequences: Comparing values, behaviors, institutions, and organizations across nations (New York, Sage Publications).
- Horbach, J.; Renning, K.; Sommerfeld, K. 2015. *Circular economy and employment* (Mannheim, Zentrum für Europäische Wirtschaftsforschung).
- Husson, M. 2010. "Croissance sans CO₂?", *Hussonet*, No. 24. Available at: http://hussonet.free.fr/crco2.pdf [8 Sept. 2016].
- Illich, I. 1973, Energy and equity (London, Calder & Boyars).
- Inglehart, R. 1990. *Culture shift in advanced industrial society* (Princeton, NY, Princeton University Press).

- Inglehart, R.; Baker, W.E. 2000. "Looking forward, looking back: Continuity and change at the turn of the millennium", in *American Sociological Review*, Vol. 65, No. 1, pp. 19–51.
- Intergovernmental Panel on Climate Change (IPCC). 2014. Climate change 2014: Synthesis report (Geneva).
- International Trade Union Confederation (ITUC). 2015. *Climate justice: There are no jobs on a dead planet*, Frontlines Briefing, ITUC, http://www.ituc-csi.org/ituc-frontlines-briefing-climate?lang=en [8 Sept. 2016].
- International Labour Organisation (ILO). 2013. Sustainable development, decent work and green jobs, Report V, International Labour Conference, 102nd Session, Geneva (Geneva).
- —. 2015. World Employment and Social Outlook: The changing nature of jobs (Geneva).
- National Institute of Statistics and Economic Studies (INSEE). 2015. Emploi et revenus des indépendants, INSEE Références, (Paris).
- Jackson, T. 2009. *Prosperity without growth: Economics for a finite planet* (Abingdon and New York, NY, Earthscan).
- Jaumotte, F.; Buitron, C.O. 2015. "Power from the people", in *Finance and Development*, Vol. 52, No. 1, pp. 29–31.
- Jonas, H. 1985. *The imperative of responsibility. In search of an ethics for the technological age*, (Chicago, IL, University of Chicago Press).
- Krausmann, F. et al. 2009. "Growth in global materials use, GDP and population during the twentieth century", in *Ecological Economics*, Vol. 68, No. 10, pp. 2696–2705.
- Levratto, N.; Serverin, E. 2013. "Become independent! The paradoxical constraints of France's 'auto-entrepreneur' regime", in *Journal of Small Business management*, Vol. 53, No. 1, pp. 284–301.
- Lipsey, R.G.; Carlaw, K.I.; Bekar, C.T. 2005. *Economic transformations: general purpose technologies and long term economic growth* (Oxford, Oxford University Press).
- Lobo, S. 2014. "Die Mensch-Maschine: Auf dem Weg in die Dumpinghölle", Der Spiegel, 3 September.
- Locke, J. 1690. Two treatises of government: in the former, the false principles, and foundation of Sir Robert Filmer, and his followers, are detected and overthrown. The latter is an essay concerning the true original, extent, and end of civil government (London, printed for Awnsham Churchill).
- Loungani, P. 2016, *Shaping the new world of work: The impacts of digitalisation and automatisation*, Paper presented at the ETUI-ETUC Conference 27–29 June (Brussels).
- Maddison, A. 2006. *The world economy: A millennial perspective* (Paris, Organisation for Economic Co-Operation and Development).
- Marx, K. 1979. Œuvres, tome II: Economie, Collection Bibliothèque de la Pléiade (Paris, Gallimard).
- Meadows D.; Randers J.; Behrens, W.W. 1972. *The Limits to Growth* (New York, NY, Universe Books).

- Méda, D. 2000. *Qu'est-ce que la richesse?* (Paris, Champs-Flammarion).
- —. 2010. Le travail, une valeur en voie de disparition? (Paris, Champs-Flammarion) (original work published 1995).
- —. 2013. La mystique de la croissance: Comment s'en libérer? (Paris, Flammarion).
- —. 2015. Le Travail: Que sais-je? (Paris, Presses universitaires de France).
- —; Orain, R. 2002. Transformations du travail et du hors travail: le jugement des salariés sur la réduction du temps de travail, in *Travail et emploi*, No. 90, pp. 23–38.
- —; Vendramin, P. 2013. *Réinventer le travail*, collection "Le lien social" (Paris, Presses universitaires de France) (forthcoming in English as *Reinventing Work in Europe*, published by Palgrave MacMillan).
- Mettling, B. 2015. *Transformation numérique et vie au travail*, Rapport à la Ministre du Travail, de l'Emploi, de la Formation professionnelle et du Dialogue social. Available at: http://zevillage.net/wp-content/uploads/2015/09/rapport-Mettling.pdf [9 Sept. 2016].
- Meyerson, I. 1955. "Le travail, fonction psychologique", in *Journal de psychologie normale et pathologique*, Vol. 48, No. 1, pp. 3–17.
- Mokyr, J. 2014. "Secular stagnation? Not in your life", in C. Teulings and R. Baldwin (eds): *Secular stagnation: Facts, causes, and cure,* (London, Centre for Economic Policy Research Press), pp. 83–89.
- Moore, G.E. 1965. "Cramming more components onto integrated circuits", in *Electronics*, Vol. 38, No. 8, pp. 114–117.
- Neale, J.; Spence, T.; Ytterstad, A. (eds). 2015. *Global climate jobs*. Available at: https://globalclimatejobs.files.wordpress.com/2015/09/global-jobs-online-sept-2015.pdf [9 Sept. 2016].
- OECD. 1990. Labour market policies for the 1990s (Paris).
- Parboteeah K.P. and Cullen J.B. 2003. "Social institutions and work centrality: Explorations beyond national culture", in *Organization Science*, Vol. 14, No. 2, pp.137–148.
- Parent-Thirion, A.; Vermeylen, G.; van Houten, G.; Lyly-Yrjänäinen, M.; Biletta, I.; Cabrita, J. 2012. *Fifth European working conditions survey: Overview report* (Luxembourg, Publications Office of the European Union). Available at: http://www.eurofound.europa.eu/publications/report/2012/working-conditions/fifth-european-working-conditions-survey-overview-report [10 Sept. 2016].
- Pessis, C.; Topçu, S.; Bonneuil, C. 2013. *Une autre histoire des 'Trente Glorieuses': Modernisation, contestations et pollutions dans la France d'après-guerre* (Paris, La Découverte).
- Pothier, R. 1764. Traité du contrat de louage, selon les règles tant du for de la conscience que du for extérieur (Orléans, J. Rouzeau-Montaut).

- Quirion, P. 2013. L'effet net sur l'emploi de la transition énergétique en France: Une analyse inputoutput du scénario négaWatt, CIRED Working Paper Series, No. 46–2013 (Nogent sur Marne, Centre International de Recherches sur l'Environnement et le Développement).
- Rey, A. 2012. Dictionnaire historique de la langue française (Paris, Dictionnaires Le Robert).
- Richard, J. 2012. Comptabilité et développement durable (Paris, Economica).
- Richard, J. Forthcoming. "Refonder l'entreprise, la société anonyme et l'intérêt social par la comptabilité".
- Riffault, H.; Tchernia, J-F. 2002. "Les Européens et le travail: Un rapport plus personnel", in *Futuribles*, No. 277, pp. 63–80.
- Rifkin, J. 1995. The end of work: The decline of the global labor force and the dawn of the post-market era (New York, NY, G.P. Putnam's Sons).
- Rifkin, J. 2015. *The zero marginal cost society: The Internet of Things, the collaborative commons, and the eclipse of capitalism* (London, Palgrave Macmillan).
- Robé, J.-P. 2012. "Being done with Milton Friedman", in *Accounting, Economics, and Law*, Vol. 2, No. 2, pp. 1–33.
- Rockström, J. et al. 2009. "A safe operating space for humanity", in *Nature*, No. 461, p. 472–475.
- Rosenblat, A.; Stark, L. 2015. *Uber's drivers: Information asymmetries and control in dynamic work*, workshop paper prepared for the Winter School "Labour in the on-demand economy" at the Centre for European Policy Studies (CEPS), Brussels, Belgium, 23–25 November.
- Sahlins, M.D. 1968. Tribesmen (Englewood Cliffs, NJ, Prentice-Hall).
- Scholz, T. 2016. *Platform cooperativism: Challenging the corporate sharing economy* (New York, Rosa Luxembourg Stiftung).
- Serverin, E. 2011. "Le salariat, au risque de l'indépendance", in L. Jacquot et al. (eds): Formes et structures du salariat : crise, mutation, devenir. Tome 2 : Des normes et transformations du travail salarié (Nancy, Presses Universitaires de Nancy), pp. 333–348.
- Smith, A. 1776. An inquiry into the nature and causes of the wealth of nations (London, W. Strahan and T. Cadell).
- Solow, R.M. 1986. "On the intergenerational allocation of natural resources", in *Scandinavian Journal of Economics*, Vol. 88, No. 1, pp. 141–149.
- Stewart, I.; De, D.; Cole, A. 2015. *Technology and people: The great job-creating machine* (London, Deloitte). Available at: http://www2.deloitte.com/uk/en/pages/finance/articles/technology-and-people.html [8 Sept. 2016].
- Stiglitz, J.; Sen, A.; Fitoussi, J-P.. 2009. Richesse des nations et bien-être des individus: Rapport de la Commission sur la mesure des performances économiques et du progrès social au Président de la République (Paris, Odile Jacob).

- Taylor, R. 2002. *Britain's world of work myths and realities*, ESRC Future of Work Seminar Series (Swindon, Economic and Social Research Council). Available at: http://www.leeds.ac.uk/ ESRCFutureofWork/downloads/fow_publication_3.pdf [9 Sept. 2016].
- Terrasse, P. 2016. Rapport au premier Ministre sur l'économie collaborative (Paris).
- Teulings, C.; Baldwin, R. (eds). 2014. *Secular stagnation: Facts, causes, and cure* (London, Centre for Economic Policy Research Press).
- United Nations Environment Programme (UNEP). 2008. Green Jobs: Towards decent work in a sustainable, low-carbon world. Policy messages and main findings for decision makers (Nairobi).
- Vendramin P. (ed). 2010. *Generations at work and social cohesion in Europe*, Work & Society No. 68 (Brussels, P.I.E. Peter Lang).
- Vendramin, P.; and Valenduc, G. 2016. Work in the digital economy: sorting the old from the new (Brussels, European Trade Union Institute).
- Vernant J.-P. 1965. Mythe et pensée chez les Grecs (Paris, Maspero).
- Voswinkel, S. 2007. "L'admiration sans appréciation. Les paradoxes de la double reconnaissance du travail subjectivisé", *Travailler*, No. 18.
- Weber, M. 2001. *The Protestant ethic and the "spirit" of capitalism* (Chicago and London, Fitzroy Dearborn).
- World Economic Forum (WEF). 2016. The future of jobs. Employment, skills and workforce strategy for the fourth industrial revolution (Geneva).
- Zoll, R. 1999. "Mutation des orientations des jeunes par rapport au travail", in Ministère de l'emploi et de la solidarité (ed.): *Travail, activité, emploi. Une comparaison France-Allemagne* (Paris, La Documentation française), pp. 9–14.

Future of Work Centenary Initiative



Issue Note Series

The world of work is undergoing major changes that will continue, and potentially intensify, in the future. To better understand and in order to respond effectively to these new challenges, the ILO has launched a "Future of Work initiative" and proposed four "centenary conversations" for debates in the years leading up to its centenary anniversary in 2019: (i) work and society; (ii) decent work for all; (iii) the organization of work and production; and (iv) the governance of work. This Issue Note Series intends to provide an overview of key trends and issues in selected thematic areas of particular relevance to the "conversations" with a view to informing and facilitating dialogue and debates at the national, regional and global levels.

Comments and suggestions should be sent to futureofwork@ilo.org

TECHNOLOGICAL CHANGES AND WORK IN THE FUTURE: Making technology work for all*

This note analyses the effects of technological changes on the quantity and quality of jobs and discusses policy challenges in developing a skilled workforce, avoiding job polarization and assuring equal distribution of productivity gains.

* This note is based on contribution from Irmgard Nübler.

1. Setting the scene: Key issues and overview

Technological change is recognized as a major driver of growth and development. In economic thinking, for instance, it is common to assume that long-term growth can be explained largely by technical progress. Robert Solow who received a Nobel Prize in economics for his growth theory once estimated that technical progress accounted for around 80 per cent of US economic growth in the first half of the 20th century (Solow, 1957).

Technological changes are also inevitably dynamic processes which involve: (a) both job destruction and creation; and (b) transforming existing jobs, particularly in how work is organized. Both aspects have critical implications for workers, employers and their families. The extent and speed of technological changes have always been subject to economic and social debates, typically with diverging views between optimists and pessimists.

The recent wave of technological change within the digital paradigm is once more garnering wide-spread attention. While there is a broad consensus on its productivity potential, recent years have witnessed growing concerns – not entirely unlike those of the past – about the "labour replacing potential" of this kind of technological change (ILO, 2015). Some believe that the current wave has already reached a tipping point so that a jobless digitalization of the economy (or society) could be a reality in the near future. Others disagree. Some are more optimistic, noting the sequential process of job creation which is often stronger than job destruction. Still others admit that technological innovation puts jobs at risk, but that this is not inevitable. In the latter view, the future impacts of technology on the labour market will depend on social choice and policy actions and thus a job-rich digital economy is deemed to be an attainable future.

This issue note reviews recent analysis and debates on the possible impacts of ongoing and recent technological innovations on work in the future. Given the breadth of the subject

area – and the huge cross-country variations, especially between industrialized and developing countries – this note concentrates on major trends, the forces shaping these trends, and issues most commonly observed globally. Based on the selective review, the note will identify key questions which merit, and should lay the groundwork for, further in-depth analysis and policy discussion in the coming years.

Technological change is a complex, non-linear, evolutionary and resource-intensive process which is driven not only by economic, but also by social and political forces. Moreover, technological change is not homogenous, and is defined broadly to take into account different forms of change and innovation that affect the quantity and nature of individual tasks in different ways. Technological change is reflected in the creation of new knowledge, the implementation of an original or significantly improved product, or a different production technique, workplace, or business model, and in the wide diffusion of these innovations within the economy.

The note is structured as follows: as technological change is not new, Section 2 looks back at the past role of technological change and its effect on the world of work, and the debates that have accompanied it, which show that techno-pessimism has often failed to materialize.

However, history does not always repeat itself. So the question is: will this time be different? Section 3 examines this critical question by looking at distinctive features of the current wave of technological changes (often called the Fourth Industrial Revolution) with a historically unprecedented potential of job destruction. We then examine the opposing case which argues that technological change is associated with strong job creation and net gains in total employment. The most recent studies in this area, including a variety of projection results, are reviewed for each of these contrasting views.

Obviously, only time will tell which trajectory the future will take, and, as discussed below, policies will also matter in shaping the future. However, there are other important dimensions which go beyond employment volume. It is well known that technological changes have significant distributional consequences, with winners and losers. Section 4 looks at three issues of particular importance in the current economic and social contexts: (a) impacts on job quality, especially given the ongoing trend towards job polarization; (b) social and economic adjustments driven by technological changes (e.g., new skill requirements, geographical relocation); and (c) (re)distribution of productivity gains between different economic and social groups, given the global trend of widening income inequality.

Section 5 concludes the note with a short summary and proposes a list of major questions for further in-depth analysis and debate.

2. What does history tell us?

While technological changes may have eventually led to new job creation, they typically began with "labour-saving" efficiency gains (i.e., job shedding) and the speed of such technological efficiency enhancement was often faster than that of creating jobs for displaced workers. In a sense, job destruction comes first and compensating actions follow, typically at a slower speed. Thus, historically, technological changes have been the source of anxiety and even discontent. The early 19th century saw the massive introduction of textile machines which provoked the well-known Luddite movement. Since then, the overall response to technological innovation has become less negative, but it has continued to be viewed with considerable apprehension as the job losses stemming from these changes have been a reality for many firms and workers. As early as 1930, John Maynard Keynes called such job loss "a new disease" and introduced a new term, technological unemployment: "unemployment due to our discovery of means of economising the use of labour outrunning the pace at which we can find new uses for labour" (Keynes 1930).¹ Debate on this persists.

Since its inception in 1919, the ILO has provided a global avenue for discussing the employment

¹⁻ But Keynes added "this is only a temporary phase of maladjustment. All this means in the long run that mankind is solving its economic problem. I would predict that the standard of life in progressive countries one hundred years hence will be between four and eight times as high as it is to-day. There would be nothing surprising in this even in the light of our present knowledge" (ibid).

impacts of technological progress. For instance, in response to emerging doubts about the employment impacts of rapid mechanization and automation (i.e., standardization of products and production processes which allows jobs performed by workers to be encoded in algorithms which could be performed by machines) in the 1950s, the ILO Director General submitted a report which stated "past experience shows no reason to believe that technological innovation led to a decrease in the global volume of employment. On the contrary, it suggests that such innovations, while they may cause declines in some areas of employment, led in the long run to an expansion of employment by creating increases in other areas" (ILO 1957, p. 29). However, techno-pessimism gained strength in the 1960s, which led the ILO to discuss the "labour and social implications of automation and other technological developments" at its 1972 annual International Labour Conference (ILC).

It is interesting that the ILC report of 1972 began by examining the latest trends in reference to "the opinions expressed during the 1950s and the early 1960s" which were predominantly pessimistic (the ILC report referred to it as "automation scare"). Noting that "much of the discussion was of a theoretical nature and was based more on opinions than on facts", it concluded that the consequences of technological changes were "in most respects much less dramatic than had earlier been feared". It added:

Many of the forecasts made in the early fifties have been clearly disproved by the real course of events. Probably one of the most striking was the prediction made by Norbert Wiener, an authority on cybernetics, when he said in 1950 that automation deriving from computers and cybernetic feedback controls would result within twenty-five years in a depression which would make that of the 1930s seem like a "pleasant joke". Twenty-two years later, it does not seem likely that his prophecy will come true either by 1975 or – fortunately – even during the following twenty-five years" (ILO 1972, p. 4).

Similar debates were observed in the 1960s in the US where concerns about "the automation jobless" led President Johnson to set up a national commission which eventually concluded that these concerns were not grounded (Autor, 2015).

Technological innovation gained further momentum after the 1970s, with the usual cyclical up-downs, but overall employment volume in both absolute and relative terms expanded. As a simple illustration, Figure 1 shows the employment-to-population rate in OECD countries between 1960 and 2015. The rate for men declined significantly but such decline was more than offset by the rapidly increasing employment rate for women. This contrasting development between men and women, in part, reflects technological changes which shifted the economy away from the male-dominated manufacturing to service sectors. Overall, the employment rate has increased by around 10 percentage points over the last 55 years. In fact, ILO's World Employment Reports (1996/7, 2001) concluded that aggregate data do not support the fear of massive technological unemployment ("the end of work").

Figure 1. Expanding employment in the era of technological innovation: Employment-to-population rate, 1960-2015 OECD countries

Source: ILO and OECD, age group 15-64

3. Will this time be different?

Job destruction: how bad will it be this time?

Our historical experience to date tends to discredit techno-pessimism when it comes to the overall employment outcome, but history does not always repeat itself. The question, therefore, is: will this time be any different in terms of net job destruction; and if so, how?

Some observers believe that we are witnessing a critical departure from the historical pattern to date, highlighting the unique nature of the current wave of technological changes, sometimes referred to as "the Fourth Industrial Revolution" (Schwab, 2015). One of the arguments underpinning this view is that this round of revolution builds on the achievements of the previous waves of technological change (including information technology (IT) and automation) and brings them all together to produce an unprecedented – and exponential – pace of productivity growth.

Automation has also intensified, resulting in much stronger job-replacement effects. The new manufacturing technologies leading to Industry 4.0 are expected to introduce a new wave of automation of jobs in logistics, coordination and communication. The move towards automating the full value chain by manufacturing and integrating autonomous robots equipped with sensors that collect and analyse data, into a data network that boosts inter- and intra-firm connections could increase productivity exponentially. Indeed, some expect increasing and persistent technological unemployment due to the disruptive effects of the innovative use of information and communications technology (ICT), the diffusion of learning robotics, the Internet of things and 3D printing (McAfee and Brynjolfsson, 2014), and some foresee a jobless future (Ford, 2015).

This growth in automation is combined with ongoing competitive pressures in the context of globalization. Enterprises are under strong pressure to enhance productivity and to reduce costs. Competition induces firms and the research and development (R&D) sector to search for new production technologies in order to create opportunities for enterprises to enhance productivity and competitiveness. These competitive pressures have been driving automation and the fragmentation of production systems as two long-term trends in process innovations that enhance productivity by saving labour and thereby destroying jobs.

As a result, the pessimistic perspective argues that the unprecedented nature of current technological change is essentially biased to "labour-saving" even in the long term. The question becomes: how bad will it be this time?

A variety of efforts have been made to estimate the potential magnitude of job destruction. For example, Frey and Osborne (2013) explored the potential automation of occupations, that is, the technical easiness or feasibility of computerizing occupations. They estimated that 47 per cent of total US employment is technically in a high risk category "over the next decade or two". The comparable estimate for the UK is 35 per cent, and studies for Germany and France produced similar results. An ILO study has recently produced a much higher estimate for ASEAN countries: about three in five jobs face "a high risk of automation" (Chang and Hyunh, 2016), thus raising important questions about regional variations in job destruction.

Critics, however, argue that future automation is unlikely to destroy complete occupations; rather, jobs within occupations will vary, and while some jobs may disappear, others will only change (Autor and Handel, 2013). Studies analysing jobs rather than occupations find significant lower risks for job losses. Arntz, Gregory and Zierahn (2016) find that automation will replace some tasks which will fundamentally change the nature of jobs workers will perform, but the jobs themselves are not at risk. They conclude that in OECD countries on average about 9 per cent of jobs are at high risk of being automated, ranging from 12 per cent in Austria, Germany and Spain to around 6 per cent or less in Finland and Estonia.

In addition, recent technological changes have often facilitated outsourcing/offshoring and made the production process more fragmented, with the potential of making job losses more severe in developed countries. New technologies in transport, information and communication technologies as well as new institutions such as trade agreements and free trade regimes have enabled increasing fragmentation in order to enhance productivity. Initially, jobs of workers were routinized, with a specialization on a narrow sequence of tasks. The search for productivity increase with economies of specialization and agglomeration has motivated firms also to specialize in particular tasks within countries, and finally to specialize in specific tasks within global value chains. Outsourcing of labour intensive production tasks has resulted in the fragmentation of production processes across borders, and the relocation of low-skilled jobs from developed countries to low-wage countries. During the past decades, developed economies have specialized in high-skilled tasks such as R&D, design, finance and after-sales services, while developing countries have attracted many of the low- wage and low-skilled jobs which could not yet be automated.

Overall, it is widely expected that high competition in global markets will continue to drive automation and fragmentation, though the new wave of specialization may be driven more by the service sector than by manufacturing. On the one hand, new production technologies requiring sophisticated skills are expected to re-shore or in-source jobs and disrupt value chains. For example, new robots can perform sewing tasks which so far had remained a job for "nimble fingers" in low- wage countries (The Economist, 2015, May 30). On the other hand, the spill-over of digital technologies, powerful algorithms and learning software (artificial intelligence) will result in the decomposition of professional jobs, and relocation of jobs from developed to developing countries. Brown and Lauder (2013) foresee a process of "digital Taylorism". Enterprises will divide office services into specialized tasks similar to the process of Taylorism in manufacturing. Digitalization allows relocation of these tasks to developing countries. Even complex service tasks will be outsourced to developing countries due to the growing number of high-skilled workers there along with wages that are two-thirds lower than in developed economies.

Yet new jobs will also be created: Mechanisms and magnitude

The gloomy picture has been questioned by many other researchers who point to the potential of new job creation. While the direct impact of innovations aimed at the productivity enhancing process is job-destroying, these innovations and their intended consequences have the potential to trigger new economic activities and create jobs (with the potential of net positive job creation at the aggregate level). There are indeed various mechanisms, outlined below, which can channel such changes (Vivarelli, 2007).

First, there are complementarities between new technology and employment within a given sector. For instance, as Autor (2015) explained, the introduction of ATMs reduced labour demand for tellers but this was offset by large expansions in the number of branches. In addition, the new technology itself enables the banks to broaden the range of their services, particularly through "relationship banking" in which bank staff members introduce various banking services to the customers in person.

Second, the technological spill-over effect creates jobs. The same process innovations which displace workers in the user industries create demand for workers in the producer industries. New robots and smart machines need to be developed, designed, built, maintained and repaired. Furthermore the fragmentation of production systems, the Internet of things, Industry 4.0, digital Taylorism, driverless cars and other phenomena will increase demand for the construction of new infrastructure, transport equipment and IT equipment as well as increasingly complex software and new institutions. Many developing countries will need to construct a reliable supply of electricity, transport and IT infrastructure.

Third, technological innovation leads to other innovations. New scientific knowledge opens "exploitable opportunities" not only for process technologies but also for the development of new products. Creative entrepreneurs design and develop fundamentally new goods and services, develop new business models and create new jobs. The Industrial Internet of Things (IIoT) and Big Data have created a new business model – manufacturing-cum-service – where firms combine manufacturing with data creation that leads to additional product innovations. For example, Michelin has developed tires with sensors to collect information on road conditions, temperature and speed, which provides the opportunity to provide services to truck fleet managers in order to reduce fuel consumption and costs. At the same time, software enterprises such as Google combine new technologies to expand into manufacturing by developing a driverless car (Accenture Technology, 2014).

Fourth is the price and income effect (Acemoglu and Restrepo, 2016). Technology-induced productivity growth, if translated into higher wages, income, purchasing power and reduced prices, will enhance demand for domestic products and expand output. Furthermore, lower costs will enhance competitiveness, while higher profits will stimulate investment. This will lead to further productivity gains through innovation and scale economies. These income and market expansion effects have the potential to compensate for the loss of employment (Vivarelli, 2007). For instance, technological advances in health care can reduce health costs which then increase demand for more sophisticated medical services.

Fifth, the implementation of labour saving process technologies has resulted in declining working hours. This has led to increasing demand for leisure related activities, a wide range of product innovations, entire new leisure industries and services, and the creation of new jobs. Sports, health, recreation, tourism, music, TVs, computer games, restaurants, fairs and museums, and the do-it-yourself movement starting in the 1980s are examples of this phenomenon. Evidence also shows that leisure industries have become increasingly technology intensive, and hence, jobs have become increasingly complex (Posner, 2011). The potential of increased future demand for leisure activities depends on the translation of technological advances into reduced working time rather than unemployment. Thus, the distribution of productivity gains arising from new production technologies to consumers is critical to ensure rising purchasing power and demand.

If these mechanisms all exist, then, "technology eliminates jobs, not work" (Bowen 1966, cited in Autor, 2015).

Will this time be different? It is hard to predict but further research and well-informed debates will be necessary in the coming years. One important point in this debate is the recognition of country variations with respect to the impacts of new technologies on job destruction and creation processes. Empirical evidence shows that countries differ significantly in innovation activities, growth of robotization and integration into the global value chains (GVC), and in the impact of these process innovations on net job creation. Even more interesting is that the correlation between these new process technologies and employment is not clear cut and indeed

both the job-destruction and job-creation effects differ across countries (Timmer et al, 2015; Graetz and Michaels, (2015). For example, despite the fact that Germany had the highest rate of growth in robots, far surpassing the rate in the United States, the net job loss in manufacturing employment as a share of total employment was much lower when compared to the US (Nübler, 2016).

More generally, we need to better understand the country-specific forces that allow some countries to rapidly adopt new technologies, gain competitiveness and create product innovations as part of the economic adjustment process. The compensation effects are created by markets, but markets do not work in a vacuum. Rather, they are embedded in societies, whose capacity to innovate, mobilize resources for new economic activities, and to learn to compete have shown to be important determinants of product innovation and job creation (Cheon, 2014; Nübler, 2014; Paus, 2014).

4. Beyond employment volume: Job quality, economic and social adjustment, and distributional challenges

Our analysis thus far shows that the outcome of the Fourth Industrial Revolution may not be as negative as some pessimistic observers have suggested. Creating more jobs than destroying them is a possible trajectory in the near future. Even in this positive scenario, however, there are many other issues which deserve serious policy debate, and the economic and social outcomes of technological changes tend to depend much on how countries address these issues.

More specifically, there seem to be three broad issues:

- First, technological changes will transform the nature and quality of existing and new jobs. Simply put, the key concern here is whether and how we will be able to avoid the destruction of good jobs and the creation of bad jobs, even though total employment increases. The point is well captured by Gordon (2016, p. 604): "The problem created by the computer age is not mass unemployment but the gradual disappearance of good, steady, middle-level jobs that have been lost not just to robots and algorithms but to globalization and outsourcing to other countries, together with the concentration of job growth in routine manual jobs that offer relatively low wages." In developing countries, the key concern is to generate patterns of diversification that generate more and better jobs.
- Second, the dynamic process of job destruction and creation involves significant changes and adjustments for workers and companies as well as communities, which are often painful and costly. The outcome of technological changes depends on how these adjustment processes are managed. This is not just about market processes but also the social and political choices that communities make and the policies they implement.
- Third, technological changes can bring about significant productivity gains. Again, the impact on the world of work within countries and across the globe will depend on how such gains are distributed between economic and social groups. This point is particularly important as today's technological innovation is taking place when overall income inequality has already reached a historic high (Piketty, 2014).

Will technological changes destroy middle jobs and exacerbate job polarization?

Technological change not only affects the quantity of jobs, but also the nature and quality of jobs. While there are various ways of describing the quality of jobs, the ILO (1990) defines a job as "a set of tasks and duties, performed, or meant to be performed, by one person, including for an employer or in self-employment". This defines a job by the scope, nature and profile of tasks and these job properties determine the occupational profile. Autor et al. (2003) describe the tasks of a job both as routine or non-routine and as manual or cognitive. They show that automation first replaced manual routine tasks and increasingly has replaced non-routine

tasks; while recent multiple new technologies have allowed the automation of increasingly complex tasks, in particular routine and non-routine cognitive tasks.

Many of the emerging mobile robots will not replace humans, but will augment their cognitive, collaborative and physical capabilities. Workers will increasingly focus on those tasks that cannot be performed by computers and as a result, jobs will become more complex. Collaborative worker-machine interaction requires a higher level of autonomy of operators and designers, shifting focus from rule-following to value-finding. Managers working with smart and connected machines which will support day-to-day management decisions, and take over routine decisions, require more softs skills acquired mainly through experience, such as good judgement, creativity and problem solving. Managers will have to frame the questions which computers have to answer, address exceptional circumstances highlighted by increasingly intelligent algorithms, and learn to cope with ambiguity. Furthermore, the nature of jobs in research, development, and design will become more experimental as digital modelling and simulation make experiments less expensive, and work processes will increasingly be structured around "design-build-test" cycles.

Moreover, product innovations driven by the Internet of things, Big Data, Industry 4.0 and digital Taylorism have the potential to create jobs in a wide range of new knowledge-oriented occupations. New occupations will emerge, in particular at the intersection of professions, software and machines, such as big data architects and analysts, cloud services specialists, software developers and digital marketing professionals (Frey, 2016). Susskind and Susskind (2015) predict that a range of new legal roles will be created at the intersection of software and law, such as legal knowledge engineer, legal technologist, project manager, risk manager, and process analyst.

An important issue in this context is whether the demand for higher-skilled occupations comes at the cost of middle-skilled jobs, i.e., whether it will create the polarization of jobs or a "hollowing out". For example, Autor, Levy and Murnane (2003) found that since the 1980s, the share of middle-skilled routine jobs in the US decreased relative to low - and higher -skilled jobs. However, recent studies by Graetz and Michaels (2015) and Timmer, Los and de Vries (2015) estimate the impact of robotization and globalization on jobs during the 1990s and 2000s and confirm the results for the US but find limited evidence of widespread job polarization elsewhere.

Job polarization can also be observed at a global level, especially when technological progress occurs unevenly with low-income countries lagging behind. For instance, most African countries still face low levels of technological advancement, and only a small number of them have managed to transform their economies by generating economic dynamism thorough technological upgrading. Evidence shows that patterns of change in occupational composition differ widely across countries. While some countries increase the share of high-skill intensive and middle-skill intensive jobs, others demonstrate job polarization as defined above, and some countries simply increase the share of medium-skilled jobs (ILO, 2015).

How can we manage economic and social adjustments for technological upgrading?

The dynamic process of technological change and innovation does not happen in a vacuum or in a predetermined way and results in a wide range of economic and social adjustments, which can disproportionately affect certain workers, firms and communities (in some cases countries and regions). Experience shows that the outcome of technological changes depends on how these adjustment processes are managed and whether or not they include support for communities and displaced workers (including training and income support) and start-up incentives for firms. These processes tend to be complex and resource-intensive, but it is often taken for granted that such adjustments will take place.

New task profiles for jobs and new occupations can significantly alter the nature of skills needed for production and innovation. This challenges education and training systems, enterprises and families to provide the skills needed in the future, and to promote the development

of diverse and complex sets of competences in the labour market. First, workers need to acquire the right set of skills to be employable and to respond rapidly to changing skills requirements. Such competences relate to technical, but also to core skills such as creativity, imagination, openness to new ideas, social and communication skills. Yet, during phases of rapid technological change many of the specific skills sets which will be needed in the future are unknown or uncertain. Education and training systems face the challenge of reducing this risk and enhancing the flexibility of workers and the portability of their skills.

Productive transformation policies are also needed to drive the diversification of enterprises into new products and industries. The recent debate on productive transformation highlights particularly the role of industrial dynamics, macro-economic effects and innovations on structural change in driving the creation of good jobs (Salazar-Xirinachs, Nübler, Kozul-Wright, 2014). Economic models also show that sustained growth in productivity and good jobs requires diversification of the economy, the expansion of high-tech activities, and a dynamic growth in domestic and international demand (Astorga, Cimoli and Porcile, 2014).

A fundamental message is that markets alone cannot trigger this complex adjustment process in conjunction with technological changes andthat proactive and deliberate government policies and institutions are critical to support such processes. Evidence shows that successful Asian catching-up countries transformed their industrial structure in favour of high-tech sectors and higher demand elasticity sectors. To achieve this they implemented industrial, trade, investment, education, training, macroeconomic and labour market policies to generate learning, productive transformation and job creation processes. Many Latin American countries as well as African countries have been unable to generate productivity and job enhancing dynamics of structural change. Recent experience shows once more that Asian countries have used integration into global value chains as a means to increase the complexity of their economy while Latin American countries followed a strategy that reduced their economic complexity (Nübler, Kümmritz and Rubínová, 2016).

It is also important to note that technological change comes in long waves, and that phases of productivity-enhancing innovations and job destruction are followed by phases of product innovations that create fundamental new goods and services and trigger what Perez has called a "Golden Age of job creation". This second phase has led each time to interconnected innovations - ".... technical and organizational and managerial innovations, ... opening up an unusually wide range of investment and profit opportunities". This is the phase where enterprises create value by developing new products and markets, and where new industries replace incumbent industries as drivers of growth. Again, markets cannot achieve this transition; history shows that this is a socio-political choice. Creating a Golden Age phase requires a fundamental transformation of economies and this can only be achieved by transformation of societies, which is essentially a process of collective learning (Nübler, 2016). Based on her framework of historical recurrences, Perez (2013) argues that countries are currently at the turning point at which they need to make social and political choices, forge a new social consensus and develop new institutions to drive the path towards new consumption and production patterns (Nübler, 2016).

Distributional challenges of technological changes and productivity gains: How real, and what policies?

Productivity gains from technological innovation are substantial and may continue to be so. In the era of wider IT applicability and globalization, economies of scale (and productivity gains) are likely to be even larger. However, because these gains have gone primarily to the owners of such innovation, recent technological changes have contributed to widening inequality (ILO 2014, 2015). The job polarization noted above has led to a rise in inequality in many countries, due to the unequal distribution of high productivity gains arising from innovations among capital owners, skilled and unskilled workers and consumers. Moreover, the expected increase in the skills of managers, and in particular the important soft skills that can only be acquired though experience, may contribute to rising inter-generational inequality. Thus, with continued technological advancement, inequality will likely increase further.

However, the current level of inequality is already high, posing serious economic and political risks (ibid.) and a global consensus has emerged for the need to tackle this divide (G20, 2016). In addition, it is important to note that technological innovation, as discussed above, is the result of collective and cumulative effort by individuals and companies over generations, and therefore its benefits should be shared widely.

This is also an important economic issue. The concentration of productivity gains among certain economic groups (hence, widening inequality) can depress overall consumption and thus constrain economic growth. If this is combined with technological unemployment, it can create significant shortfalls in aggregate demand, which in turn could be a serious blow to the global economy, given the persistent weakness of aggregate demand since the beginning of the Great Recession. As Ford (2015, p.190) put it:

"Accelerating technology is likely to increasingly threaten jobs across industries and at a wide range of skill levels. If such a trend develops, it has important implications for the overall economy. As jobs and incomes are relentlessly automated away, the bulk of consumers may eventually come to lack the income and purchasing power necessary to drive the demand that is critical to sustained economic growth".

For this reason, some commentators have suggested basic income as a counter-policy measure. This would guarantee minimum living standards for all, irrespective of employment status, thus maintaining the consumption demand. This idea is not new. In the 1960s when technology pessimism was strong, the commission set up by President Johnson observed that the "cybernation revolution" resulted in "a system of almost unlimited productivity capacity which requires progressively less human labor" and "the traditional link between jobs and incomes" was broken. It therefore proposed that "society, through its appropriate legal and governmental institutions, undertake an unqualified commitment to provide every individual and every family with an adequate income as a matter of right".

More broadly and historically, productivity gains tend to be shared with workers in the form of higher wages and/or shorter working hours. However, in recent years, wages have tended to stagnate in many parts of the world (ILO 2014, 2015) and only modest progress in reducing working hours has occurred, especially for full-time workers (ILO, 2011). For this reason, hourly wages, which could increase as a result of higher hourly rates or shorter hours, have lagged behind labour productivity.

Overall, an important feature of the current wave of technological innovation which may distinguish itself from the previous waves is that the pace is progressing while inequality is already high, jobs are increasingly polarized, and the labour market is deeply segmented. Given the significant risk of worsening these trends, debates should focus more on policy actions to tackle the distribution of productivity gains.

5. Wrap-up: Key questions for future debates

Technological changes have been a defining character of market economies, often inviting opposing views on their impacts on work. Employment volume has defied techno-pessimism repeatedly, but history does not always repeat itself. Indeed, the current wave of technological changes (i.e., the Fourth Industrial Revolution) includes various elements which could make this time different. However, studies have also identified new sources of job creation which could potentially offset job losses. Understandably, projections on employment volume in the coming years differ sharply. In light of this, debates are needed, with new empirical analysis using a variety of methodologies, with a focus on this overarching issue:

■ How can "full employment" be achieved in the context of current and future technological changes?²

² The ILO Philadelphia Declaration (1944) explicitly recognized achieving "full employment" as ILO's solemn obligation. This is reflected in the Employment Policy Convention (No. 122) which commits future ratifying States to "declare and pursue as a major goal an active policy designed to promote full, productive and freely chosen employment".

- In addressing this question, the following specific questions will need to be examined:
 - Which jobs and occupations are at the risk? At the same time, what are the new potential sources of job creation?
 - If net job loss is inevitable, how can society find complementary ways of creating jobs that help achieve full employment (e.g., the care economy)?
 - How are these dynamics of job destruction and creation played out at the global level?
 - What policies, at both national and global levels, can be helpful in realizing the full potential of new job creation?
 - The transition of economies into new and dynamic industries with a huge job-creating potential requires transformative technological change, mission-oriented innovations, and a new social consensus. How can social dialogue play an instrumental role in shaping this process?

In addition, technology has critically important effects on job quality, economic and social adjustments, and distributional challenges.

First, some evidence indicates that the current technological changes may exacerbate the ongoing trend towards job polarization; this has the potential of further segmenting the labour market, crowding out the middle class, and widening wage inequality. In light of this, debates must also focus on questions such as:

- Is technology-driven polarization inevitable? What policies and institutional changes are needed to tackle job polarization and, more broadly, the deterioration of job quality? Will education and skill policies be sufficient?
- How will new technologies change the nature of jobs in different occupations and different levels? What will be the defining properties of new jobs, and most importantly, will they be perceived as quality jobs?

Second, technological changes do not happen in a vacuum or in a mechanical way but require a wide range of economic and social adjustments. Experience shows that the outcome of technological changes and the nature of innovations depend on how these adjustment processes are managed. In light of this, debates are needed, with a sharpened focus on:

- What are good practices and what capabilities are needed in managing this adjustment process? What are the key elements of success, especially in terms of articulating a wide range of labour market policies, education and training policies, industrial policies and macroeconomic policies?
- How should we redistribute work within the labour force and adjust working time in the light of net jobs destruction? What are innovative models and what can we learn from past experience?

Third, current technological changes have created huge productivity gains which, to date, have exacerbated income inequality. Given the already visible economic and political risk of widening inequality, how to address the distributional challenge of productivity gains will be an important factor in shaping the future of work and society. In light of this, critical debates are required, with a focus on:

- How can we manage the (re)distribution of productivity gains to reduce inequality while maintaining purchasing power and demand in order to strengthen compensation effects, sustainable economic growth and job creation?
- How can fiscal and wage policies become effective instruments in sharing productivity gains with consumers and creative entrepreneurs?
- Do we need a new "paradigm-shifting" way of thinking about income distribution (e.g., basic income)?

REFERENCES

Accenture Technology, 2014. "Driving unconventional growth through the industrial internet of things", https://www.accenture.com/ch-en/labs-insight-industrial-internet-of-things, Accenture.

Acemoglu, D.; Restrepo, P.; 2016. The race between machine and man: Implications of technology for growth, factor shares and employment, NBER Working Paper No. 22252, Issued in May 2016, National Bureau of Economic Research, 1050 Massachusetts Ave., Cambridge, MA.

Arntz, M. G.; Zierahn, U. 2016. *The Risk of Automation for Jobs in OECD countries: A comparative Analysis*, OECD, Social, Employment and Migration Working Papers No 189, Paris, OECD Publishing.

Autor, D. H.; Levy, F.; Murnane, R. J. 2003. "The skill content of recent technological change: An empirical exploration", in *The Quarterly Journal of Economics*, Vol. 118, Issue 4, pp. 1279-1333.

Autor, D. H.; Handel, M. J. 2013. "Putting tasks to the test: Human capital, job tasks, and wages", *Journal of Labor Economics*, Chicago, III, University of Chicago Press.

Autor, D.H. 2015: "Why are there still so many jobs? The History and future of workplace automation" in *Journal of Economic Perspectives*, Vol. 29, No. 3, pp. 3-30.

Astorga, R.; Cimoli, M.; Porcil, G. 2014. The role of industrial and exchange rate policies in promoting structural change, productivity and employment, in Salazar-Xirinachs et al. 2014, ILO, Geneva.

Ashton, D.; Brown, P.; Lauder, H. 2011. "The global auction: The broken promises of education, Jobs, and Incomes", Oxford, Oxford University Press.

Bowen, H. R., Chairman. 1966. *Report of the National Commission on technology, automation and economic progress*, Volume I., Washington, U.S. Government Printing Office.

Brynjolfsson, E.; McAfee, A. 2014. "The second machine age: Work, progress, and prosperity in a time of brilliant technologies", W. W. Norton & Company Inc Publishers, New York.

Chang, J. H.; Huynh, P.; Rynhart, G. 2016. ASEAN in transformation. Automotive and auto parts: Shifting ears, Bureau for Employers' Activities (ACT/EMP), Working Paper No.12, ILO, Geneva.

Cheon, B.Y. 2014. "Skills development strategies and the high road to development in the Republic of Korea", in *Transforming Economies: Making industrial policy work for growth, jobs and development*, in: Salazar-Xirinachs, J.M.; Nübler, I. and Kozul Wrigth R., ILO, Geneva.

Frey, C. B. and Osborne, M. A. 2013. *The future of employment: How usceptible are jobs to computerisation?* Working Paper No. 7, Oxford Martin School, University of Oxford, 34 Broad Street, Oxford, UK.

Frey, C. B. 2016. "Project syndicate, creative destruction at work", www.project-syndicate.org, 4 Washington Square Village, New York.

Ford, M. 2015. "The rise of the robots: Technology and the threat of a jobless future", Basic Books, 250 W. 57th St., New York.

Gordon, R. J. 2016. "The rise and fall of American growth: The U.S. standard of living since the Civil War", Princeton, NJ, Princeton University Press.

Graetz, G.; Michaels, G. 2015. *Robots at work*, LSE Centre for Economic Performance, CEP Discussion Paper No 1335, March 2015, LSE, London.

International Labour Office, 1957. The Report of the Director-General: Part 1 – Automation and other technological developments (Geneva,).

International Labour Organization, 1972. International Labour Conference 57th Session Geneva: Labour and Social Implications of Automation and Other Technological Developments, Geneva.

ILO. 1990. "International Standard Classification of Occupations: ISCO-88", Geneva.

ILO. 2015a. Employment and new technologies: Opportunities for Africa's youth, Background note, African Regional Meeting, 30 November – 3 December 2015, Addis Ababa.

ILO: 2015b. Report of the Director-General, ILC, 104th Session, 2015: *The Future of Work Centenary Initiative* (Geneva).

ILO. 2015. *G20 Employment Working Group: Inequality in G20 countries: Causes, impacts, and policy responses*, Korea Institute for International Economic Policy, ILO Geneva. http://www.ilo.org/wcmsp5/groups/public/--dgreports/---dcomm/documents/meetingdocument/wcms_398847.pdf.

Keynes, JM. 1930: "Economic possibilities for our grandchildren", in *The Nation*, The Nation Company, L.P., New York

Nübler, I. 2014. "A theory of capabilities for productive transformation: Learning to catch up", in: Salazar-Xirinachs, J.M., Nübler, I. and Kozul-Right, R., *Transforming Economies: Making Industrial Policy Work for Growth, Jobs and Development*, ILO, Geneva.

2016. New technologies: A job-less future or a Golden Age of job creation? Working paper 13, Research Department, ILO, Geneva.

Nübler, I.; Kümmritz, V.; Rubínová, S. 2016 (forthcoming). *GVCs and economic complexity—a comparative analysis of China, South East Asia and Latin America*, Working paper. Geneva, ILO, Research Department.

Paus, E. 2014. Industrial development strategies in Costa Rica: When structural change and domestic capability accumulation diverge, in: Salazar-Xirinachs et al, 2014, Geneva, ILO.

Perez, C. 1983. Structural change and assimilation of new technologies in the economic and social systems, Futures (ISSN 0016-3287), 15 (5), Elsevier, Amsterdam.

Perez, C. 2002. "Technological revolutions and financial capital: The dynamics of bubbles and golden ages, Edward Elgar Publishing Ltd, The Lypiatts, Cheltenham.

Perez, C. 2013. "Financial bubbles, crises and the role of government in unleashing golden ages", Working Paper Finnov No. 2-2012, in Pyka and Burghof, Routledge, London.

Piketty, T. 2014. "Capital in the Twenty-First Century", Boston, Mass, The Belknap Press of Harvard University Press.

Posner, S. 2011. "Leisure time and technology", http://ieg-ego.eu/en/threads/crossroads/technified-environments/stefan-poser-leisure-time-and-technology, EGO - European History Online, Leibniz Institute of European History (IEG), Mainz.

Schwab, K. 2015. "The Fourth Industrial Revolution", in *Foreign Affairs* https://www.foreignaffairs.com/articles/2015-12-12/fourth-industrial-revolution, and e-book http://www3.weforum.org/docs/Media/KSC_4IR.pdf, World Economic Forum, Geneva.

Solow, R. 1957. "Technical change and the aggregate production function" in Review of Economics and Statistics, Vol. 39, No. 3, pp. 312-320, Boston, Mass, MIT Press.

Spezia, V; Vivarelli, M, 2000. "The analysis of technological change and employment", The Employment Impact of Innovation. Evidence and Policy, eds. M. Vivarelli, M. Pianta, Routledge, London.

Susskind, R.; Susskind, D. 2015. "The Future of the Professions", Oxford, Oxford University Press.

The Economist, 2015. Technology Quarterly, "Made to measure", May 30th 2015, p.1.

Timmer, M.P.; Los, B.; de Vries, G.J. 2015. *Incomes and jobs in global production of manufactures*, Groningen Growth and Development Centre, Faculty of Economics and Business, (University of Groningen).

Vivarelli, M. 2007. *Innovation and employment: A Survey*, IZA Discussion Paper No. 2621, Institute for the Study of Labor, Bonn.

Future of Work Centenary Initiative



Issue Note Series

The world of work is undergoing major changes that will continue, and potentially intensify, in the future. To better understand and in order to respond effectively to these new challenges, the ILO has launched a "Future of Work initiative" and proposed four "centenary conversations" for debates in the years leading up to its centenary anniversary in 2019: (i) work and society; (ii) decent work for all; (iii) the organization of work and production; and (iv) the governance of work. This Issue Note Series intends to provide an overview of key trends and issues in selected thematic areas of particular relevance to the "conversations" with a view to informing and facilitating dialogue and debates at the national, regional and global levels.

Comments and suggestions should be sent to futureofwork@ilo.org

THE FUTURE OF LABOUR SUPPLY: Demographics, migration, unpaid work*

This note details key demographic dynamics already impacting the Future of Work as well as two significant trends in the labour market – unpaid work and labour migration – that create global policy opportunities in light of those demographic changes.

* This note is based on contributions from: Christiane Kuptsch, Uma Amara, Dorothea Schmidt, Laura Addati, Paul Comyn and Kieran Walsh

1. Introduction

The ongoing debate about the Future of Work often pivots around on the impact of technology. While technological innovation will play a critical role in shaping jobs, we cannot ignore global demographic trends as well as changes in the nature of work that already confront us at global, regional, and national levels. These dynamics have profound implications for the labour market. They will continue to do so, since machines are unlikely to fully replace the labour of human beings any time soon (see the FoW Issue Note No. 1).

Workers make decisions about whether, how, and where to work within a complex environment of labour market policies, employment strategies, social protection systems, societal norms and cultural changes, as well as levels of technological and other development within their communities and countries. Policy decisions we make today set the stage for future job growth, gender and wage inequality, and the ways in which we will need to harness technology.

This issue note is about the people who will shape the future of work. It attempts to capture some of the complexities of the policy arena in which people make decisions about work by focusing on key demographic trends, as well as two of the most significant developments in the world of work today: unpaid work, and migration. Section 2 on labour supply and demographics looks at some of the characteristics of today's and tomorrow's workforce and points to policy innovations that are likely to shape future labour market participation. Section 3 relates to labour supply for free: unpaid work and examines the link between unpaid work, labour supply and inequalities, especially gender inequality. Section 4 looks into labour supply on the move: migration, covering numerical, geographical and policy trends in migration and old and new drivers of labour mobility. Section 5 concludes by proposing key issues for debate.

2. Labour supply: Demographical dynamics

Demographical changes continue to be a defining feature of the labour market. They are often complex with considerable variations between countries, but can be grouped around three dimensions: youth, ageing and women.

The number of new entrants into the labour market is increasing in many countries. Currently, close to 40 million people enter the labour market each year. Between now and the year 2030 the world economy needs to create close to 520 million new jobs in order to match the projected increase in the size of the labour force. This is most likely an under-estimation as it does not reflect possible increases in female and older worker labour force participation and migration flows. Considerable heterogeneity exists between regions: in sub-Saharan Africa, for instance, the working-age population as a share of the total population is expected to continue to increase between 2015 and 2040, while it will stagnate in Latin America and decrease in East Asia as well as in advanced economies (ILO, 2016a).

Youth

Youth unemployment is already at much higher levels than average unemployment for the adult populations (ILO, 2015a). Currently, 71 million youth are unemployed and there is a "jobs gap" of about 62 million jobs. In 2015, almost 43 per cent of the global youth labour force was either unemployed or living in poverty despite having a job. The latter is the result of the low quality of jobs available to young people. This dire situation increases the challenges involved in creating jobs for new young entrants into the labour market.

A key response to the continued, sometimes worsening situation for youth has been the improvement of the quality of labour supply through education and training. Indeed, recent decades have witnessed significant improvements in terms of training and educational opportunities for youth, including through new and innovative training methods such as web-based training courses (e.g., Massive Open Online Courses (MOOCs)). Despite these improvements, however, many young people, especially in developing countries, do not have access to education. In 2015, 31 per cent of youth in low-income countries had no educational qualifications at all, compared to 6 per cent in lower middle-income countries and 2 per cent in upper middle-income countries (ILO, 2015a).

At the same time, despite some progressive improvements in their skills, young men and women continue to suffer disproportionately from insufficient job opportunities. This suggests the need for broader and integrated strategies which can boost labour demand. Studies and experience show that such strategies could build on the following principles: (a) articulating macroeconomic policies, labour and employment policies and targeted interventions in a coherent manner; (b) increasing fiscal incentives, supporting the development of infrastructure, and developing enabling regulations for enterprises operating in sectors with high employment potential for youth; (c) ensuring that young people have the right skills and support when searching for employment; and (d) targeting disadvantaged youth through comprehensive packages of active labour market policies to help them in their school-to-work transition.

Ageing

People now live longer and healthier lives and have fewer children. While these demographic changes certainly indicate great progress in human development, they have also led to trends towards ageing in many countries. For the time being, developed economies are hit the most, however it will only take one generation until almost all societies will start ageing. The share of the world's population over 65 is projected to increase from 8 per cent today to nearly 14 per cent by 2040 (Harasty and Schmidt, forthcoming 2016).

This demographic shift poses a range of policy challenges for which there are no easy answers. For example, questions arise as to the role of the social security system in an ageing society.

This question is even more challenging for developing countries, where coverage and benefit levels remain insufficient (ILO, 2013a; see also the FoW Issue Note No.4 on social contract). Partly to address the sustainability of social security in some countries, active ageing (including how to "re-activate" older people for labour markets) has emerged as an important policy tool. While such a strategy has gained wide recognition, it remains difficult to develop policies which are acceptable to all age and professional groups. The perception that "older workers steal from young" persists although evidence to support this view is largely lacking (Harasty and Schmidt, forthcoming 2016).

Women

While there is a common perception that women's labour market participation has increased in many countries, this is not the reality at the global level. In fact, female participation rates decreased from 52.4 to 49.6 per cent between 1995 and 2015, and gender gaps in the participation rates remain large at around 27 per cent (ILO, 2016c). This is compounded by a relatively high risk of unemployment for women compared to men (6.2 per cent and 5.5 per cent, respectively), particularly for young women. In some regions such as North Africa and the Arab States, young women find the transition from school to work much harder and the female youth unemployment rate is almost double that of young men (ILO, 2016b).

The declining trend in women's labour force participation reflects in part the voluntary with-drawal of women from labour markets as a result of increasing living standards (i.e., the pattern known as "M curve" in which the female participation rate decreases with higher income and then bounces back once the level of income reaches a certain threshold) as well as the fact that they are spending more time in school. However, the decline is disappointing, particularly given the considerable improvement in the quality of female labour supply. Globally, the rates of educational attainment and gender parity are increasing. Enrolment and completion rates in primary and secondary education are steadily growing and leading to increased participation in post-compulsory education and training, resulting in a more highly educated labour force. In 2009, 73 per cent of 184 countries had reached gender parity at the primary or secondary level or at both levels (UNESCO, 2012). There are also more young women than men in universities in 60 countries and women form the majority of the world's university graduates (World Bank, 2011).

There are strong reasons to believe that sluggish female participation has much to do with the quality of the jobs offered. It is well documented that women workers end up in lower quality jobs more often than their male counterparts. Women in employment are also overrepresented in a narrow range of sectors and occupations, where low quality jobs, informality, inequality and precariousness prevail (ILO, 2016c). In most developing countries the share of women engaged in self-employment and contributing family labour is higher than that of men. Even when the overall income improves, these workers sometimes decide to withdraw from the labour market rather than move to other jobs unless jobs on offer are sufficiently attractive. In addition, in developed countries with low female participation rates (e.g., Japan, Republic of Korea), greater emphasis is being placed on improving job quality for women.

Another critical factor underlying low female participation is the fact that unpaid work is undertaken predominantly by women as a result of economic, social and cultural constraints. This issue is examined in the next section.

3. Labour supply 'for free': Unpaid work

The term "unpaid work" is often used in a loose way, creating some confusion. In 2013, an international statistical standard was adopted which identified a variety of unpaid forms of work which fulfil different functions either for the workers themselves or society as a whole.¹ Among these are: (a) unpaid trainee work; (b) volunteer work; (c) own-use provision of goods (work done to produce goods for consumption by the household or family); and (d) own-use provision of services (work done to provide services to the household or family, including unpaid household and care work).²

Economic value of unpaid work

While "unpaid work" has long been deemed to have "no monetary value", various measures exist to value this labour. For instance, country-level estimates highlight the economic significance of unpaid household services, beyond their individual and social value. If such services are valued on the basis of their replacement (i.e., market) cost they amounted to 20 to 60 per cent of GDP in 2015 (UNDP, 2015). Similarly, an estimated 971 million people worldwide engage in unpaid, non-compulsory volunteer work.³ On a full-time equivalent basis, this equates to over 125 million workers, with approximately one quarter participating through organizations and the other three quarters volunteering directly (The Johns Hopkins Center for Civil Society Studies, 2011). Tentative estimates as of 2005 place the value of volunteer work at USD 1.348 trillion or 2.4 per cent of the entire global economy (The Johns Hopkins Center for Civil Society Studies, 2016, forthcoming).

Unpaid work as captured in categories (c) and (d) above, has a clear gender dimension, reflecting cultural norms and traditions about women's unequal share of unpaid household and care work. Perceptions about care responsibilities contribute to pervasive inequality in political, social and economic spheres even in countries where women are relatively more empowered (ILO, 2016). In both high-and lower-income countries, women on average perform at least two and a half times more unpaid household and care work than men, although the gender gap in time spent on unpaid work has narrowed over time in industrialized countries (United Nations, 2015). Using the estimated economic value of unpaid household work, this means that women's economic contributions to the household are approximately three times those of men.

Hidden costs for women

The gender distribution of unpaid work affects the ability of women to pursue employment and other activities such as education, participation or access to discretionary free time, including rest. Performing unpaid work also bears an opportunity cost and is therefore potentially impoverishing. "Time poverty" in both higher-and lower-income countries particularly affects women and correlates with individual and social well-being and quality of life (UNRISD, 2016 forthcoming). In high-income settings, poor work-family balance has been also identified as a "new social risk" (Esping-Andersen, 2009; Taylor-Gooby, 2004). A 2015 poll of more than 9,500 women in the G20 countries found that work-family balance was the top work-related issue for women, flagged as such by 44 per cent of the respondents. Equal pay and harassment were ranked second and the third respectively (Ipsos MORI, 2015). In a 2015 ILO survey of 1,300 private sector companies in 39 developing countries, the greater burden of family responsibilities borne by women than by men was ranked as the number one barrier to women's leadership (ILO, 2015a).

Boosting women's participation in the labour market requires the economic recognition of unpaid work by creating market demand for or public provision of those activities, in particular care-giving. This need has grown in the context of an ageing society. Meeting the care demand is partially organized at the global level through migration flows, a phenomenon which some observers have labelled as "global care chains". Social reproduction is ensured by relying on female migrants who fill care-related jobs, in particular domestic workers, child-minders, nurses and other occupations in personal care service, in response to care shortages in ageing

- ^{1.} Resolution 1, Resolution concerning statistics of work, employment and labour underutilization (Geneva, ILO, 2013).
- ² As defined in the resolution concerning statistics of work, employment and labour underutilization, "own-use production work" refers to "any activity to produce goods or provide services for own final use". This includes household accounting and management, preparing and serving meals, cleaning, decorating and maintaining one's own dwelling, and also childcare, transporting and caring for dependents, including the elderly and other household members.

3. Ibid, p.8.

higher-income countries. Women in low-income countries leave their own children with relatives or employ a domestic helper themselves – often another internal or international migrant. The scale of the global care chain is considerable. In 2015, the ILO estimated that of the total of 150.3 million migrant workers, 11.5 million – or 17.2 per cent – were domestic workers (see also Section 4).

How to socially organize unpaid work

Recognizing the social and economic value of unpaid work, especially care work, has led to greater attention on how to provide for it. For instance, improved work-life balance has received increased funding and policy focus through, on the one hand, shifting care work out of the family sphere to public or market institutions (e.g., Sorj, 2013), and, on the other hand, supporting more equal sharing of care responsibilities between women and men. Examples of these policies include better maternity protection for all working women as well as longer and better paid paternity and parental leave schemes, which encourage men to take leave by applying a 'take it or lose it' approach instead of allowing it to be fully shared among partners. However, major gaps exist in the provision of adequate and affordable childcare services and long-term and disability care (ILO, 2016c; Scheil-Adlung, 2015). To address this global gap, Sustainable Development Goal 5 ("Achieve gender equality and empower all women and girls") includes a specific goal: "5.4. Recognize and value unpaid care and domestic work through the provision of public services, infrastructure and social protection policies and the promotion of shared responsibility within the household and the family as nationally appropriate."

In addition, the provision of basic incomes and services through social protection systems contributes to addressing the balance between pressures to engage in paid employment and the importance of care-giving and other unpaid work. Experiments in the provision of basic incomes have shown both social and economic benefits (Forget, 2011), although in lower-income countries unpaid work has so far failed to become a systematic variable in policy design and implementation. Globally, over 800 million women do not have access to income security in the form of cash transfers around childbirth (ILO, 2014). Women also represent nearly 65 per cent of people above retirement age (varying for most countries from 60 to 65) without entitlements to regular social security benefits. This means that some 200 million women are living without any regular income from an old-age or survivor's pension, compared to 115 million men (ILO, 2016c).

The expansion of the care economy for the reasons noted above presents both opportunities and challenges for the future of the labour market. In fact, policies to date have failed to simultaneously guarantee care receivers' and caregivers' well-being, including decent working conditions for paid care providers (ILO, 2016; UNRISD, forthcoming). Yet the care economy has the potential for future large-scale job creation in both developing and industrialized countries assuming that social protection systems ensure that all people in need can afford care services (ILO, 2015b). For instance, recent estimates show that investment in the care economy of 2 per cent of GDP in just seven high-income countries would create over 21 million jobs. It is also argued that public investment in the care economy would also lead to the creation of comparatively better quality jobs (with social security benefits) (ITUC, 2016).

4. Labour supply 'on the move': Migration

Another critical dimension of labour supply is the growth of a global workforce 'on the move'. Migration decisions are complex, involving demand-pull factors (e.g., attractive job opportunities), supply-push factors (e.g., lack of jobs, natural or political disasters) and combinations of both. Large and diverse networks which comprise everything from moneylenders who provide the funds needed to pay an agent to cross the border, to employers or friends in the destination country who help migrants find jobs and places to live, contribute to migration decisions. The factors that motivate migrants to cross borders rarely have equal weight in individual migration decisions, and the weight of these factors can change over time. Global inequality

between countries in terms of economic and social performances also underlies the current trend towards growing migration.

Increasing and more complex

An estimated 244 million persons in 2015 qualified as international migrants, defined as persons living outside their country of birth for more than 12 months, an increase of 71 million or 41 per cent since 2000 (UN, 2015). This trend has gone hand in hand with an increased feminization of labour migration, as more and more women migrate not as accompanying family members but as workers. According to ILO global estimates, of the 150 million migrant workers in 2015, 44.3 per cent were women (ILO, 2015).

Migration has also reached an unprecedented level of complexity due to the simultaneous process of regionalization and globalization (ILO, 2014; Abel and Sander, 2014) and a blurring of categories. Some 20 years ago, one could relatively easily distinguish between migrant sending and receiving countries as well as transit countries. Today almost every country is an origin, host and transit country at the same time.

With these trends likely to continue in the future, the extent to which migrants' skills are recognized and linked to meaningful employment becomes an important issue. There is increasing emphasis on validation and recognition of skills (including those of migrant workers) and expansion of bilateral and regional mutual recognition arrangements based on learning outcome models. The growth of international qualifications and online credentials is also contributing to new debates on the potential of world reference levels (UNESCO, 2015). Common global standards could make cross-border migration more attractive in the eyes of prospective migrants as they would be less exposed to 'brain waste', i.e., having to work in jobs below their level of qualification.

Shifts in policies

Migration policies have also continued to evolve. One noticeable development with significant implications is the reliance on more temporary labour migration programmes as opposed to permanent immigration (OECD, 2008). The ILO has detected a worldwide "mushrooming" of temporary foreign worker schemes that typically place more stringent and less favourable conditions of admission and stay on less-skilled workers relative to better-skilled workers, and feature strong return control mechanisms, often regardless of actual labour market needs (ILO, 2012).

Temporary foreign worker programmes have potential advantages over programmes of permanent immigration, including meeting acute labour demand without having to bear costs of integrating migrants on a long-term basis; avoiding 'brain drain' (i.e., the permanent loss of highly qualified nationals) in origin countries; and meeting the preference of migrant workers and their families to return to their home countries. These programmes also have the potential to create a class of vulnerable workers who depend entirely on their employer for their regular immigration status.

The views on policies that seek to attract global talent are mixed. The optimistic view stresses its potential of forging closer links between developing and developed countries which would eventually lead to convergence in economic performance and less migration over time. Yet the pessimistic view holds that countries that are already prosperous will win the global quest for talent thereby widening global inequality (Kuptsch and Pang, 2006).

At the other end of the skills spectrum, programmes designed to fill low-skilled jobs lead to concerns about the conditions under which migrant workers work. Such programmes often provide diminished labour rights, which tend to contribute to downward pressures on wages and working conditions in entire sectors. Not all employment protection legislation is applied to temporary migrants (Kuptsch, 2015) and it may be difficult to implement non-discrimination policies. According to international labour standards and in particular ILO's migrant specific

Conventions (No. 97 and No. 143), a migrant worker can claim the right to equal treatment at work in comparison with a worker who is a citizen of the host country. However, this is difficult to operationalize where sectors or occupations become "migrant jobs", shunned by local populations (ILO, 2014), where asserting rights carries with it high risks of retaliation, and access to remedies is costly. Furthermore, temporary foreign worker programmes may create incentives for both migrant workers and employers to prolong the working relationship beyond the initial agreement and authorization under immigration regulations: migrant workers may not have met their saving targets while employers may wish to benefit more from the training that they have imparted to their foreign employees. Where a move into irregularity takes place, migrants become even more vulnerable to exploitation.

5. Issues for debates

This note has identified key trends in the areas of labour supply, focusing on demographics, unpaid work and migration. The challenges are broad, intense and complex, requiring comprehensive and integrated responses. The note has also stressed that the future of labour supply will not just depend on individual (economic) decisions but also on policies which should build on evidence, common vision, and social dialogue.

In view of these issues, constructive debates are needed on:

- Activation: What policies would be needed to ensure an increase of the quality and quantity of jobs available for all those currently inactive? What incentives can be used to increase labour force participation?
- Ageing: Ageing societies have special needs in terms of investment and consumption that can be a motor for job creation. What is the job potential in ageing societies? Can the jobs created in ageing societies fill current and future jobs gaps? Would social economy approaches suit ageing society needs better than the existing economic models?
- Unpaid work and the care economy: The extent and distribution of unpaid work is a key determinant of labour supply and inequalities in the labour market, especially gender inequality. What kinds of sets of policies are needed to promote both paid and unpaid work in a sustainable and balanced way? How can we ensure that the value of unpaid work is recognized and considered in the development of policies, particularly those that deal with employment? How can these policies be adjusted to reflect cultural and economic realities in different countries? How can different delivery mechanisms (such as care co-operatives, civil society, and volunteering) be used to provide caring services typically delivered through the unpaid work of household members and thereby enable further engagement in paid work? What is the adequate and sustainable policy mix to recognize, reduce, redistribute and give representation to unpaid work and generate well-being for both caregivers and care recipients?
- Migration: Globally coordinated policies are urgently needed to avoid making migrant workers a 'global under-class'. Are we moving even further towards a global segmentation of labour markets along with persistent discriminatory practices against migrant workers? How can we ensure that migrants are seen as individuals with workers' rights, not as members of an 'alien' group?
- Skills: The issue of skill development and recognition cuts across the future of labour supply. What policies will ensure that education and training systems continue to improve their capacity to anticipate and respond to skill needs through higher quality and more relevant programmes and institutions? What measures need to be taken with a view to meaningfully recognizing the skills of migrant workers and deploying them where the need is greatest?

REFERENCES

Demographics

ILO. 2016a. World employment and social trends (Geneva).

2016b. Young and female – A double strike? Gender analysis of school-to-work transition surveys in 32 developing economies (Geneva).

2016c. Women at work trends (Geneva).

2015a. Global employment trends for youth (Geneva).

2015b. Youth and rural development: Evidence from 25 school-to-work transition surveys (Geneva).

2014. Informal employment among youth: evidence from 20 school-to-work transition surveys (Geneva).

2013a. Report to the ILC 2013: Employment and social protection in the new demographic context (Geneva).

2013b. Men and Women in informal economy: A statistical picture (Geneva).

Harasty, C.; Schmidt, D. (forthcoming July 2016). *Revisiting dependency ratios in ageing societies*, ILO Employment Policy Working Paper Series (Geneva, ILO).

Lansky, M. et al 2016. Women, gender and work; Social choices and inequalities (Volume 2) (Geneva, ILO).

Vanek, J. et al. 2014. Statistics on the informal economy: Definitions, regional estimates and challenges, WIEGO Working Paper No. 2. (Cambridge and Manchester, WIEGO).

Unpaid work

Esping-Andersen, G. 2009. *Incomplete revolution: Adapting welfare states to women's new roles* (Cambridge, Polity Press).

Forget, E. 2011. The town with no poverty (Manitoba, University of Manitoba).

ILO. 2016. Women at work. Trends 2016 (Geneva).

2015a. Women in business and management: Gaining momentum, Global Report (Geneva).

2015b. The future of work centenary initiative, Report I, International Labour Conference, 104th Session, Geneva, 2015 (Geneva).

2014. Maternity and paternity at work: Law and practice across the world (Geneva).

Ipsos MORI. 2015. The 5 key issues facing women working in the G20. Available at: www.poll2015.trust.org [22 September 2016].

ITUC. 2016. Investing in the care economy. A gender analysis of employment stimulus in seven OECD countries (Brussels, International Trade Union Confederation). Available at: http://www.ituc-csi.org/CareJobs [22 September 2016].

Salamon, L. M. et al. (forthcoming, 2016). "Closing the gap? New Perspectives on volunteering north and south", Chapter prepared for forthcoming *Perspectives on volunteering: Voices from the south*, J. Butcher (ed.) (New York, Springer Press).

Salamon, L. M. et al.2011. "Measuring The Economic Value of volunteer work globally: Concepts, estimates, and a roadmap to the future", in Annals of Public and Cooperative Economics 82:3, 2011 (Wiley Online Library). Available at: http://onlinelibrary.wiley.com [22 September 2016].

Scheil-Adlung, X. 2015. Long-term care protection for older persons: A review of coverage deficits in 46 countries (Geneva, ILO).

Sorj, B. 2013. *Arenas of care at the intersections between gender and social class in Brazil*, vol.43, no.149 May/ Aug. 2013 (São Paulo Cadernos de Pesquisa, Fundação Carlos Chagas).

P. Taylor-Gooby (ed.). 2004. New risks, new welfare. The transformation of the European welfare state (Oxford, Oxford University Press).

UNDP. 2015. Human Development Report 2015 (New York).

United Nations. 2015. *The World's Women 2015: Trends and Statistics* (New York, United Nations, Department of Economics and Social Affairs, Statistics Division).

UNESCO. 2012. World Atlas of Gender Equality in Education (Paris).

UNRISD Flagship Report, forthcoming, chapter on Care policies (peer reviewed) (Geneva).

World Bank. 2011a. World Development Report 2012 (Washington, D. C.).

Skills

EDUCAUSE Centre for Analysis and Research.2013. The state of E-Learning in higher education: An eye toward growth and increased access. Available at: http://www.educause.edu/ecarar [22 September 2016].

CEDEFOP.2015. Skill shortages and gaps in European enterprises: Striking a balance between vocational education and training and the labour market, Thessaloniki, European Centre for the Development of Vocational Training (Luxembourg, Publications Office of the European Union).

UNESCO. 2015. Education for All 2000-2015: Achievements and challenges (Paris).

2015a. Unleashing the potential: Transforming technical and vocational education and training, (Paris).

2011. Comparing education statistics across the world (Montréal, UNESCO Institute for Statistics).

Migration

Abel, G.J.; Sander, N. 2014. "Quantifying Global International Migration Flows", in *Science*, Vol. 343, March 2014

Dauvergne, C. 2016. The new politics of immigration and the end of settler societies (New York, Cambridge University Press).

ILO. 2015. ILO Global estimates on migrant workers. Results and methodology. Special focus on migrant domestic workers (Geneva).

2014. Fair migration. Setting an ILO agenda. Report of the Director-General, International Labour Conference, 103rd session, 2014 (Report I (B) (Geneva).

2012. Labour Migration. GB.316/POL/1. Governing Body 316th Session, Geneva, 1-16 November.

Kuptsch C. 2015. "Inequalities and the impact of labour market institutions on migrant workers", in J. Berg (ed.): Labour markets, institutions and inequality (Edward Elgar and ILO).

Kuptsch C.; Martin P.L. 2011. "Low-Skilled Labour Migration", in A. Betts (ed.): *Global migration governance* (Oxford, Oxford University Press).

C. Kuptsch; E.F. Pang. 2006. (eds.): Competing for global talent (Geneva, IILS /ILO).

OECD.2008. International migration outlook, (Paris).

United Nations, Department of Economic and Social Affairs, Population Division. 2015.

Trends in international migrant stock: The 2015 revision (United Nations database, POP/DB/MIG/Stock/Rev.2015)

World Bank.1999. Knowledge for Development (World Development Report) (Oxford, Oxford University Press).





The world of work is undergoing major changes that will continue, and potentially intensify, in the future. To better understand and in order to respond effectively to these new challenges, the ILO has launched a "Future of Work initiative" and proposed four "centenary conversations" for debates in the years leading up to its centenary anniversary in 2019: (i) work and society; (ii) decent work for all; (iii) the organization of work and production; and (iv) the governance of work. This Issue Note Series intends to provide an overview of key trends and issues in selected thematic areas of particular relevance to the "conversations" with a view to informing and facilitating dialogue and debates at the national, regional and global levels.

Comments and suggestions should be sent to futureofwork@ilo.org

SOCIAL CONTRACT AND THE FUTURE OF WORK: Inequality, income security, labour relations and social dialogue*

This note discusses the role of the social contract between the state and other actors in defining mutual expectations for distributing power and resources to achieve social justice, the erosion of that contract as result of rising inequality and other developments in the world of work, as well as policy challenges in renewing the social contract.

* This note is based on contributions from Christina Behrendt, Isabel Ortiz, Emmanuel Julien, Youcef Ghellab, Susan Hayter, and Florence Bonnet

1. Introduction: The changing world of work and its implications for the social contract

In the world of work the market, state and citizens interact continuously and their relationship evolves constantly. As a result of this process, an implicit social agreement often emerges that broadly determines the relationship between the actors and establishes guiding principles in building economic, social and political institutions. Such an agreement is called a social contract.

While it varies across countries and over time, a social contract can be understood as an implicit arrangement that defines the relationship between the government and citizens, between labour and capital, or between different groups of the population. Essentially, a social contract reflects a common understanding on how to distribute power and resources in order to achieve social justice. This understanding reflects both substantive and procedural dimensions. The substantive dimension of the social contract relates to the manner by which common goals, such as equity, fairness, freedom and security, are framed and prioritized in a society, while the procedural dimension relates to the institutions and procedures that are used to shape and legitimize this common understanding.

Both the effectiveness and relevance of the social contract depend on how it can adapt itself to new economic, social and political realities. When the world of work undergoes profound changes, tensions grow threatening to erode the existing social contract. For example, there is widespread concern that, in some parts of the world, the post-World War II notion of a social con-

tract based on economic growth, full employment and social security no longer enjoys consensus. At the same time, other countries now struggle to arrive at a stable social contract in the face of economic volatility, social conflicts and low trust in governments and institutions. As is the case with the employment relationship (see FoW Issue Note No. 3) this phenomenon varies significantly across countries.

Developing an effective and sustainable social contract which reflects changing realities in a given country remains a common challenge. Thus, it should not come as a surprise that, as ways of achieving a fair globalization, the World Commission for the Social Dimension of Globalization (2004, p.65) has called for a "new social contract" that encompasses: (a) commitment to social dialogue in the formulation of economic and social policies; (b) recognition that the drive for greater efficiency and higher productivity must be balanced against the right of workers to security and equal opportunities; and (c) a commitment to take the "high road" of business-labour collaboration to achieve efficiency gains, and to eschew the "low road" of cost-cutting and downsizing. The Commission's call has received a growing resonance in recent years, particularly in the context of the decade-long global economic crisis and the rapidly changing world of work.

This note examines the nature and viability of the social contact in light of recent wide-ranging changes in the world of work (see FoW Issue Notes Nos 1, 2, and 3). Reflecting the Commission's discussion on the social contract, it focuses on the following interrelated issues: income distribution, inequality and income security, labour relations and social dialogue. Section 2 briefly reviews the evolution of the social contract in recent years and the symptoms of "social contract under strain". Section 3 follows by investigating major forces which have contributed to undermining the basis of the social contract, while considering different circumstances in developed and developing countries. Section 4 examines how these changes constrain major policies and institutions underlying the current social contract. Section 5 concludes by proposing key issues for future debates.

2. The social contract under growing strain

Changes in the world of work present multiple opportunities and challenges for shaping the social contract in the 21st century. Employment is a major structural element of the social contract, shaping the rights and responsibilities of workers and employers, labour and capital, strongly influencing the distribution of resources and power in a society.

One of the major challenges to the social contract in the 21st century is the high and often growing level of inequality and income insecurity in many parts of the world, despite some progress made in reducing poverty and significant advances in human development, including lower maternal and child mortality, as well as a rise in education levels (UNDP, 2015). Yet, people living in the most extreme forms of poverty are still left behind (Ravallion, 2014), and social exclusion, particularly of disadvantaged groups, is still a major concern (UN DESA, 2016). Many workers and their families around the world are struggling with low and fluctuating incomes, poor working conditions and a lack of social protection, and many of them continue to live in poverty despite hard work (ILO, 2016b). One contributing factor is the economic exclusion rooted in both low productivity and underdeveloped productive structures, which tends to produce to high levels of poverty, informality and inequality. In many parts of the world, the aspirations of increasingly educated and skilled populations for decent work have been disappointed in the face of high levels of unemployment, underemployment and informality.

Moreover, social mobility has not delivered on the promises made in previous decades. In many parts of the world, younger generations can no longer rely on reaching higher living standards than their parents, as used to be the case. In fact, observers have warned that today's youth may become a "lost generation" whose ambitions to find decent employment are disappointed by the ongoing recession and jobless growth (ILO, 2012; see also FoW Issue Note No. 2). Inequalities in access to health care, education, skills development and employment hinder upward social mobility, while holding back economic and social progress. Various factors contribute to such inequalities, including gender, disability, rural/urban disparities, and migration (ILO, 2016a). At the same time, fears about downward social mobility, including among the middle class, are

fuelled by stagnating real wages and weakened income security, and weigh heavily on perceptions of equality and social justice.

These developments present important challenges to the social contract. While countries have very different approaches to what is considered a fair distribution of resources, some elements are common to many societies. One of these elements is the role of equal opportunity, which addresses the question of how to equip individuals with the tools to succeed regardless of their circumstances, how to reward merit, and to what extent those with more resources have the responsibility to share with others in the interest of overall progress.

The fact that high inequality has recently moved into the centre of the global debate may be linked to the realization that inequality has reached a level that threatens the basic tenets of the social contract. In addition to fuelling discontent and political unrest, social and economic exclusion is increasingly perceived as undermining development permanently by leaving behind a significant share of the global population. A renewal of the social contract is therefore much needed.

3. What forces erode the social contract?

What are the driving forces that fuel these challenges to a stable social contract? While there is a complex bundle of factors that shape the social contract in today's societies, some of these factors have had a particularly strong adverse impact on the social contract itself. They are all related to profound changes in labour demand-supply and the employment relationship (as discussed in FoW Issue Notes Nos 1-3 and 5).

Globalization and the financialization of the economy

One of the major challenges faced by the social contract in the 21st century is greater economic integration caused by the globalization of the economy. While globalization has opened many opportunities, it has also contributed to a shifting balance between labour and capital, to more intense global competition, higher macro-economic instability and a secular increase in income inequality (e.g., Piketty, 2014). The accelerated deregulation of product and labour markets since the 1990s has contributed to this development, and there is continued pressure to continue on this route (IMF, 2016). Where financial markets dominate the "real economy", the gains from economic activities are increasingly concentrated in a few hands, rather than shared more broadly (World Commission on the Social Dimension of Globalization, 2004; ILO, 2014a).

The financialization of the economy is also associated with increased instability in the global economy. Deregulation policies in force since the 1980s, and an increasing dependence of economies on the financial sector have contributed significantly to this trend. Where economic activities are strongly connected and linked to higher levels of financial leverage, a financial crisis can quickly develop into pervasive economic and social crises, as demonstrated by the long-term repercussions of the 2008 crisis. While there has been some re-regulation of the banking sector accompanying government bailouts, significant challenges remain. Financial resources however are not allocated to a sufficient extent to productive investments which would offer possibilities for increased productivity and the creation of new employment opportunities (see FoW Issue Note No. 5).

Technology and new forms of work

Technological changes, such as increasing automation and digitalization, may have a profound and transformative impact on the world of work, which some consider a "Fourth Industrial Revolution" (see FoW Issue Note No. 1). Some observers are concerned that these changes will lead to a "race against the machine" (Brynjolfsson and McAfee, 2015) or a "jobless future" (Ford, 2015). Others point to the adaptive capacities of societies to react to these changes and the opportunities arising from these developments for more meaningful work to emerge from dangerous or boring tasks. Nonetheless, there are concerns about a growing polarization of tomorrow's societies, with a stark increase in the number of low-income workers and households facing even higher

levels of precariousness, a shrinking middle class, and the further ascent of a minority of ever wealthier people at the top of the income scale (Degryse, 2016).

Yet, digitalization and automation also allow for better economic opportunities and more flexibility (Hill, 2015). For example, mobile phone services allow agricultural producers in remote areas to check crop prices and to better negotiate the sale of their produce. Telework, crowd-work and other forms of remote work offer new opportunities for people to engage in employment in a more flexible way, for example persons with restricted mobility, parents with young children or others providing care for family members. Whether or not automation and digitalization benefit specific groups of workers they may become the source of new inequalities.

The "new" forms of employment associated with automation and digitalization which are emerging in some parts of the world challenge the rights and responsibilities associated with an (explicit or implicit) employment relationship (see FoW Issue Note No. 3). While the system of industrial relations is built on the notion that employers have a responsibility for the well-being of their workforce, in the "on-demand" or "gig" economy such responsibility, is not readily assumed by either the "buyers" of labour (those requesting the services) or the "organizers" (platforms) (Berg, forthcoming; De Stefano, 2016). At present, many countries are struggling to determine the status of these workers and putting in place appropriate protection; taking into account that the boundaries between labour law and commercial law have become blurred. While these "new" forms of employment currently affect a minority of total employment, many observers expect that these are going to grow exponentially in the near future.

Informality

In many parts of the world, high inequality and poverty, together with low levels of income security are associated with a prevalence of informal employment and the associated lack of protection. The informal economy is characterized by a shortage of productive development, large decent work deficits and a lack of both labour and social protection for the majority of workers, resulting in low incomes and a high degree of income insecurity. The existing labour relations institutions face difficulties in addressing these challenges and finding new ways of aggregating workers' interests (Hayter, 2015a; Hyman, 2015; Sen and Lee, 2015).¹

Informality has broader implications for the social contract in a society, as it constitutes a symptom of a significant malfunctioning in the relationship between the state and its citizens. An effective social contract requires a fair balance between rights and obligations, an equitable and effective application of the law and appropriate enforcement mechanisms, as well as effective accountability mechanisms. If citizens (and economic actors) cannot trust the state to provide them with needed services and protection, if laws are not enforced in an equitable and effective way, if legal and institutional frameworks are perceived as dysfunctional and ineffective, if the tax system is not recognized as a fair and effective mechanism to finance collective goods, then compliance with legal frameworks will remain low.

Weakening of labour market institutions

The rise in inequality and income insecurity has been associated in particular with changes in employment and earnings patterns, persistent unemployment and underemployment (ILO, 2016c), as well as a widespread decline of the labour share (ILO, 2014a). Real wages have stagnated in many parts of the world, and have lagged behind productivity growth, corporate profits and property income. The changing nature of work and employment relationships, as well as the weakening of labour market institutions, have contributed to this trend, and are considered as one of the driving factors of higher inequality and insecurity (Berg, 2015).

Labour market institutions are not only challenged by external forces, but in many countries also by a lack of adaptation to a fast moving context. Keeping those institutions on par with the changing needs of workers and employers is also an "internal" responsibility of its actors.

¹ See the special issue of the International Labour Review: "What Future for Industrial Relations?" Volume 154, Issue 1, pages 68–72, March 2015. Available at: (http://onlinelibrary.wiley.com/doi/10.1111/ilr.2015.154.issue-1/issuetoc).

The role of unions and collective bargaining is particularly important in this regard (Hayter, 2015b). Collective bargaining has come under pressure in many countries since the financial crisis of 2008, following a longer-term decline in union membership rates. There are concerns that these trends may even accelerate in the future with the rise of the on-demand economy and "non-standard" forms of employment (Degryse, 2016). The higher diversity of working arrangements, shifts towards shareholder or market-oriented corporate governance and the emergence of global production networks, all present challenges for labour relations and collective bargaining. However, during the recent global economic crisis, countries that supported inclusive collective bargaining through a range of policy measures were able to increase collective bargaining coverage, especially for small and medium size businesses and for migrant and workers in non-standard forms of employment (ILO, 2015).

4. Challenges for national policies and institutions shaping the social contract

All of the trends discussed above, which result in rising inequality and greater income insecurity, challenge societal values about fairness and equity and ultimately the social contract itself. If economic gains are captured by the richest, and if the majority of society does not benefit from economic growth, social cohesion is at stake. It is now recognized more widely that high levels of inequality inhibit sustainable economic growth and undermine the potential for future economic development (Ostry et al. 2014; IMF, 2014; OECD, 2012; ILO, 2014a; ILO, 2008). However, it appears that this awareness is still to be translated into concrete policies in order to address rising inequality in a meaningful way, and to forge a renewed social contract.

One of the challenges to the social contract is how to strengthen the representation of different groups of workers and employers. On the workers' side, this includes the challenge of organizing the collective voice of informal workers, as well as those outside of established employment relationships, and the need to build broad-based coalitions with organizations that have similar interests, such as cooperatives, user groups, traders' associations and other civil society membership-based organizations. On the employers' side, this includes the challenge of effectively representing the interests of SMEs and strengthening the relationship between MNEs and national employer organizations. Effective social dialogue depends on achieving such representation.

A broad debate about the role of business in society is also taking place. There are high expectations for the role of business in inclusive growth and sustainable development, yet at the same time important questions are being asked about the tension between business interests and public goods in public-private partnerships. In this respect, growing attention is being paid to the role of public policy in stimulating a positive contribution of business to society.

Changes in the world of work also create other significant challenges for public policies. While greater precariousness increases the need for redistributive policies, fiscal capacities have shrunk in many parts of the world, partly as a result of an increased mobility of capital and tax competition. While there have been some efforts to confront harmful tax competition, such as base erosion and profit shifting (OECD, 2013; OECD, 2015; Crivelli et al. 2015), fiscal sovereignty has shrunk in the face of globalization and financial pressures. More limited fiscal space and global tax competition restrict the scope of manoeuvre for governments to invest in redistributive policies, including in the provision of quality public services and transfers. Given that these are key policy tools governments have at their disposal to contain inequality, limited fiscal space may result in a further increase in inequality (see FoW Issue Note No. 5).

Social protection systems are key instruments for redistributive policies, together with tax systems. In fact, a large number of developing countries have recently expanded their social protection systems with a view to reducing and preventing poverty and addressing inequality (ILO, 2014b). Yet, some recent policy reforms in several advanced economies have curbed the capacity of social protection systems to address income inequality and ensure income security for the population at present and in the future, particularly with regard to pensions (ILO, 2014b). While many countries have implemented measures to adapt social protection systems to changing realities in the world

of work, for example through the extension of coverage to certain categories of self-employed workers, these have not gone far enough to ensure universal coverage and adequate benefit levels. More efforts are needed to ensure that social protection mechanisms can continue to deliver as an indispensable mechanism of social solidarity, based on the principles of the pooling of risks, as well as equity both with regard to financing (taking into account contributory capacities) and benefits (according to need).

Whether countries are able to provide adequate employment and social protection to workers in different forms of employment will constitute a litmus test for their preparedness for the future of work. Only then will workers be able to seize economic opportunities, including those provided by digitalization and automation. Ensuring social protection for workers in the new as well as old forms of employment characterized by high vulnerability, volatility and exposure to different risks is critical. Some countries already have mechanisms in place to ensure social protection for non-salaried and vulnerable workers, including those with multiple employers (Hill, 2015), own-account workers and solo entrepreneurs (ILO, 2014b; European Commission, 2014), as well as those in disguised self-employment (Eichhorst et al. 2013). These can provide valuable lessons for adapting social protection systems to meet workers' needs.

5. Key issues for a renewed social contract for the 21st century

The trends described above are likely to affect the foundations of the social contract on which the stability of societies has been built and will be built. Higher inequality, insecurity, instability and informality have fundamentally challenged the social contract at the beginning of the 21st century. In fact, these issues are already being debated in various ways: how can countries develop a new "social compromise which benefits employers and workers alike" (Government of Germany, 2015); "a new social settlement that is able to meet the challenges of the twenty-first century" (New Economics Foundation, 2015); a "social compact 2.0" (Perez, 2015). Each of these formulations reveals an important focus on a renewed social contract.

Building on ongoing discussions, debates can be further advanced by considering the following overarching questions:

- How can we ensure that the social contract encompasses the most vulnerable groups in society, and engages all actors, including those operating across national borders (financial sector, multinational enterprises)?
- How can the ILO, as the "global parliament of labour" contribute to enhancing social contracts and strengthening social justice at the global level in the context of the 2030 Development Agenda?

Under these, more specific issues can be debated as follows:

- Adapting to changes in the organization of economic activity and shaping better outcomes: How does the social contract reflect changes in the organization of work and forms of employment as well as the changing roles of work (both paid and unpaid) in a society (see FOW Issue Notes Nos. 2 and 3)? How can a renewed social contract prevent a harmful race to the bottom in the context of globalization and financialization? How can tax systems be reshaped to ensure that tax revenues benefit the countries and communities in which they operate and where their profits are generated? Which enterprise governance structures are conducive to sharing the benefits between management and workers and between the enterprise and the communities of operation (see FoW Issue Note No. 5)?
- Addressing inequalities and ensuring a fair distribution of resources: What policies are necessary to foster more equitable societies, with more stable and fairer markets and a fairer distribution of resources? How can such policies contribute to strengthening and renewing the social contract? How can legal frameworks and other forms of regulation be adapted to changing contexts, and ensure both security and flexibility (see FoW Issue Note No. 3)? How can public policies be implemented in a more effective way, and how

can the necessary fiscal space be ensured through effective and equitable tax systems (see FoW Issue Note No. 5)? How can the equitable and sustainable financing of social protection and other inequality-reducing policies be ensured? How can social cohesion and collective interests be strengthened in the face of pressures to individualize risks?

■ Enhancing institutional frameworks to strengthen voice and participation: What is necessary to achieve this at the enterprise, sectoral and national level? How can social dialogue adapt to the new trends? What new forms of organization and representation are emerging, including among workers in the informal economy and in non-standard forms of employment, and what implications do they have for the functioning of social dialogue institutions?

REFERENCES

Berg, J. forthcoming. "Income security in a platform-regulated labour market: Findings and policy lessons from a survey of crowdworkers", in *Comparative Labor Law and Policy Journal*.

—. 2015. "Labour market institutions: the building blocks of just societies", In Berg, J. (ed.) *Labour markets, institutions and inequality: Building just societies in the 21st Century* (Geneva, ILO, Edward Elgar), pp. 1–38.

Brynjolfsson, E.; McAfee, A. 2015. Race against the machine: How the digital revolution is accelerating innovation, driving productivity, and irreversibly transforming employment and the economy (Lexington, Mass, Digital Fontier Press).

Crivelli, E.; de Mooij, R.; Keen, M. 2015. *Base erosion, profit shifting and developing countries* (Washington D.C., International Monetary Fund).

De Stefano, V. 2016. The rise of the «just-in-time workforce»: On-demand work, crowdwork and labour protection in the «gig-economy» (Geneva, ILO). Available at: http://www.ilo.org/wcmsp5/groups/public/---ed_protect/---protrav/---travail/documents/publication/wcms_443267.pdf. [22 September 2016].

Degryse, C. 2016. *Digitalisation of the economy and its impact on labour markets* (Brussels, European Trade Union Institute). Available at: https://www.etui.org/content/download/22130/184851/file/ver+2+web+version+Working+Paper+2016+02-EN+digitalisation.pdf. [Accessed 22 September 2016].

Eichhorst, W.; Braga, M.; Famira-Mühlberger, U. 2013. *Social protection rights of economically dependent self-employed workers* (Luxembourg, Office for Official Publications of the European Communities). Available at: http://bookshop.europa.eu/is-bin/INTERSHOP.enfinity/WFS/EU-Bookshop-Site/en_GB/-/EUR/ViewPublication-Start?PublicationKey=BA3013643. [22 September 2016].

European Commission, Mutual Information System on Social Protection/Social Security (MISSOC). 2014. *Social Protection for the Self-Employed* (Brussels). Available at: http://ec.europa.eu/social/BlobServlet?docId=5662&langId=en. [22 September 2016].

Ford, M. 2015. Rise of the robots: Technology and the threat of a jobless future (New York, Basic Books).

Government of Germany. 2015. *Work 4.0: Re-imagining work* (Green Paper) (Berlin, Federal Ministry of Employment and Social Affairs). Available at: http://www.bmas.de/SharedDocs/Downloads/DE/PDF-Publikationen/arbeiten-4-0-green-paper.pdf;jsessionid=2C748B2967CB4FB770B648A88B1948EF?__blob=publicationFile&v=2 [Accessed: 25 April 2016]. [22 September 2016].

Hayter, S. 2015a. "Introduction: What future for industrial relations?" in *International Labour Review*, 154 (Geneva, ILO), pp. 1–4. Available at: http://onlinelibrary.wiley.com/doi/10.1111/j.1564-913X.2015.00220.x/abstract [Accessed: 2 March 2016]. [22 September 2016].

—. 2015b. "Unions and collective bargaining," in Berg, J. (ed.) *Labour markets, institutions and inequality: Building just societies in the 21st Century* (Geneva, ILO, Edward Elgar), pp. 95–122.

Hill, S. 2015. New economy, new social contract: A plan for a safety net in a multi-employer world (Washington D.C., New America Foundation). Available at: https://static.newamerica.org/attachments/4395-new-economy-new-social-contract/New%20Economy,%20Social%20Contract_Updated Final.34c973248e6946d0af17116fbd6bb79e.pdf. [22 September 2016].

Hyman, R. 2015. "Three scenarios for industrial relations in Europe", in *International Labour Review*, 154, pp. 5–14. Available at: http://onlinelibrary.wiley.com/doi/10.1111/j.1564-913X.2015.00221.x/abstract. [22 September 2016].

ILO. 2008. World of Work Report 2008: Income inequalities in the age of financial globalization (Geneva, ILO and International Institute for Labour Studies). Available at: http://www.ilo.org/public/english/bureau/inst/download/world08.pdf. [22 September 2016].

- —. 2012. *Global Employment Trends for Youth 2012* (Geneva, ILO). Available at: http://www.ilo.org/wcmsp5/groups/public/---dgreports/---dcomm/documents/publication/wcms_180976.pdf. [22 September 2016].
- —. 2014a. *Global Wage Report 2014/15: Wages and income inequality* (Geneva, ILO). Available at: http://www.ilo.ch/global/publications/books/WCMS_324678/lang--en/index.htm. [22 September 2016].
- —. 2014b. World Social Protection Report 2014/15: Building economic recovery, inclusive development and social justice (Geneva, ILO). Available at: http://www.ilo.org/wcmsp5/groups/public/---dgreports/---dcomm/documents/publication/wcms_245201.pdf; http://www.social-protection.org/gimi/gess/ShowTheme.action?th.themeId=3985. [22 September 2016].

- —. 2015. Trends in collective bargaining coverage: Stability, erosion or decline? (Geneva, ILO). Available at: http://www.ilo.org/public/english/iira/pdf/labourrelations.pdf. [22 September 2016].
- —.2016a. *Women at Work: Trends 2016* (Geneva, ILO). Available at: http://www.ilo.org/wcmsp5/groups/public/--dgreports/---dcomm/---publ/documents/publication/wcms_457317.pdf. [22 September 2016].
- —. 2016b. World Employment and Social Outlook 2016: Transforming jobs to end poverty (Geneva, ILO). Available at: http://www.ilo.org/wcmsp5/groups/public/---dgreports/---dcomm/---publ/documents/publication/wcms_481534.pdf. [22 September 2016].
- —. 2016c. *World Employment and Social Outlook: Trends 2016* (Geneva, ILO). Available at: www.ilo.org/global/research/global-reports/weso/2016/WCMS_443480/lang--en/index.htm. [22 September 2016].

International Monetary Fund (IMF). 2014. Fiscal policy and income inequality. (Washington D.C.).

—. 2016. World Economic Outlook April 2016: Too slow for too long (Washington D.C.). Available at: https://www.imf.org/external/pubs/ft/weo/2016/01/pdf/text.pdf. [22 September 2016].

International Labour Review, Special issue: "What Future for Industrial Relations?" Volume 154, Issue 1, pages 68–72, March 2015. Available at: http://onlinelibrary.wiley.com/doi/10.1111/ilr.2015.154.issue-1/issuetoc. [22 September 2016].

New Economics Foundation. 2015. *People, planet, power: Towards a new social settlement* (London). Available at: http://www.neweconomics.org/publications/entry/people-planet-power-towards-a-new-social-settlement. [22 September 2016].

OECD. 2012. Jobs, wages and inequality: Progress report (Paris).

- —.2013. Addressing base erosion and profit shifting (Paris). Available at: http://www.oecd.org/tax/beps.htm. [22 September 2016].
- —. 2015. Explanatory Statement, OECD/G20 Base Erosion and Profit Shifting Project (Paris).

Ostry, J.D.; Berg, A.G.; Tsangarides, C.G. 2014. *Redistribution, inequality, and growth* (Washington D.C., International Monetary Fund). Available at: http://www.imf.org/external/pubs/ft/sdn/2014/sdn1402.pdf. [22 September 2016].

Perez, T.E. 2015. Remarks at the Department of Labor Future of Work Symposium, Washington, D.C., 10 December. Available at: https://www.dol.gov/newsroom/speech/20151210. [22 September 2016].

Ravallion, M. 2014. *Are the world's poorest being left behind?* (Washington D.C., National Bureau of Economic Research). Available at: http://www.nber.org/papers/w20791.pdf. [22 September 2016].

Sen, R.; Lee, C.H. 2015. "Workers and social movements of the developing world: Time to rethink the scope of industrial relations?" in *International Labour Review*, 154, pp. 37–45. Available at: http://onlinelibrary.wiley.com/doi/10.1111/j.1564-913X.2015.00224.x/abstract [22 September 2016].

UN DESA. 2016. Report on the World Social Situation 2016: Leaving no one behind: Progress towards achieving socially-inclusive development, Overview (New York). Available at: http://www.un.org/esa/socdev/documents/2016/RWSS2016ExecutiveSummary.pdf. [22 September 2016].

UNDP. 2015. *Human Development Report 2015: Work for human development* (New York). Available at: http://hdr.undp.org/sites/default/files/2015_human_development_report_1.pdf. [22 September 2016].

World Commission on the Social Dimension of Globalization. 2004. *A Fair Globalization - Creating Opportunities for All* (Geneva, ILO). Available at: http://www.ilo.org/public/english/wcsdg/docs/report.pdf. [22 September 2016].

World Economic Forum. 2016. *The future of jobs: Employment, skills and workforce strategy for the fourth industrial revolution* (Geneva). Available at: http://www3.weforum.org/docs/WEF_Future_of_Jobs.pdf. [22 September 2016].