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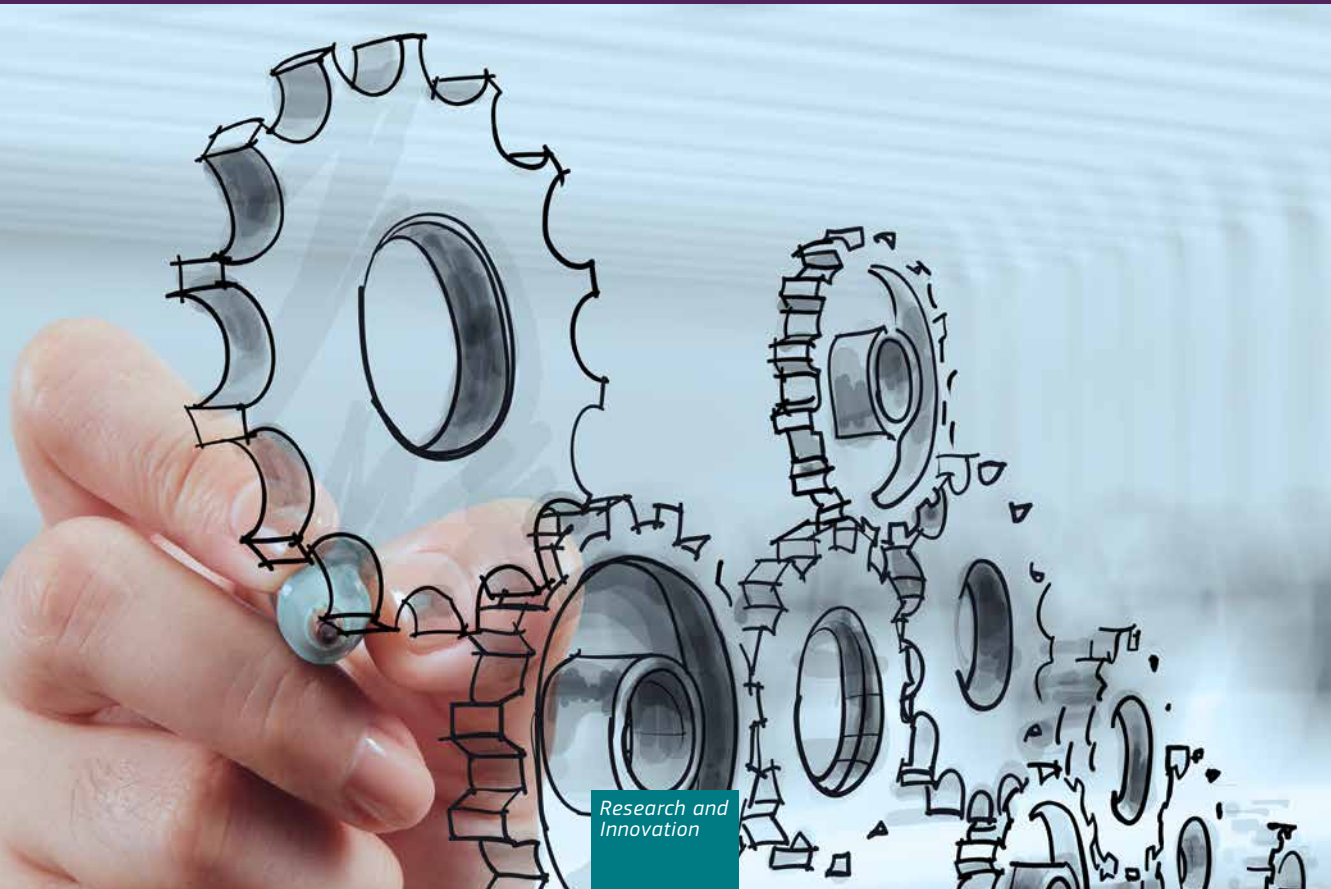
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► PROCEEDINGS

OPEN ROUND TABLE

The Future of Work

European Group on Ethics
in Science and New Technologies



Research and
Innovation

European Group on Ethics in Science and New Technologies
Proceedings of the Open Round Table on the Future of Work, 5 February 2018

European Commission
Directorate-General for Research and Innovation
Unit RTD.DDG1.02 - Scientific Advice Mechanism

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EUROPEAN COMMISSION

Proceedings of the
**Open Round Table
on the Future of Work**

5 February 2018

*EUROPEAN GROUP ON ETHICS
IN SCIENCE AND NEW TECHNOLOGIES*

Brussels, 10 July 2018

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INTRODUCTION

1 About the event



Commissioner Carlos Moedas opens the Round Table ©European Union, 2018.

On 5 February 2018 an Open Round Table brought together a wide range of stakeholders from all sectors of society, including academic experts, international organisations, industry, trade unions and NGOs, discussing thorny questions at the heart of the Future of Work, ranging from the impact of automation and digitalisation on the labour market, including the future role of artificial intelligence, to the rise of the gig economy and industry 4.0. As a critical moment for public deliberation, the discussions held during the Round Table will inform the development of the upcoming EGE Opinion on the Future of Work.

Opened by Commissioner Carlos Moedas, the event unfolded in four panels with interventions from key speakers, followed by an open discussion. The first panel raised fundamental questions about why we work, how work gives us meaning as individuals and members of society, to what extent work can create both community and disparity, and what kind of 'social contract' we envisage for the generations to come. An important element of the debate was the distinction between paid and unpaid work, and specifically, the need to give recognition to the latter.

The second panel explored the opportunities and dangers associated with new forms of employment. The increase in gig and platform workers facing precariousness prompts questions about how decent working conditions can be ensured when employment becomes dissociated from time and place, how digital review processes can replace personal supervision, and how address contracts becoming more temporary and one-sided. During this panel the speakers enumerated the social consequences brought by these new forms of employment. In particular, the notion of the 'working poor' was brought the attention of the audience.

The third panel addressed the consequences of automation and digitalisation on the world of work. Industry 4.0, the impact of so-called 'autonomous' machines on the workplace and dreams or fears about the end of work dominate the public debate on the issue. At the core of the discussion were the implications of algorithmic decision-making processes, new challenges to data protection and employer supervision, future skills needs and educational curricula, new approaches to social security and redistribution, and general questions about the quality of prognoses.

The concluding panel was dedicated to questions about governance and ethics. The changing nature of work might require the overhaul of longstanding governance frameworks, such as social security systems and labour law. Speakers acknowledged the role of the European Union and the policy measures currently in place, namely, the EU Social Pillar as a good reference document comprising a set of social principles to be implemented through European and national governance.

All presentations are available in the EGE website:

https://ec.europa.eu/info/news/proceedings-round-table-future-work-2018-jun-21_en

2 About the EGE

The European Group on Ethics in Science and New Technologies (EGE) is an independent, multi-disciplinary body appointed by the President of the European Commission and operating under the direct responsibility of Commissioner Moedas. The EGE advises on all aspects of Commission policies and legislation where ethical, societal and fundamental rights dimensions intersect with the development of science and new technologies.

Since its inception in 1991, the EGE has adopted 29 Opinions, providing the Commission with high quality and independent advice on such crucial and diverse issues as: nanotechnology, novel food legislation, agriculture policy, animal welfare, embryo research, genetically modified organisms, CAP revision, biodiversity, climate change, global trade, digital agenda, bio-security, environment protection, food security, internet governance, energy, and security and surveillance.

In addition to the Opinions, the EGE also develops shorter Statements. The latest one, adopted in January 2016, pertains to the ethical implications of Gene Editing and Human Germline Modification. Currently, the EGE works on a Statement on the Ethics of Artificial Intelligence and Robotics.

PROGRAMME

08:30 – 09:30 **Registration and welcome coffee**

09:30 – 10:00 **Opening by Carlos Moedas, European Commissioner for Research, Science and Innovation**

Introduction by Christiane Woopen, Chair of the EGE

10:00 – 11:20 **Why do we work?**

Chaired by Professor Christiane Woopen

Chair of the EGE

Keynote by Professor Barry Schwartz

Emeritus Professor of Psychology, Swarthmore College; Visiting Professor, Haas School of Business, Berkeley

Interaction between economics and morality, author of *Why We Work*

Keynote by Sangheon Lee

Special Adviser to the Deputy Director-General for Policy on Economic and Social Issues of the International Labour Organization

Conditions of work and employment, new approaches to welfare entitlement

Keynote by Madi Sharma

UK Member European Economic and Social Committee (Employers' Group) and Founder of the Madi Group, a group of philanthropist enterprises and non-profit organisations for a sustainable society

Discussion led by Professor Nils-Eric Sahlin, Member of the EGE

11:20 – 11:40 **Break**

11:40 – 13:00 **New employment forms and workers' rights**

Chaired by Professor Herman Nys

Vice-Chair of the EGE

Keynote by Irene Mandl

Head of Research Unit 'Employment' at the European Foundation for the Improvement of Living and Working Conditions (Eurofound)

Working conditions in the era of digitalisation and automation, new forms of employment and entrepreneurship

Keynote by Amana Ferro

Senior Policy Officer at the European Anti-Poverty Network (EAPN)

Work and poverty, new forms of precarious work, anti-poverty policies

Keynote by Véronique Willems

Secretary General of the European Association of Craft, Small and Medium-sized Enterprises (UEAMPE)

SMEs in the changing world of work

Discussion led by Professor Siobhán O'Sullivan, Vice-Chair of the EGE

13:00 – 14:30 **Lunch break**

14:30 – 15:50 Automation, digitalisation and algorithmic decision making

Chaired by Professor Julian Kinderlerer

Member of the EGE

Keynote by Lorena Jaume-Palasi

Co-founder and Executive Director of AlgorithmWatch
Ethics of automation and algorithmic decision making processes

Keynote by Patrice Chazerand

Policy Director on Digital Economy and Trade Groups at DigitalEurope
Social implications of digital technologies

Keynote by Konstantinos Pouliakas

Expert on Skills and Labour Markets at the European Centre for the Development of Vocational Training (Cedefop)
Skills needs and the future of education

Discussion led by Professor Jeroen Van den Hoven, Member of the EGE

15:50 – 16:10 Break

16:10 – 17:30 Ethics and governance

Chaired by Professor Laura Palazzani

Member of the EGE

Keynote by Professor Ursula Huws

Professor of Labour and Globalisation, University of Hertfordshire (UK)
Gig economy and workers' rights

Keynote by Thiébaud Weber

Confederal Secretary of the European Trade Union Confederation (ETUC)
Trade unions in the changing world of work

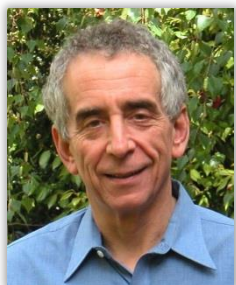
Keynote by Maxime Cerutti

Director of Social Affairs at BusinessEurope
Labour market policy and social affairs

Discussion led by Professor Jonathan Montgomery, Member of the EGE

Panel 1: Why do we work?

Barry Schwartz



Barry Schwartz is an emeritus professor of psychology at Swarthmore College and a visiting professor at the Haas School of Business at Berkeley. He has spent forty years thinking and writing about the interaction between economics and morality. He has written several books that address aspects of this interaction, including *The Battle for Human Nature*, *The Costs of Living*, *The Paradox of Choice*, *Practical Wisdom*, and most recently, *Why We Work*. *The Paradox of Choice* was named one of the top business books of the year by both *Business Week* and *Forbes Magazine*, and has been translated into twenty-five languages.

Schwartz has written for sources as diverse as *The New York Times*, *The New York Times Magazine*, the *Chronicle of Higher Education*, *Slate*, *Scientific American*, *The New Republic*, the *Harvard Business Review*, and the *Guardian*. He has appeared on dozens of radio shows, including NPR's *Morning Edition*, and *Talk of the Nation*, and has been interviewed on *Anderson Cooper 360 (CNN)*, the *PBS News Hour*, *The Colbert Report*, and *CBS Sunday Morning*. Schwartz has spoken three times at the TED conference, and his TED talks have been viewed by more than 16 million people.

Summary

Although the ideology that has governed free-market capitalism from the beginning has assumed that people work for pay, and that if one gets the material incentives right, nothing else matters, a great deal of evidence indicates that people want more than a paycheck from their work. They want engagement, autonomy, challenge, a sense of mastery, and, above all, meaning and purpose. People whose work has these attributes do better work than people whose work lacks these attributes. Nonetheless, less than 15% of the workforce worldwide finds its work engaging.

The gap between what work is and what it could be provides a great opportunity going forward, as the AI-dominated new industrial revolution threatens to transform much of the work people do. Machines replaced the human hands, and computers may replace the human mind, but nothing will replace the human heart. Focusing on work that requires heart—work of service and care—and providing it with the kind of respect and compensation it warrants, may be just what societies need to survive the coming workplace revolution and provide much needed service to populations dominated by the old and the young.

Sangheon Lee



Sangheon Lee is currently the Special Adviser to the Deputy Director-General for Policy on Economic and Social Issues of the International Labour Organization and will be the Director of the Employment Policy Department (1 March 2018). He was born in the Republic of Korea and joined ILO in 2000. He is specialised in analysing employment and related economic, development and social issues, and advising on broad policy areas.

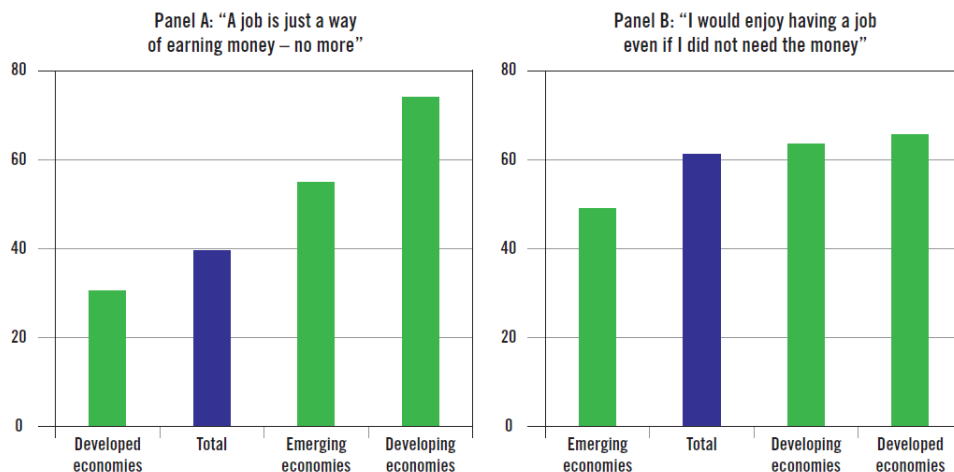
He has also written extensively on labour and economic issues, including articles in the *International Labour Review* and *Socio-Economic Review* as well as editing volumes under the global research project of *Regulating for Decent Work* (2011 and 2013, ILO and Palgrave). He is also one of the main authors of the *Global Wage Report* (2008, 2010 and 2012) and the *World of Work Report* (2014). He co-authored *Working Time around the World* (2007 Routledge). Mr Lee holds a PhD in Economics from Cambridge University.

Summary¹

Centrality of work: There has been much talk of ‘the end of work’. And yet work remains a central pillar in our lives. It gives people meaning, purpose and dignity, and provides a platform for social interaction and integration. It allows us to make an active contribution to society. And there is clear evidence that work has a positive impact on well-being and happiness (see Figures 1 and 2).

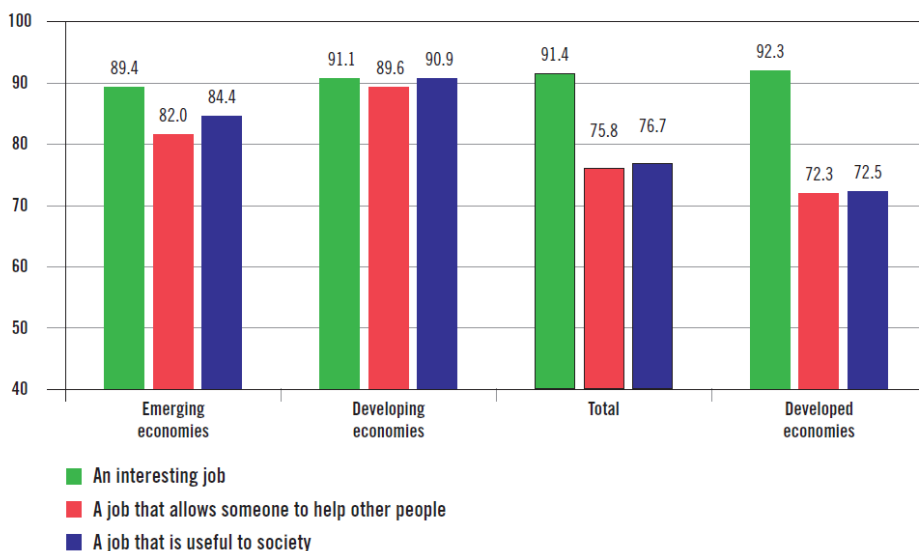
¹ This note draws from: ILO (2017), *The Inception Report for the Global Commission on the Future of Work* and ILO (2017), *What Future for Decent Work in Europe and Central Asia: Opportunities and challenges*.

Figure 1 - Work and money (2015, % of respondents)



Source: ILO calculations based on International Social Survey Programme (ISSP), 2015.

Figure 2 - Share of individuals who feel 'an interesting job', 'a job that allows someone to help other people', and 'a job that is useful to society' are important or very important characteristics in a job, 2015 (% of respondents)



Source: ILO calculations based on ISSP, 2015.

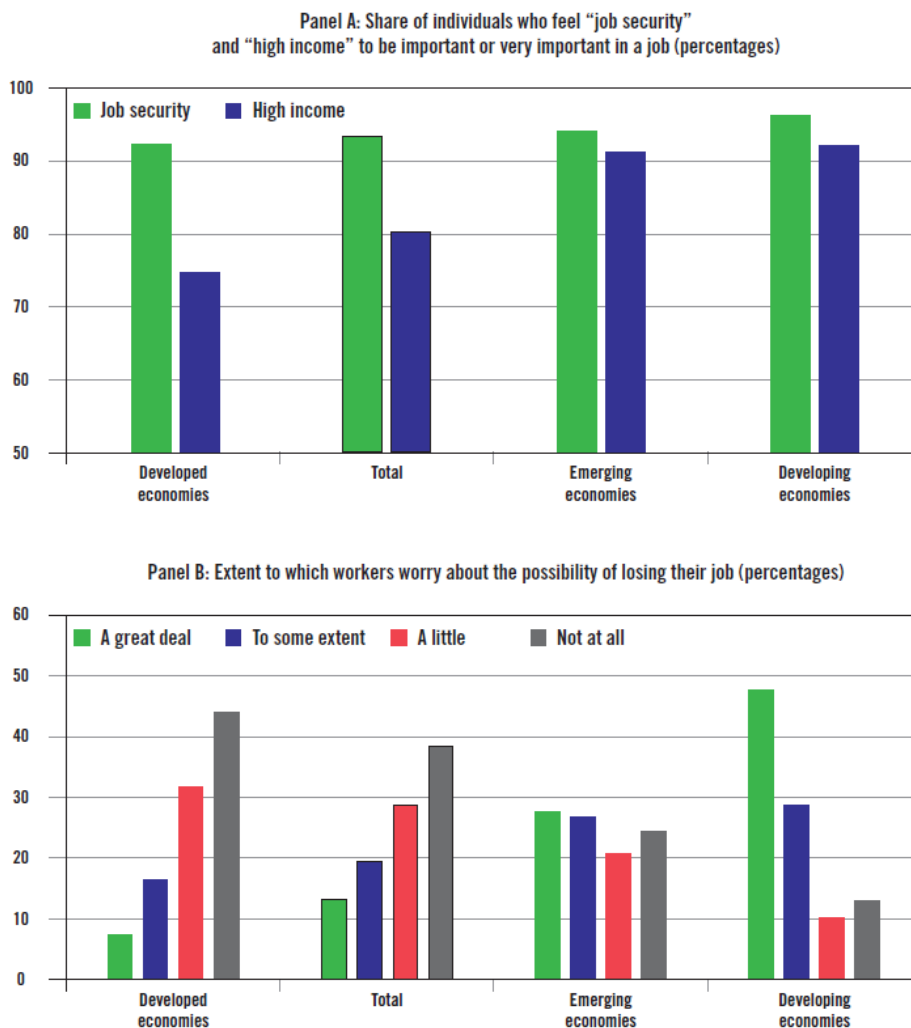
Yet work is being undergoing tremendous changes which will affect everyone in society, and there is a growing call for the way we understand 'work', especially in policies and laws.

The very nature of work is changing. A single job for life is no longer the rule. Although a multiplicity of jobs throughout working life offer opportunities for

broader social networks, they can potentially limit the depth of social interaction. Geographically disjointed work and new forms of business are changing interactions between workers and employers, as well as among workers and among employers. At the same time, whether through communication technologies or improved public transport infrastructure, technology offers opportunities for enhanced access to the labour market for disadvantaged groups, including people with disabilities, older workers and those seeking more flexible working arrangements.

Anxiety about work is widespread. Globalisation and new forms of production are considered by many to be making it harder for workers to assert their rights and are leading to a greater feeling of helplessness. Technological progress is spurring fears that jobs may be destroyed, and that there is a risk of some sort of a dehumanisation of working life and industrial relations (Figure 3). Climate change poses a challenge to our current modes of consumption and production, and to the ability of future generations to enjoy and benefit from our planet.

Figure 3 - Anxiety about job security (2015, % of respondents)



Source: ILO calculations based on ISSP, 2015.

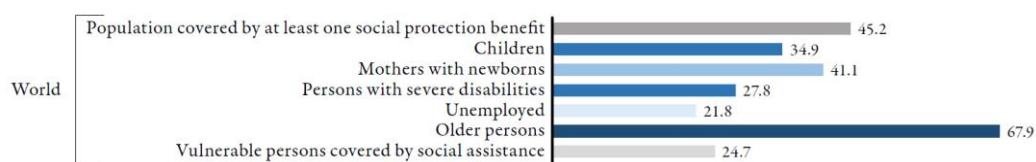
Expectations towards work are changing. The aspiration for fulfilling work, rather than just working to survive, is strong in the region, especially among the younger generation. This is finding expression in the concern for a better work–life balance, although expectations differ between population groups. Young parents seek better family care arrangements. Many adults wish to invest in personal development and learning. Some, constrained by too few working hours, would like to work more, while others who are under the pressure of very long hours, would prefer to work less. Elderly workers seek arrangements adapted to their physical condition.

All is all, there are need for changes in the way that work is defined (especially for policy purposes) and distributed in society. For instance, no one disputes that

care work, which is part of social reproduction, is important for both individual and societal well-being. But this type of work is typically seen as ‘women’s work’, and is often marginalised and undervalued. This has much to do with the duality between paid productive work and unpaid reproductive work, which privileges some types of activity over others. In the end, it boils down to the question of working time, which is close to many people’s hearts. But it is also a question of the value we place on this type of work.

Challenges for social protection. The world has achieved significant progress in expanding social protection. At present, 45% of the population is effectively covered in at least one social protection area, yet only 29% of the world’s workers enjoy comprehensive coverage in all social security areas. Even in countries where social protection systems are well-established, many workers are not covered or are inadequately covered, for a variety of reasons.

Figure 4 - Social protection coverage (2017, ILO estimates)



Source: ILO, World Social Protection Report 2017-19

As a response to some of these challenges, some scholars and policy-makers have argued for the need to delink social protection from employment by creating a universal basic income that would provide a flat unconditional benefit to all citizens or residents of a country, regardless of income. Proponents argue that a sufficiently large benefit can eliminate absolute poverty, is easy to administer and less prone to leakage or corruption. Basic income also attracts many critics. They argue that, in order to be effective, benefit levels will need to be sufficiently high. They also argue that they will be costly, difficult to implement and will displace spending on necessary health and other social services. Others fear that such a grant would deter individuals from working, that households with adequate income would receive an unnecessary benefit and that a universal basic income would not address the structural causes of poverty and inequality. The debate regarding universal basic income has just begun. While some communities are piloting a version of this scheme, there is limited information so far to evaluate its impact on individuals, inequality, social protection systems, economies and on work itself.

Other innovative ways of providing social protection have also been proposed. For instance, some scholars have argued for the need to reconfigure unemployment insurance as ‘employment insurance’ that would include a system of entitlements to training that would belong to the individual instead of the job. This would support workers with the greatest need for continuing education, who often do not have the resources to pay for it themselves, particularly when accompanied by a period of unemployment, as well as workers in small- and medium-sized enterprises (SMEs) who are less likely to benefit from employer-sponsored training.

Madi Sharma



Madi Sharma is an Entrepreneur who founded and runs the Madi Group, a group of International private sector and not for profit companies and NGOs. Her philosophy is to create 7 billion innovative ideas tailored to local action which can achieve global impacts beneficial to a sustainable society. She established her first company from her kitchen at home, which grew to 2 factories and 35 staff.

She has received the honours of Asian Woman of Achievement, UK's Best Boss and a Prime Minister's appointment to The European Economic and Social Committee in Brussels, representing the Employers' Group, as well as the All Ladies League Award 'Iconic Women Creating a Better World for All'.

Summary

Would you give me a job?

No CV, no qualifications, domestic violence victim, asian, female, single parent... No! I wouldn't give me a job either, which is why I became an entrepreneur!

Life is short, it is a lesson, it is our classroom, we are learning every day, we are all teachers, and we MUST enjoy what we are doing if we are to do it well.

That should also be the ethos of work - if it is not, then something is wrong... and we know that something is wrong, as 84% of people hate the job they are working in!

Innovations, creativity, entrepreneurship, job creation, training, working with, respecting and learning from others, valuing human capital, should make up each day... and it should be fun!

...Doesn't sound like your day?

WE shouldn't be talking about the Future of Work, we should be changing the 'Ethics' by which we conduct ourselves today!

Human Capital is the greatest resource we have, globally. Nevertheless, we chose to judge, to discriminate, gender, colour, qualifications, age, CV's, ... and the list goes on.

Who is the loser? - YOU, ME and Society.

My policy recommendations are the same as those I practice in business, no CV's, no business plans and no blame culture and strong ethics and principles to guide us, with no compromises! ... Give everyone the opportunity to do what they want to do, and for sure they will do it well, and as a result we will all benefit - the EU and the planet.

I am the case study: from lying on the floor 25 years ago, to now working in EU policy, running multiple small enterprises, being an international speaker, journalist and author ... and still without any qualifications!

- And the reason for my success - The amazing people I have around me, their talents, their motivation, their knowledge (which is greater than mine) and our philosophy - NO Excuses!

Recommendations of the employers group of the EESC

Competitiveness for more employment thus enhancing the social dimension of the EU:

By focusing on competitiveness and boosting growth, the EU would enable companies to create more jobs. This is the way to provide a real social dimension in the EU and to solve the problem of high unemployment, including youth unemployment.

Too often it is ignored that the EU already has wide-ranging legislation in the field of social affairs laying down minimum standards that all employers in the EU must comply with. We should now focus on ensuring proper implementation and enforcement of the existing *acquis* and using best practices and benchmarking to give impetus to the reform process. As underlined in the EESC Opinion on the European Pillar of Social Rights, the future of work, linked to Industry 4.0 – with all the opportunities and challenges this presents – is a key priority. While reaffirming our commitment to the European social model, it must be ensured that national labour markets and social protection systems are modernised: adaptable, affordable and fit for the future.

Therefore we believe in:

- A solution-oriented social dialogue contributing positively to competitiveness and growth. Social partners have a key role in shaping a competitive EU. The Employers' Group will continue to strongly promote the role and importance of social dialogue.
- Growth-enhancing labour market reforms to increase the flexibility of labour markets and sustainability of social protection systems. A renewal of the flexicurity strategy would allow for the needs of enterprises, workers and job-seekers to be addressed in a balanced way. Reforms in the labour market are necessary so that we can embrace the future of work, change in skills, technology, new forms of work organisation, materials and production processes.
- Achieving higher levels of employment participation of diverse groups in European society, which is essential in order to face demographic ageing and a shrinking working-age population. Reducing unemployment and encouraging people to stay longer in labour markets today, including through raising the labour market participation of women, will be crucial for the future sustainability and adequacy of pension benefits.

- The framework conditions in labour markets need to support new and more diverse career paths. Different forms of sourcing labour and different forms of working are needed in working life. We must find ways to ensure smooth transitions between jobs, statuses and from unemployment to employment, as well as from education to work.
- Improvement of the work-based education system, vocational education and training, comprehensive lifelong learning strategies as well as upgrading skills, therefore ensuring that skills match the changing needs of businesses.
- Digitalisation as an important driver to boost employment and productivity.
- The European Pillar of Social Rights shaped as a tool to support national reforms of labour markets, education and training systems and social systems, through the development of well-designed benchmarks.
- Full compliance with the division of competences between the EU and the Member States and with the subsidiarity principle, as well as respecting the diversity of industrial relations practices.
- Facilitating the mobility of workers so that employers have access to a skilled labour force and workers have increased job opportunities. Promotion of labour mobility also take place via better coordination of social security systems as this removes unintended incentives which result in migration being based only on 'social security shopping'

Panel 2: New employment forms and workers' rights

Irene Mandl



Irene Mandl is Head of the research unit 'Employment' at Eurofound. She holds a master's degree in International Business Administration and one in Business and Law. Before joining Eurofound, she worked in policy-oriented socioeconomic research in Austria in the fields of employment and labour market, as well as entrepreneurship and industry analysis.

At Eurofound, she is mainly involved in research on labour market developments (including new forms of work and employment, digitalisation or restructuring and related public policy approaches) and topics in the intersection of employment and entrepreneurship (such as job creation, workplace practices, small and medium-sized enterprises, start-ups and scale-ups or internationalisation).

Summary

While for a few years, there are public and policy debates emerging at both European and national level on the 'future of work' and 'new forms of employment', there does not seem to be a harmonised understanding across Europe what the latter refers to. Developments differ from country to country, involved actors have different understandings when using the same terminology, or the same understanding of an emerging phenomenon in spite of using different connotations.

To help overcoming this challenge in debating an important issue, the European Foundation for the Improvement of Living and Working Conditions (Eurofound)² conducted a research study on 'New forms of employment'³, mapping the emerging work and employment trends across Europe.

The study resulted in the identification of nine new employment forms, related to changing employment relationships or work patterns/work organisation (or both) that can affect employees or self-employed. Two of these forms are strongly related to digitalisation. Crowd employment refers to the matching of supply and demand for paid labour through online platforms. ICT-based mobile work refers to work outside the employer's or a client's premises with strong reliance on ICT and access to a shared computer/data network.

The identified new forms of employment are characterised by a large heterogeneity as regards their potential positive and negative impacts on working conditions and the labour market.

² www.eurofound.europa.eu

³ <https://www.eurofound.europa.eu/publications/report/2015/working-conditions-labour-market/new-forms-of-employment>

Similarly, a recent Eurofound study on self-employment⁴ highlights a large heterogeneity among self-employed in Europe, resulting again in different effects concerning their working conditions.

Both studies hence hint towards an increasing variety of employment across Europe. While technology is 'just' one of the drivers of this development, it should not be neglected. Digital technologies⁵ such as automation (the replacement of human resources by machines) and digitisation (the use of sensors and rendering devices to translate production into the digital domain) are observed to affect the labour market structure, employment relations and working conditions.

The developments as regards new forms of employment, digitalisation and self-employment offer both opportunities and challenges that should be further explored to create a better understanding and awareness as a basis for policy interventions, where required.

⁴ <https://www.eurofound.europa.eu/publications/report/2017/exploring-self-employment-in-the-european-union>

⁵ <https://www.eurofound.europa.eu/publications/report/2018/automation-digitisation-and-platforms-implications-for-work-and-employment-concept-paper>

Amana Ferro



Amana Ferro works as Senior Policy Officer with the European Anti-Poverty Network (EAPN) since 2008. Her areas of work include quality of jobs and employment, inclusive education and training, youth and poverty, social innovation, Roma issues, and human rights, among others.

A dual Romanian and Portuguese national, Amana is a trained political scientist and a College of Europe alumna, with further post-grad education in Cultural Anthropology and Roma Studies. She has 15 years of experience working at the national and EU level on human rights and social policy, including with the International Labour Office, the International Organisation for Migration, and Amnesty International, among others. She is fluent in Romanian, English, French, Italian, and Portuguese.

Summary

EAPN is the largest independent network of NGOs committed to fight against poverty and social exclusion in Europe, with and for people in poverty, started in 1990. It has been a key actor in poverty programmes and development of social Open Method of Coordination, the Lisbon Strategy, Europe 2020 and the European Semester, and the European Pillar of Social Rights. It receives financial support from the European Commission (EaSI programme) and it comprises 31 National Networks and 13 European NGOs as members, representing over 10 000 organisations.

EAPN has been monitoring the European Employment Strategy and associated processes since 1997. For an overview of its main work and concerns regarding employment and poverty, please see [here](#). Throughout 2017, EAPN undertook a comprehensive internal reflection regarding the future of work and new labour market trends, as well as implications on poverty and social exclusion. The results of this reflection will be published in the upcoming months.

Context

The EU context of the debate includes, chiefly, the European Pillar of Social Rights, which contains useful relevant principles (on secure and adaptable employment, wages, employment conditions, social dialogue, work-life balance, work environments, as well as on social protection, unemployment benefits, minimum income, pensions), a Social Scoreboard to monitor social standards across Member States, as well as two upcoming useful initiatives on access to social security for all workers, a European Labour Authority, and a European Social Security Number.

The Pillar is supposed to be implemented and monitored through the European Semester, and the latest Annual Growth Survey and Joint Employment Report represent a step forward towards rebalancing economic and social priorities, and contain a positive rhetoric around wages, job creation, adequate social protection

systems, while concrete risks of new, non-standard and precarious forms of work highlighted, which entails exclusion from social protection. The main question is, will the Social Pillar Principles continue to be adequately mainstreamed in the European Semester, including Country Reports and National Reform Programmes, and will they trigger policy change, through Country Specific Recommendations?

Trends

Austerity measures have led to subdued job creation and downward pressure on quality of work and employment. Both trade union density and coverage of wage agreements have declined in the European Union. Technological change (loss of routinised jobs) and globalisation (delocalisation) lead to unemployment and wage polarisation, thus exacerbating income inequalities.

Job security and employment protection have been declining – atypical contracts and bogus self-employment proliferated, with little or no social protection coverage. Increased employer flexibility maximises insecurity for workers, allowing for externalising risks to workers (now independent contractors rather than employees). The digital divide leads to digital exclusion. A key issue is migration – brain drain in some countries, illegal migrant labour (modern slavery) and social dumping.



©Andreea Buzec, Visual Architects Romania, for the 16th European Meeting of People Experiencing Poverty, 2017

Voices from the ground

EAPN Networks highlight:

- Rise of fixed-term contracts (NL, NO, SE, UK, CY, UK, IE, AT, IT)
- Underemployment / overqualification (IT, PT, CY, UK)
- Multiple low-wage job holding (CY, RO, GR, NL)
- Weakening of contractual relations (DE, SE, NL, UK).

People experiencing poverty say:

- **PRECARIOUSNESS:** 'People are thrown into any kind of job, sometimes with no minimum salary... and youngsters still dependent on them...'
- **LOW WAGES:** 'Instead of saying minimum wage, we should say 'adequate' wage; we need money to live, not just to survive...'
- **LABOUR MIGRATION:** 'Immigration caused by globalisation, capitalism, dictatorships... these are dramatic situations with people becoming poorer and more vulnerable...'
- **GLOBALISATION:** 'In a global society, we need to change mindsets against a constructed scarcity of resources...'
- **PARTICIPATION:** 'We need people to make decisions in favour of those who are falling through the cracks...'
- **SOCIAL PRIORITIES:** 'EU countries are not following up enough when it comes to social issues...'

Recommendations

Better research on new ways of work, taking account of social, societal, cultural, health, and distributional changes - go beyond quantitative data to understand real impact on people's lives.

Step up quality of work and of contractual arrangements, stemming the proliferation of insecure, unstable forms of employment, including self-employment and contractors, atypical, zero-hour, mini-jobs, involuntary part-time and short-term.

Invest in comprehensive, adequate social protection for all, as an essential prerequisite for combatting poverty and social exclusion, protecting all against risks throughout the lifecycle, at levels allowing for lives in dignity.

End punitive activation pushing people into unsustainable jobs, curbing punitive approaches, marred by conditionality and sanctions, and favouring positive, integrated pathways to employment, in line with the Active Inclusion strategy.

Tackle the digital divide and improve life-long learning, improving efforts on digital inclusion, especially for those experiencing poverty and the low-skilled, so they are not left behind by the technological revolution, including in accessing goods and services.

Bet on social and civil dialogue for evidence-based policy solutions, as civil society organisations working with the unemployed, the self-employed, and those experiencing poverty and exclusion are a powerful ally, alongside trade unions.

Véronique Willems



Véronique Willems has been supporting Crafts and SMEs as the Secretary General of UEAPME since January 2017. Beforehand and as from 2009, she was the Head of European affairs at UNIZO (UEAPME Belgian member organisation) and was responsible for advocacy on policies affecting SMEs at EU-level. In January 2016, she was nominated deputy to the SME-representative for Belgium at the European Economic and Social Committee.

Ms Willems started her career at UNIZO in 1999 as Policy Officer in charge of SME education and counselling and went on to work at the regional office (Vlaams-Brabant & Brussel) as responsible for advocacy at regional level, mentorship programmes and individual counselling for entrepreneurs. Ms Willems holds a Law degree from Vrije Universiteit Brussels and a Master's Degree in Commercial sciences/ Business management from VLEKHO Brussels.

Summary

Not only workers but as well employers, notably SMEs, are influenced by digitalisation, automation and the changing nature of work. Due to the impact of digital technologies, companies need and require a new set of skills. The scope and speed of changes is increasing in an unprecedented manner. These processes are affecting all companies and sectors across the globe. In this context, UEAPME has placed digitalisation at the centre of the organisation's strategy.

Three big groups can be distinguished in the digital era: 1) front-runners (those who create digital technology and drive the change); 2) traditionally active (those who follow the course of events); 3) a growing group of self-employed and freelancers.

There is a significant increase in specialisation – workers can choose specific tasks and offer their skills to clients. In the digital age, skills adaptability is what needs to be addressed, particularly by incentivising employers to take part in the up-skilling of workers.

Panel 3: Automation, digitalisation and algorithmic decision making

Patrice Chazerand



Patrice Chazerand is Director in charge of Digital Economy and Trade Groups at DigitalEurope. Prior to joining DigitalEurope, he was the Secretary-General of the Interactive Software Federation of Europe (ISFE), the trade body of PC and videogames publishers operating in Europe between 2002 and 2009. In this capacity he has established PEGI, the only pan-European system of harmonised rating of digital content dealing with various topics such as internet content, protection of minors, privacy, freedom of expression and intellectual property, competition law as applied to interactive and user-generated content, net neutrality, etc.

In 1999, Patrice Chazerand set up the Brussels office of Viacom which he ran as Vice President, European Affairs until 2002. During this tenure with Viacom he dealt with audiovisual content creation and distribution on all platforms, anti-piracy and EU audiovisual issues. From 1989 to 1995, he was Director, Public Affairs, at AT&T France, and subsequently Managing Director from 1995 to 1999. He has extensive knowledge of telecom services and networks (regulation, interconnection, universal service, broadband deployment, next gen networks, etc.). Patrice Chazerand spent the first fifteen years of his career with the French Ministry of Foreign and European Affairs, seven of which were at the Embassy of France in Washington.

Summary

SETTING THE SCENE

For ages work has followed the rules of Greek drama: one place, one time, one action. Digital tech is disrupting this scene as well as other parts of our life, and faster than governments and other stakeholders seem to realise:

'The data-driven economy characterised by exponential growth replaces the mass production industry based on economies of scale.'

Source: IBA Global Employment Institute (International Bar Association): 'Artificial Intelligence and Robotics and Their Impact on the Workplace', April 2017

Two certainties:

- digital developments has a fundamental, transformative impact on labour
- they cannot be stopped, if only because they are global.

Three considerations to inspire our recommendations:

- like globalisation, the digital revolution holds out a mix of threats and rewards
- way forward: identify challenges, maximise rewards, minimise threats
- proven recipes like cooperation between industry, government and civil society are only made easier by ICT.

Four industrial revolutions:

- Industry 1.0: end of 18th century, steam engine drives industrialisation
- Industry 2.0: end of 19th century, electrification makes the assembly line possible
- Industry 3.0: IT boosts automation from the 1970's onwards
- Industry 4.0: ubiquitous, affordable connectivity ushers in technical integration of cyber physical systems (CPS). Think IoT, Big Data, AI and other drivers of data-powered economy.

Cost advantage: in German automotive industry, typical salary = €40/hour; robot = €8/hour, better than Chinese workforce!

Seamless, 24/7 production, constant quality. Industrial robots find themselves chained to the Greek triad instead of men thus set free from it.

In services too, robots substitute humans to feed systems with data. Predictive health, pipe leak detection, etc.

POSSIBLE CONSEQUENCES

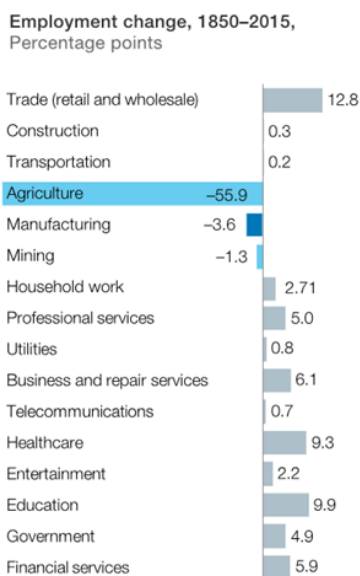
1. McKinsey suggests that by 2030 up to 375 million workers (14% of world's workforce by then) may need to switch jobs and learn new skills, 100 million of them in China alone. Up to one-third of the workforce in the US and Germany, and nearly half of Japanese employees, will have to learn new skills or change jobs.

At least one-third of tasks could be automated in about 60% of jobs, which means substantial changes for employers and workers. Machine operators, fast-food workers and back-office staff are among those likely to be most affected.

But creeping automation is unlikely to have such a big effect on jobs that involve creativity, expertise, managing people, or those that require frequent social interactions.

In Germany, it is expected that digitisation and resulting automation will create 390 000 new jobs in services within the next 10 years.

2. History tells that technology has always created large employment and sector shifts but also new jobs.



The same holds true for ICT. Technology is disruptive but it also creates jobs. Between 8% and 9% of new jobs in 2030 will not have existed before, McKinsey says. In addition, certain sectors, such as healthcare and technology, would see a massive growth in jobs.

As it happens, employment is a direct function of robotisation:

Country	Robot density for 10,000 manufacturing jobs	Jobless rate
South Korea	347	3.8%
Japan	339	2.9%
Germany	261	3.8%
Italy	159	11.2%
Sweden	157	6.8%
Denmark	145	5.8%
US	135	4.4%

Source: WEF

3. More directly related to ICT, another McKinsey report focused on '9 digital front-runners in northern Europe' found that as long as there is continued economic growth, innovation and plenty of government funding, there are likely be enough jobs to offset those lost.

Three main findings:

- ICT has always brought jobs, skill development and improved productivity. 200 000 new jobs created (80,000 in ICT, 50% high-skills), 80 000 net per year.
- GDP growth boosted by €550 billion (about 1.2%) per year in 2016-2030.
- 300 000 jobs displaced per year. 33% jobs created belong to new categories.
- New skills structure: digital economy will hold 19% of all jobs (8% in 2017)

ACTIONS

1. What have we done?

This inspired the following train of actions with DIGITALEUROPE and its membership.

DIGITALEUROPE actively supports the European Commission to boost digital skills in Europe. DIGITALEUROPE has been managing pan-European awareness raising campaigns on digital skills since 2010, with a major impact on reducing the skills gaps (predictions for 2020 fell from 1 million to 500 000) attracting people to new digital careers and bolstering cooperation between the industry and education sectors. April 2012: Neelie Kroes on 'lost generation'. May 2012: 4 associations (DE, EUN, CEEMET, SmartCard) wrote to 4 Commissioners (CNECT, GROW, EMPL, EAC). Jan 2013: Grand Coalition launched.

Since 2016, DIGITALEUROPE has been running the Secretariat of the Digital Skills and Jobs Coalition, urging stakeholders from the ICT and ICT-enabled sectors to commit, and facilitating the setting up of National Coalitions. Cecilia Bonefeld-Dahl, Director-General of DIGITALEUROPE, is also Chair of the digital skills for the labour force working group within the Governing Board of the Digital Skills and Jobs Coalition.

2. What else could help?

2.1. Creativity + (a modicum of) STEM = winning formula. Why a modicum? Because that's where AI will outperform humans. In 'The War of Intelligences', Laurent Alexandre recommends that school curricula should focus on wide-ranging culture and how to use your head to make the most of life as opposed to coding or programming which might prove to be dead-end streets. Why? Because humans are superior to robots in exercising judgment based on centuries-old legacy and global scope. Takes problem-solving to the next level.

Commission heeded this advice in latest Education Action Plan (17 January) which includes learning how to be a good citizen.

2.2. Governments must lead by example. See Tallinn declaration on 6 October 2017, Gothenburg Declaration on the Pillars of Social Rights.

2.3. Adaptability, oftentimes quoted as agility, is essential (rediscovering Darwin's survival of the fittest?) Some sources tell that 47% of total US employment is at risk. 65% of US citizens expect robot or AI to take their job in the next 50 years. Only lifelong learning will secure employability. A life sentence to education? Good, since it will feed curiosity, man's main engine of progress.

One form of adaptability brings government, industry and civil society together: more flexible frameworks to let self-employment, i.e. the lifeblood of the collaborative economy, grow and prosper. But social protection, retirement unsolved yet. Universal Basic Income?

Konstantinos Pouliakas



Konstantinos Pouliakas is an Expert on Skills and Labour Markets at the European Centre for the Development of Vocational Training (Cedefop). He is lead researcher of Cedefop's skill mismatch and future of work projects and coordinator of its country support programme 'Governance of skills anticipation and matching'. Konstantinos developed, managed and analysed the first European Skills and Jobs Survey.

He has been member of the steering committees of high profile European Commission skills/VET projects, contributor to the World Economic Forum and author of influential policy contributions on skills anticipation, skill mismatch and unemployment (e.g. Employment and Social Developments in Europe, New Skills Agenda for Europe). He has represented Cedefop at high-level international conferences in Europe, USA and Latin America. Before joining Cedefop he held posts at the University of Aberdeen (UK) and the University of Cyprus and briefly worked for the Bank of Greece and the UK's HM Treasury. He has published widely in peer-reviewed journals of Economics. He holds an M.Phil from the University of Oxford (St. Antony's College) and a D.Phil from the Scottish Graduate Program in Economics. He is Honorary Lecturer at the University of Aberdeen Business School, Invited Professor at Universita Degli Studi Roma TRE and IZA Research Fellow.

Summary

The new (4th) industrial revolution – with its marked advances in digitisation, robotics, artificial intelligence (AI) - is already disrupting production processes, the world of work and society at large. While the disruptive influence of new technologies across a wide range of industries is becoming increasingly apparent, accounts of what 'digitalisation', 'automation' and the 'future of work' will entail for labour markets, in particular in terms of job destruction and worker displacement, are conflicting. Estimates of the extent to which 'robots will steal our jobs' have ranged from over a half of all occupations in the US and Europe (Frey and Osborne, 2013; Bruegel, 2017) to a low of 5-9% (MGI, 2017; Arntz et al., 2016). Estimates of the European skills and jobs survey, recently carried out by Cedefop, further caution that about one-third of the jobs of EU adult employees are potentially 'automatable'. Around 10% of jobs of EU employees are however susceptible to a 'high risk' of being replaced by machines and approximately 17% believe that they face a risk of job displacement due to their skills becoming outdated (Cedefop, 2017a, 2018).

Despite divergence in estimates of the risk of automation, most studies agree however that digitalisation will transform the task structure and required skill sets in a majority of jobs. This highlights the need for efficient, responsive and forward-looking education and training policies, especially lifelong learning, to prevent emerging inequalities and social exclusion. Digitalisation has also facilitated the shifting of work outside of traditional organisational boundaries, giving rise to new online 'platform' markets in which freelancing and independent

work prevails. Such transformative forces towards atypical forms of employment pose significant challenges to training systems.

Even though the aforementioned trends related to the 4th Industrial Revolution have raised calls for a 'reskilling revolution' (WEF, 2018), in which Big data-driven approaches to reskilling and upskilling based on labour market information predominate, it is important to take stock of ongoing reforms in EU education and training policies. EU education and training systems have been gradually moving towards a competence-based pedagogical approach with widening social partnerships, quality assurance and the strengthening of feedback loops reliant on skills anticipation exercises, which feed into European/national qualification and skills validation frameworks (Cedefop, 2017b). Such an approach has sought to maintain the necessary balance between retention of the ability to impart key competences to students while remaining flexible enough to adapt to new technological challenges.

Nevertheless, existing educational frameworks will face a risk of becoming redundant or inefficient if they do not acknowledge and take advantage of the significant potential of digitalisation and AI. Integrating algorithmic decision-making within education and training provision can promote better skill matches, closer understanding of changing skill needs and greater transparency in individuals' skills profiles. However, such efforts need to remain human-centric, ensuring that technological forces empower teachers and trainers and employment and guidance counsellors. A code of ethics also needs to be applied (e.g. transparency and full disclosure of algorithmic operation and of potential informational biases, quality assurance, governance structures) to prevent the risk of policy diluting and of absence of a social safety net for individuals.

Panel 4: Ethics and governance

Ursula Huws



Ursula Huws is Professor of Labour and Globalisation at the University of Hertfordshire in the UK. She has been carrying out pioneering research on the economic and social impacts of technological change, the restructuring of employment and the changing international division of labour for many years. She lectures, advises policy-makers and carries out academic research as well as writing and editing books and articles aimed at more popular audiences.

She has directed a large number of interdisciplinary international research projects, funded by the European Commission and other national and international bodies. She is the editor of the international interdisciplinary peer-reviewed journal *Work Organisation, Labour and Globalisation* and co-edits the Palgrave Macmillan/Springer *Dynamics of Virtual Work* book series. Her work has appeared in translation in a number of languages including Chinese, Swedish, German, French, Italian, Greek, Hungarian, Danish, Portuguese, Turkish, Spanish, Hindi, Japanese, Korean, Maharathi and Serbo-Croat. She is currently carrying out research on work in the 'gig economy' in Europe in collaboration with FEPS and UNI Europa.

Summary

Historically, labour was characterised by fixed working hours (full time), a certain, fixed set of skills, and employees being represented by trade unions. There was a clear division between employers, employees (and self-employed) and non-employed. Other kinds of work were considered atypical.

After the financial crisis and in the context of digitalisation and globalisation, new forms of employment have become more prominent. The rise of the platform economy, the digital outsourcing of work, and the formalisation of the informal economy are some of trends shaping the current labour market. A worrying trend are the working poor – people who occupy both new and old forms of work but typically are left outside the scope of existing protections.

Among the characteristics of the 'gig' economy one can mention the need for constant availability of workers, the use of customer ratings, tracking and monitoring of worker performance, widespread use of digital solutions, and also deteriorating working conditions and social protection.

A new regulatory model for the 21st century labour market should be developed. It needs to envisage universal coverage, including for different forms of self-employment. It needs to address issues like social protection, liability, data protection, rating systems, communication with employers and platforms. Social security and tax systems would need to be adjusted accordingly.

Thiébaut Weber



Thiébaut Weber is a trade unionist and former student activist in his native France. Born in Mulhouse, he studied history at the University of Haute-Alsace. He is a member of the French trade union Confédération Française Démocratique du Travail (CFDT) and in 2007 started work as their youth delegate, then in 2014 as political advisor on issues including international and European affairs.

Between 2011 and 2013 he was President of the ETUC Youth Committee. He was elected as ETUC Confederal Secretary at the XIIIth Paris Congress in 2015. His ETUC responsibilities include digitalisation, new forms of work, and online platforms. One of his main priorities is to find trade union solutions to tackle the challenges of new technological developments and the platform economy.

Summary

The Fourth industrial revolution will not be fair by nature – as that was not the case with the previous ones. Previous industrial revolutions were succeeded by advances in social rights, with new labour legislation and the creation of trade unions. At this point, a new social dialogue would be necessary. Trade unions are changing alongsidethe labour market.

We must be aware that AI can be biased – there are certain functions it can perform very efficiently, and some that remain out of the scope of its perception such as humour or judgement, inter alia.

Maxime Cerutti



Maxime Cerutti was appointed Director of BusinessEurope's Social Affairs department in January 2012. He is responsible for a diverse portfolio of social affairs and labour market policy issues as well as the day-to-day management of the department. He also coordinates BusinessEurope's engagement as a social partner in the context of the European social dialogue. Maxime joined BusinessEurope in November 2007 as social affairs adviser. Prior to this, he worked between 2005 and 2007 as a policy officer at the European Youth Forum in Brussels.

He started his professional career with a six-month internship at the French ministry of Foreign Affairs in Paris, where he followed the work of the EU Council on Employment and Social Affairs. Graduated in European law and political science, Maxime holds a master degree from Sciences Po Paris, a double law degree from the University of Bordeaux in France and the University of Canterbury in the UK, and he participated in a summer session at the University of California at Berkeley in the United States. His mother tongue is French. He speaks English fluently, is at ease in Italian, and is a basic user of German and Spanish.

Summary

Embracing digitalisation of our economy will bring opportunities. This includes fostering and making best use of technological advancement for economic and social progress, exploiting the role of data in value creation, and supporting the development of new business models deriving from a collaborative economy. Policy makers and social partners should help companies and workers grasp the benefits of digitalisation.

Improving digital skills is an economic and social priority to increase labour productivity and enable workers to move into the new jobs that will be created by digitalisation. No new EU social directives are needed, but rather better coordination of national reform programmes as part of a partnership for reforms.

List of participants

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The EGE publications

EGE Current Mandate

- Statement on Artificial Intelligence, Robotics and 'Autonomous' Systems (2018)

EGE Mandate 2011-2016

- Opinion n°29 - 13/10/2015 - The ethical implications of new health technologies and citizen participation
- Opinion n°28 - 20/05/2014 - Ethics of Security and Surveillance Technologies
- Opinion n°27 - 16/01/2013 - An ethical framework for assessing research, production and use of energy
- Opinion n°26 - 22/02/2012 - Ethics of information and communication technologies
- Statement on the Ethical Implications of Gene Editing and Human Germline Modification (2016)
- Statement on the formulation of a code of conduct for research integrity for projects funded by the European Commission (2015)
- Statement on the proposal for a regulation of the European Parliament and the Council on clinical trials on medicinal products for human use, and repealing Directive 2001/20/EC (COM 2012) 369 final (2012)

EGE Mandate 2005-2010

- Opinion n°25 - 17/11/2009 - Ethics of synthetic biology
- Opinion n°24 - 17/12/2008 - Ethics of modern developments in agricultural technologies
- Opinion n°23 - 16/01/2008 - Ethical aspects of animal cloning for food supply
- Opinion n°22 - 13/07/2007 - The ethics review of hESC FP7 research projects
- Opinion n°21 - 17/01/2007 - Ethical aspects of nanomedicine

EGE Mandate 2000-2005

- Opinion n°20 - 16/03/2005 - Ethical aspects of ICT Implants in the Human Body
- Opinion n°19 - 16/03/2004 - Ethical aspects of umbilical cord blood banking
- Opinion n°18 - 28/07/2003 - Ethical aspects of genetic testing in the workplace
- Opinion n°17 - 04/02/2003 - Ethical aspects of clinical research in developing countries
- Opinion n°16 - 07/05/2002 - Ethical aspects of patenting inventions involving human stem cells

EGE Mandate 1998-2000

- Opinion n°15 - 14/11/2000 - Ethical aspects of human stem cell research and use
- Opinion n°14 - 14/11/1999 - Ethical aspects arising from doping in sport
- Opinion n°13 - 30/07/1999 - Ethical issues of healthcare in the information society
- Opinion n°12 - 23/11/1998 - Ethical aspects of research involving the use of human embryo in the context of the 5th framework programme
- Opinion n°11 - 21/07/1998 - Ethical aspects of human tissue banking

EGE Mandate 1991-1997

- Opinion n°10 - 11/12/1997 - Ethical aspects of the 5th Research Framework Programme
- Opinion n°9 - 28/05/1997 - Ethical aspects of cloning techniques
- Opinion n°8 - 25/09/1996 - Ethical aspects of patenting inventions involving elements of human origin
- Opinion n°7 - 21/05/1996 - Ethical aspects of genetic modification of animals
- Opinion n°6 - 20/02/1996 - Ethical aspects of prenatal diagnosis
- Opinion n°5 - 05/05/1995 - Ethical aspects of the labelling of the food derived from modern biotechnology
- Opinion n°4 - 13/12/1994 - The ethical implications of gene therapy
- Opinion n°3 - 30/09/1993 - Opinion on ethical questions arising from the Commission proposal for a Council directive for legal protection of biotechnological inventions
- Opinion n°2 - 12/03/1993 - Products derived from human blood or human plasma
- Opinion n°1 - 12/03/1993 - The ethical implications of the use of performance-enhancers in agriculture and fisheries

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Why do we work and how does work give us meaning? How can the European values of justice, dignity and solidarity be realised in a changing world? To what extent may longstanding governance frameworks, such as social security systems and employment laws require an update?

To address these questions an Open Round Table took place on 5 February 2018 with the participation of a wide range of stakeholders from different sectors of society, including academic experts, international organisations, industry, trade unions and NGOs.

The conclusions of the Round Table will feed into the EGE's Opinion n°30 on the Future of Work.

Studies and reports

