TECHNOCULTURE

The future of work: Will robots steal our jobs?

Episode 31

Full transcript

Guest: Andrea Glorioso [Andrea]
Host: Federica Bressan [Federica]

[Federica]: Welcome to a new episode of Technoculture. I'm your host, Federica Bressan, and today my guest is Andrea Glorioso, policy officer of the European Commission, and responsible for the Future of Work dossier at DG CONNECT. Welcome, Andrea.

[Andrea]: Welcome. Thank you.

[Federica]: Work is a topic of great social and economic importance, one that is being tackled in many ways within the European Commission. What is the role of the department that you work at?

[Andrea]: So the department, the part of the European Commission where I work and I've been working for the past years, is DG CONNECT, which stands for Communication Networks, Content and Technology, and it's the ministry, if you will, of the European Commission that deals specifically with digitalization, and they're all different perspectives. And within DG CONNECT, my angle on the future of work discussions is, unsurprisingly, the impact of digital technologies and digitalization on labour markets, [unclear 00:01:08] working, jobs being created, jobs being destroyed, jobs changing, and all these kind of things. And before we get into the thick of the discussions, let me remind you and all our listeners that here I'm expressing only my personal opinions, and nothing of what I'm going to say here necessarily reflects the position of the European Commission.

[Federica]: Of course. Thank you for clarifying that. So the future of work, and in particular the impact that digitality has on work - sometimes this topic may be perceived as distant, or

rhetorical, or even worse, something that's just about boosting the economy, but how the European Commission goes about this topic is in a very human-centric way. That is, there is the awareness that the future of work is in fact the future of the men and women who are workers, who are citizens, and who are being impacted by this digital revolution that we've been going through for a while. So in the media, oftentimes we see the negative aspects highlighted (jobs that disappear or the volatility of the job market), but you mentioned some opportunities also, so shall we start on a positive note and look at the bright side of this transition?

[Andrea]: Yes, absolutely. And for the record, we like, certainly, in this part of the Commission to look not naively, but realistically, at the positive angle of digitalization. And in terms of job creation, you know, we hear a lot of numbers here and there. I think it's very difficult sometimes to identify what new jobs that do not exist today are going to be created, much like when the car was first introduced. I'm sure that, you know, horse riders were pretty unhappy about it, but at the time nobody could actually predict or understand all the ways in which the car sector would develop and all the jobs that it would create, so it's not that I don't want to give an answer, but I think one has to be very humble and recognize that historically, technological change if we look at the history of the past 200 years, more or less, technological change always tended to create if not slightly more jobs than it destroyed to reach a balance between jobs created and destroyed. Now, the thing to keep in mind, having said all of that, is the pace of change. Technological change already in the First and the Second Industrial Revolution, as I said, is nothing new, but the pace of change that we saw in the First and Second Industrial Revolution was much slower than what we are seeing today, and so I think there is - we think there is a fair question, a fair issue to be addressed, which is how to cope with this change, make sure that we can use, as a society, all the opportunities, but also make sure that those who cannot realistically adapt as quickly as the pace of these changes would require are not just left behind. That is not the way we do things in Europe. We like to think about the European social model. We believe in free markets and open markets, but we also believe that people should not be just left out in the cold that because they are not quote-unquote "useful anymore to the economy."

[Federica]: Can you give an example of what it means to be left behind? I assume it's not just about losing your job because a machine, a robot, replaced you. There are more subtle ways of being left behind, probably not keeping up with the level of digital literacy that is required.

[Andrea]: Indeed, as you point out, or as I think you're hinting at, the big fear that we have seen on newspapers, on the media, in the common debate is about automation. It's about the strict replacement of human labour of human beings working (whichever work they do) by machines. Personally, I think that these fears are a little bit exaggerated for a number of reasons. First of all, that excepting very repetitive tasks, for very repetitive tasks (which, by

the way, many human beings would probably be very happy not have to do), these repetitive tasks can be automated and are already being automated, but as soon as you get into slightly more complex jobs which require human interaction, which require empathic skills and social skills, which require decision in the face of deep uncertainty, well, then you start to see that it's not that easy to actually replace human beings, and even if you could replace human beings, you immediately start having to deal with questions, legal questions, such as liability. Who's responsible if something goes wrong? We have quite well developed a body of laws to decide in human labour who is responsible if something goes wrong in complex production processes. Once you put a robot, to be simple, in that equation, the robot doesn't do what it's supposed to do or does it wrong and somebody gets hurt, and so on and so forth, who is responsible for that? It's not that these questions cannot have an answer. We are actually, the Commission, as many other places, we're thinking about all of this. All I'm suggesting here is that fears of outright massive replacement of human labour by machines are probably exaggerated, and even the academic research, which, you know, when the first papers started to appear on the topic of a human robot replacement, the numbers that you could see were very scary with 60

[Federica]: Would you mind explaining what you mean by "ideology" here?

[Andrea]: That's a very complicated question, but I will try to go a little bit more in depth. One of the reasons why I for the past slightly more than a year I've been working on this specific topic, which is slightly uncommon in the part of the Commission where I'm working, is because I am deeply convinced that how we see work, how we see the way in which we want as a society to configure labour relations, is both an economic question but it's also a political question, and if you look at history, massive changes in labour relations, the massive changes in the nature of work, which rights workers had, or massive transformations in the economy, for example from agricultural to industrial societies, have always been, if not the causes, certainly a very important element of massive political changes. If you look at the First and Second Industrial Revolution, the economic and structural changes of those times were one of the elements that led to the growth of the international Communist movement in Europe and in the rest of the world. And this is said without any... I mean, I have my own personal judgment on Communism, but I'm not mentioning that for that reason, simply to point out that this is not only about the economics. So as soon as you put the politics, the idea of society that we have, that's what I mean by ideology. And there is nothing wrong with that, because these discussions, again, they are not and they should not only be technical discussions. It's not only about the numbers. It's not only about the macroeconomic future of our continent, although all of these things are important. What sometimes I feel is that rather than looking at the numbers and then trying to understand that the numbers in terms of, you know, future jobs, the dynamics of the economic system, rather than saying, "Okay, I, Andrea Glorioso, I have this particular political idea of how the society in which I live in should look like," and everybody has those ideas, and that's why we have politics and different ways to try to find balance between all these ideas. So rather than saying, "These are the numbers. This is the idea of

society that I have in mind. Let me see how I can steer the change that we're going through based on the numbers in order to achieve that political idea of a society that I have," this, in my view, should be what we should be doing, and to a large extent we are doing. Sometimes, the discussions are more about, "This is the political idea of society that I want," whether on the left, on the right, etc. I cannot ignore the numbers and expect the numbers to adapt to that political reality. I don't think we should, in discussions about technology as anything else, we should not necessarily take the numbers as a given, because, you know, numbers are - the way you collect numbers, the way you interpret numbers, is always open - but at some point you also have to face the realities on the ground, whether that's about, you know, which kind of technologies in Europe we are strong in, which kind of products and services are requested internally and externally, which has an impact on which industries and companies are going to grow in Europe or not, which in return, or as a consequence, has an impact on how our labour market are probably going to look like.

[Federica]: Considering our current situation, what can we observe in the landscape of work? Is there some issue that stands out more than others, for example the need for digital skills or the volatility of the job market? So how does it look like right now? How are we doing?

[Andrea]: It's difficult to identify any particular issue as the most important one because we live in complex societies. The dynamics that we're looking at (and not only the future of worker-level dynamics; this is true in almost every facet of life), but they are complex dynamics. I think we can identify a few elements which we really need to pay attention. One, as you were mentioning, is certainly the issue of skills or competences or literacy, whichever way you want to define that. And understand there are subtle differences between all of those. But the reality (and again, I return to the point on the numbers that I made), the reality is that independently whether we are going to become a fully digital society, whatever that means, or we are going to remain strongly attached to our traditional sectors in Europe, which, you know, vary from member state to member state, but the reality is that there is basically no job, in the next five to ten years, there will not be any job which does not require at least some basic level of digital skills. And by "basic level", I literally mean being able to turn on a computer, send an email, maybe in some cases know what an Excel sheet is and how to process that. And we have been seeing as digitalization, as all sectors of life in the economy have become digitized, this need to have at least these basic digital skills has become even more predominant. The problem is that, or one of the problems, is that if you look the realities in Europe, we still have a very large segment of our population, especially older people (but not only, by the way), which do not even have those basic digital skills. On top of that (and again, this is true across sectors), we see that there is a growth of, let's call them, more advanced digital technologies where that's what nowadays is known as artificial intelligence or big data and data analytics and data processing, and all these technologies and others, are, as I said, quite horizontally permeating all different sectors, and they can be incredibly useful for increasing productivity,

for coming up with new business ideas, for selling your products. And by the way, I'm kind of thinking now more about the private sector, but very similar considerations could be made about the public sector, where advanced digital technologies can deliver more effective and efficient public services, which in times in which some countries have budgetary issues, you know, it's not a bad idea. And if, as I said, our population has some troubles, you know, (it's not the only one, by the way; this is quite widespread around the world), but looking at Europe, where what is striking is that, on average, the European citizens are quite well educated, on average much better than in most other parts of the world, and yet when it comes to digital skills, both basic and certainly advanced digital skills, we are having issues. So, in addition to this particular perspective on digital skills, I think we need to consider the way in which the introduction of digital technologies or the widespread use of digital technologies, and, in particular, what nowadays people are starting to call platform work or the use of online labour platforms - which, from my perspective, is nothing particularly new. The existence of intermediaries between the labour demand and offer has been with us for a very long time. What is more interesting is that the introduction of these online labour platforms - which, for the time being, are still a very minor part of the overall labour force, but have been growing very fast in the past three to four years, so it's still an open question whether this growth is going to continue right now - are very optimistically, depending on how you count, we are talking about between four and six percent of the entire European labour force using this online labour platform, and this is a very, very generous assessment. But as I said, this has been growing very fast, and so the question is: Is it going to grow even faster? And the issue there is, online labour platforms can serve a very useful purpose because they do introduce sometimes flexibility, and some people like or need flexibility. So in that way, online labour platforms can allow people who were until this moment excluded from the labour market to enter into the labour market. Certainly, online labour platforms are not usually the kind of environments which guarantee a very long-term career, and there is an open question to what extent online level platforms provide for what is commonly found in more traditional employer-employee relationships, which is on-the-job training, social contribution to social protection, etc. And all of these are questions that we are exploring. To me, the most, if you will, sociologically interesting question is to what extent the flexibilization and the atomization of labour relations which are maybe not, were not introduced by labour platforms, but online labour platforms do tend in many cases to augment, to what extent the atomization of these labour relations, which affect this atomization, has on the ability of workers to understand that they are not alone, that they are part of a larger group. Now, labour unions have played a very important role in the development of democracies all across Europe, and not only, so I want to say that I fully respect their history and their role. They have also, and they will be the first to recognize that they have also been a bit slow in catching up with changes introduced by the digitalization, at least in some countries. Some labour unions made a very clear choice, so they chose to care more and to defend more for the traditional workers rather than the new economy workers, as they used to be known many decades ago now (well, not many; a couple of decades ago

when I entered into the labour market). Now, the question is, though, that what we have today or what we are seeing in some instances, in particular with online labour platforms, is a very atomized workforce which is very weak in terms of negotiation with both the platform itself and the labour offer, let's put it, labour demand, sorry, so the people who are offering services which the worker then takes up. And I'm being very abstract because there are many different types of online labour platforms, and people always think about Deliveroo and Uber, but you can have labour platforms with very high skilled professionals, so [unclear 00:21:47] render services for designers, for musicians and so on and so forth. These are not quote-unquote "low-skilled jobs". To become a professional musician or designer, you need to study quite a lot. You have more localized online labour platforms. For example, Uber is a typical example. Uber, as a company, is global, but the Uber, the particular instance of Uber that you're going to use, connects you with drivers in your neighborhood, because if you are in Brussels, you're not going to order a taxi in Stockholm. You want the taxi in Brussels. And likewise for other online labour platforms, so, for example, for cleaning services and the like. So there are many different kinds of labour platforms, and one has to be very careful to put them all together in one big box, but there is an underlying question, which is the broader question of the role of organized labour and collective negotiations. If you are certain people, it's great that we don't have or we have less collective negotiations because this allows the employer or the people who want labour to basically negotiate on a one-to-one basis with the worker. I think it's fair to say that in many cases this puts the worker at a disadvantage, and again, if you look historically, the development of labour, the absence of organized labour unions, usually in the end leads to labour unrest, leads to labour unrest which is very often more difficult to manage for the employer, for the business side, because they don't have any more one or two or three single points of reference: the labour unions with which to negotiate. So now I don't want to turn this... This is supposed to be about digitalization, but I do believe that digitalization is an element, not the only one and arguably not the main cause, but is an element in the progressive atomization of labour relations that we have seen in the past 20 years or so. The good news is that it can also be a solution because, to the extent that, yes, if I am a graphic designer and I'm using online labour platforms, I most probably don't go to the office where I can see other graphic designers, I can talk to the other graphic designers. If I don't like something about the workplace or about the labour relation that we all have, I can organize with the other graphic designers. This is all very difficult when your interface to that particular labour market is a computer screen. But at the same time, digital technologies can also allow to disintermediate. You don't need necessarily to be physically with other people in order to talk and organize with other people, and so there is an open question which I don't have an answer to - and by the way, I know that labour unions at the European level are thinking very carefully about that - how can the labour movement, either through the traditional labour unions or through other ways, help workers to get organized? And again, this is not about workers and getting organized for the, I don't know, for the revolution or for the dictatorship of the proletariat. You know, some people choose to believe that that is the goal. It's not me. But again, the point

is that it's in nobody's interest in the mid-to-long term to have a very atomized work force to kind of a push that workforce to the limits and to not give space for collective negotiations, which in many cases will be hard negotiations, but the results of which can be on the mid to long term more sustainable. And so once again the question is: How can digital technologies help in that kind of new forms of negotiations, if you will, new forms of collective agreements, collective bargaining and so on and so forth?

[Federica]: I would like to mention for our audience that you and I met for the first time last year in April 2018, at the second EU-US Young Leaders Seminar in Brussels, an event co-organized by the Fulbright Erasmus+ and Marie Sklodowska-Curie programs. I was invited as a young leader (it was very flattering), and of course you were an expert speaker there, and the topic for the discussion of the two days was indeed the future of work. And to start the conversation, we were given the provoking question, "Will robots steal our jobs?" That is an intriguing, controversial question that can start an interesting debate, but sadly oftentimes in the media, we see that these types of discussions just remain on the surface. So first of all, because this is the field that you work in every day now, if this is a type of question that is often asked, if questions on artificial intelligence and robots are often heard, and if you will try to give an answer to this provoking and controversial question: Will robots steal our jobs?

[Andrea]: It is certainly politically a big theme, and by that I mean that yes, the question is asked very often. I think that if I look at the most recent developments of this debate, that was kind of the question two, three years ago. Nowadays, it's still coming back, but in a more nuanced way and accompanied by other questions which I personally think are more relevant, in some cases even more intelligent, that are not per se about whether robots will steal jobs or not. But on the particular issue of whether robots will steal jobs or not, I think we have to be realistic and the technology that we have today, we can see what we can foresee for the next, I would say, five years more or less, I think the notion that robots or automation, automatic processes, will replace anything but the most repetitive, and frankly stupid, tasks is exaggerated. And anybody who has actually been working, you know, with his or her hands and brains [unclear 00:27:54] these issues, or anybody that I'm talking to who has been working very directly on the factory floor on these issues, would agree with me. In fact, there starts to be quite some interesting qualitative research on what actually happens once you introduced robots on the factory floor, and it turns out there is some research coming from Germany, I understand that some more is being explored in France. This is, of course, you know, it's time-consuming research because you need to have a trained researcher going to the factories and observe over a moderately long period of time what's actually happening rather than looking at the synthetic macroeconomic numbers, productivity levels, etc. The qualitative research that we have suggests that, at least in some cases, when a robot or an automated machine is introduced on the factory floors, human beings are not replaced. Human beings have to complement the machine. There is so much in any sufficiently complex production process of a good or of a service that

human intervention is always needed. So again, the whole notion that robots will kill all jobs or will replace jobs, at the very least one has to nuance very much. Which jobs are we talking about? Are those jobs going to disappear anyway, independent of whether you automate those processes or not? On top of that, I would also add that the fact that a job can, or certain tasks within a job, can theoretically be automated, does not necessarily imply that it will be automated. Looking at the private sector more specifically now, any company has to make certain choices when introduces changes in their production processes. "How much will it cost me? Yes, this particular change," - in this case, the introduction of robots on the factory floor, to continue with the example - "might possibly allow me to increase productivity by X percent, but introducing robots (and forgetting even for a moment about the labour displacement effect, as it's called in the literature) but this robot will cost me money. You know, robots, they don't come for free. It will cost me money to buy it. It will cost me money to operate it. It will cost me money, if something is broken, to fix it." So, you know, every company makes that kind of choice, and so, once again, a lot of the numbers that we have seen in terms of job displacement or job replacement by machines were based on what theoretically can happen and not necessary what will happen in practice once a company has to make that choice. At the same time, I think it's important to keep in mind that, even though technological change is nothing new, digitalization is not an incredibly new phenomenon. We've been having people disagree on when we should actually start counting how to talk about digitalization, but it's not something that appeared six months ago, and likewise, let's be very honest, artificial intelligence, which is the other thing that nowadays is always on the front page of newspapers, it's not new. The first research on artificial intelligence is from the 1950s, even before depending on how you want to define the term. What has changed, and this is something that's changed in the field of artificial intelligence, in the field of automation and in digitalization more generally - and this is something we have to keep in mind - is that there has been an exponential increase in processing power, how quickly can computers make the calculations that they do, an exponential decrease in the cost of storage because processing data, for whatever reason needs also storage space. Point being is that it has become much cheaper than it used to be, and this decrease in cost has been maybe not entirely exponential, but certainly very fast, for the past 10, 15 years. At which point does a change in quantity become a change in quality, and does that mean that the technological changes that we have been seeing for the past 10 years are structurally different from the technological changes that we have been seeing for the past two centuries? That's an open question on which researchers, they like to fight all the time, and I don't think that we have an answer. I think it would be dangerous and naive to simply say, as some do, - not here at the European Commission, to be clear, certainly not myself - to basically do, "Well, we have always seen this change, so nothing, nothing to see. Just move on, and the markets will realign themselves." And the reason why that is dangerous is that, yes, I do believe - and I think that there are good numbers to show and good data to show - that, in the mid-to-long term, markets, in this case labour markets, do find a way to align themselves, but the question is (a) how long does it take, (b), which other effects does that

realignment take? Economic change and labour market change historically have always been accompanied by political change, and I think the real question is not so much to object to this change. It's not like the European Commission or any government, or anybody for that matter, can wake up tomorrow and say, "We don't want any more digitalization, full stop." There are some people who say that, but that is not going to happen. The question is: How do we steer those changes? How do we manage those changes so that, ideally, we only take the good effects and not the bad effects? That's pretty difficult to do in practice, but at least we allow society at large and labour markets in this particular case, in workers, you know, not to talk always in abstract, we're talking about human beings, about people, workers, current workers, future workers to me, as I have two small children, to me, that's probably, but that's my personal, where I'm coming from personally, it's even more important. It's not so much the workers of today, which have at least some degree of protection in terms of many. [but not all? 33:51] European countries to deal with these changes. It's the future workers of tomorrow. Which kind of labour markets will they have? Will we be able to build or to maintain a social protection system that is still fit for purpose for the change in nature of labour of digitalized labour markets?

[Federica]: You have mentioned earlier that we should be critical of numbers and that statistics should be taken with a grain of salt, and we understand what you mean by that, and at the same time, then, an ideology should not be imposed on society top-down and dictate how it should be. So, I guess the desirable approach is to strike a fair balance between what is between the facts and the direction we would like to go according to the values that Europe stands for. Recently, a working group has just delivered its report on theme of the future of work. Can you talk a little bit about that group so that maybe you can show us with this example one of the ways in which the European Commission wishes to address this issue?

[Andrea]: Sure. Before I get to that expert group that has indeed produced a report recently and that I have been managing together with other colleagues, just to be clear on ideology and numbers and data, and I want to be entirely open on this, I do not object at all in people having their own ideology, having their own political ideas. In fact, I think that a mistake of the past probably 20 years in the field of labour discussions, but more generally in our societal discussion, has been to deny the existence of ideologies. You know, the idea was: '89 came, the Berlin Wall came down, Cold War is over, there are no more ideologies. And that was silly because even assuming that those, all the ideologies or ways to look at the world, were completely over (which they are not, by the way), other ideologies came up, and people always have an idea, and it's good that they have an idea what the world should look like. My point was more that we need to find a way to recognize that we do have these different ways to look at how the world should be and how it should look like in the future, that these different ways to look at the world, now in the future, have a deep impact on our discussions on labour markets, on the world of work, including on how digitalization will impact or how it should impact this

world of work. And by and large I have to say, let's not forget that in Europe, with all our defects and with all our bickerings and with all our discussions, we have, by and large, find a way to handle these very complicated discussions without breaking each other's head open, in democracy, in peace. And if you look at the history of humankind as a whole, that is not the natural way with human beings usually handle their different perspectives. The more natural way is to kill the one that has a different opinion than you have. So we should definitely not go there, but at the same time we should not simply forget that these ideologies exist. My point is, and it's a process, and it's very difficult and probably also make that mistake when I do my job here - and maybe other colleagues do as well - there is a fine line between looking at the numbers and trying to get the best numbers, the best data that you can, and then taking a decision (or in my case, advising somebody else to take a decision) knowing fully well that the way you look at the data and the advice that you give is coloured by the particular ideology that you have. So that is one way to look at it. The other side, which I do think is dangerous, is to start from your ideology and then very willfully only looking at the data, at the numbers, at those parts of reality which confirm your ideology, kind of a self-selection bias, if you will. And that is very, very common, and it's very natural. It's a very common human trait, and it takes a bit of - more than a bit; it takes quite a bit of effort and discipline not to do it. So sorry for spending a bit of time on this, but I just wanted to be clear that I don't have anything against ideologies. Everybody has them, and it's a good thing that we have different ideologies, but when we look at the data, we should really strive to compartmentalize, if at all possible, our ideologies and be intellectually honest with ourselves when we look at that data. Now, one way which we can do that, at least in the European Commission, is because we know perfectly well that, as it happens in any organization, and certainly in a political organisation such as the European Commission, the risk of self-selection bias, the risk of - which, you know, my colleagues at the European Commission are, by and large, very competent people, very well prepared. We all had to pass quite strict competitions to enter here. So it's not that we don't make mistakes, for the record, but realistically, if you look at the average educational level and the average ability to look at the data, it's pretty high compared to the average. And yet, once you get into a particular environment, you naturally start thinking the groupthink. Danger is always there and we know it, we realize it. I am myself quite a contrarian and my superiors appreciate that I'm a contrarian, but there are instances in which I realize that, even being by nature a contrarian, I look at things from a particular angle because that's the angle which we have always used in the Commission, so in order to cope with this very natural aspect of working in any organisation (public or private, it doesn't matter, and that's true even in academia; that's true everywhere), in the Commission we often rely on so-called expert groups. There are different types of expert groups. I'm not going to bore you with all the bureaucratic details, but basically expert groups are groups which we create, the European Commission creates, of external people, professionals from different walks of life. Some expert groups formally represent member states' authorities. Some others are completely independent people who participate in these expert groups in a completely independent fashion without taking

instructions from their employers, the organization, and when we create such type of expert groups, the members of the expert group actually sign a paper stating, taking a quote-unquote an "oath", saying that they will not [improvise? 40:25] their advice they will not take instructions from anybody else, that we provide that advice on a very personal basis. Now, the expert group that I have been co-managing, providing the secretariat of, if you will, together with our colleagues, is called the High-Level Expert Group on the Impact of the Digital Transformation on EU Labour Markets. Very long name; I didn't decide it. But at the end of the day, this was an expert group of 10 members chaired by Professor Maarten Goos of Utrecht University, which was tasked, it was created back in May 2018 if I remember correctly - through, by the way, a fully open selection procedure. So we published what we call a call for expressions of interest. We received quite a large number of candidatures, 80 plus, if I remember, and then a selection committee (which I chaired by the way) come to all the application letters and the CVs and the backgrounds, the declaration of the absence of conflicts of interest, and blah blah blah, and all these rules are all transparent or clear. I mean, nobody ever reads them because they're very boring, to be honest. But I want to stress the point that the selection process to appoint members of an expert group., it's not that somebody in the Commission, whether myself or somebody else, wakes up in the morning and says, "I want one, two, three, four," because that could easily lead to situation of conflicts of interest. There is a quite transparent process, so, you know, the selection committee, which I chair, provides recommendation to the top management of the parts of the Commission which are responsible for the group. To cut a long story short, this group of 10 people chaired by Professor Maarten Goos was created back in May 2018. In practice, it couldn't meet before September because in the meantime we had the summer break. The task of this expert group, the task that we gave to this expert group, was to advise the Commission, as well as other EU institution, member states, to basically provide recommendations (bold, if I may say so) with new ideas on how to optimize, how to make sure that the impact of digitalization on labour markets in Europe, this was really very much focused on EU labour markets and on digitalization, would produce good effects, and how to minimize the negative effects, mostly, I would say, in the mid-to-long term. This group met for five times. They worked very hard. And again, to be clear, our job in the Commission, etc., my job was to provide the best possible support for this group, but in terms of substance, the group was fiercely independent. It's not in our interest to tell a group of independent experts to write what we want to hear, because if we wanted to write what we want to hear, we would write it ourselves, and it would be cheaper and more efficient and you wouldn't have to go through all the hoops of handling a group. No. When you create a group, when the Commission creates an expert group, we really want to hear ideas that, for whatever reason are difficult to emerge in here in the Commission through the usual processes. So this group met for five times. All the minutes of the meetings are public; we try to maintain a very high degree of transparency on the workings of this expert group. And then it released, it's a final report with recommendations on the 8th of April of this year, 2019, just the day before, by the way, of a very large and politically very high-level conference on the future of work which the

Commission organized here in Brussels, so with the participation of President Juncker and so on and so forth. Now, I would encourage people to read this report. Perhaps, I assume that when you publish your podcast we could put a link to that report. I'm very biased because I came to, you know, to very much appreciate both intellectually and personally the members of this group. It was not always an easy ride, because there were different ideas around the table, and the group did not have a lot of time to deliver these recommendations, so choices also had to be made on what to focus and what not. I do believe that the report contains things that, you know, yeah, nobody disagrees with. We need more skills and better skills and digital skills. But on that point, for example, the report does introduce a number, in my view, of interesting questions such as, "Okay, who should pay for the delivery of those skills?" And some say that the worker should pay on their own for the delivery of the skills. The workers in the union say, "No way. Why should we be responsible for that?" Some others said that the private sector should do it, and the private sector, understandably, is not particularly keen on doing that. Also because, in an era of high labour mobility, it's hardly in the interest, a company does not have an incentive to "upskill", quote-unquote, a worker knowing that that worker, as soon as he or she is upskilled, is going to move to another company. So that's an additional complication for companies. The report, for example, introduces the notion that maybe we could have so-called labour market intermediaries such as temp agencies take at least part of the responsibility because - and it's explained more in depth in the report - they actually have an economic incentive to have a more highly skilled workforce to quote unquote "allocate" to the different companies which request it. This is just one example. There are other recommendations, nine in total. I think people should read it, criticize the report and the recommendations. Criticize them. Keep in mind that it is not the only report out there. There are plenty of reports on the future of work. Sometimes I wonder whether we even have too many, to be honest. And knowing - and this is very important - the recommendations of this high-level expert group do not bind the European Commission. These are the opinions of the high-level expert group. The Commission, I can tell you, and that's also what I'm doing these days, is assessing those recommendations and trying to understand, "Okay, do they make sense from our perspective?" And I think they do, but that's my opinion. "If so, how do we actually turn them into practice?" That's always the difficulty, because I'm saying this as a very proud EU civil servant, and I have been a EU civil servant and temporary diplomat for twelve years now. The difficulty is always that I think that, on the discussions around the future of work generally, which is not only about digitalization, then within that, about digitalization of the future of work. Actually, I feel that there is a broad consensus on what are the main issues and what is the respective weight of the different issues, and my sense, and as we were saying before, is that actually the issue of automation, complete displacement of jobs by automation, I think there is a consensus that it is probably an exaggerated issue, but as we said there are other issues. So I feel there is consensus on what are the main questions. We are slowly getting to a point in which we agree on what is the right or what are the right methods to find answers to those questions. And when I say "method", I'm not only referring to scientific method,

which is complicated in by itself - which numbers do we use? What do we find the statistical data? All of this is very important. I'm also talking about what I'm referring to is, how do we discuss this with our citizens? That's a very important part of the whole debate. There, I feel that we need ("we", meaning collectively), we, everybody who is interested in these issues and has the means to lead this discussion, we should talk a lot more and a lot more openly with our citizens, because there will be bumps on the road. This is unavoidable. And if you just have citizens either, "Yeah, not worry, don't worry, everything will be fine," people are not stupid and they understand very well that that is not going to be the case, or even worse, what has been the case, in my view, for the politics of the past 15, 20 years, the answer by and large has been, "Well, we can't do anything about it. It's the economy, baby, so just accept it." And obviously, you know, I mean, it sounded obvious to me and it sounds obvious today, but clearly at the time it was not that obvious: If you tell a citizen and the voter that you as a senior decision maker in the private or public sector cannot do anything about X, why would that citizen give you the vote or give you trust? What is in it for that person? Clearly, that person will choose, or most probably, that person will choose to give his or her vote or trust or confidence, whatever, what you want to define, to other people who I don't think they have had or have any better answers to the issues that we're discussing today, digitalization, work, etc., but they have easy answers like, "Let's kick out all the immigrants, and our labour markets will magically become productive. Let's build a wall. Let's do all this kind of stuff." And I don't think that you can entirely criticize people for being worried about what's going to happen to their jobs and to their working life when the debate, a constructive and rational debate, on that has not been happening, it's not happening, at the same time other people, other decision makers (politicians, CEOs, whatever) enter into the fray, and they provide these very sexy and attractive answers which also happen to be wrong. I don't think you can criticize people that much for choosing those sexy answers. You need to provide the alternative political debate. So I think that we are getting to a point in which we are recognizing that this political debate has to happen. It is, to some extent, still happening. I would like to see it happening more at, you know, in every day's people life, and it's not obvious how to do it, and probably the European Commission is not best placed to do that as an institution, because we are sitting in Brussels, and this is debate that you need to have in the streets of the small cities, of the factories. The European Commission cannot go everywhere and have this discussion. Once we get to that point, then we can start to discuss, "Okay, we agree on what are the problems. We agree on how to have the discussion about the problems," and that starts the really difficult discussion which is, which solutions do we want to choose? I think there is a menu of policy options out there are, some regulatory, some [non-regulatory? 00:50:45], some about, you know, using tax incentives. I could make a full list, and we are making a full list, but at the end of the day they all remain very theoretical until you go through these other steps. It is quite telling to me that if you look at the manifestos or programs or proposals of most of the political parties or political families or political groups which are running for the next elections of the European Parliament at the end of May, so it doesn't, we are there, basically, actually, with very few exceptions,

whether it's called future of work or not, but this issue that we're talking about, in particular digitalization and changes in labour markets, are very central in all of the manifestos. That is a good thing. It means that the topic has become politically important and politically relevant. I have my own personal preferences on what the solutions should look like, but I don't mind. I'm happy that now we are truly discussing this, at least in the context of the European Parliament election, and then, you know, you could argue that not all European citizens are that interested in the debates of the European Parliament elections, but it's start. It's a basis on which to build.

[Federica]: You have mentioned serving as a diplomat in the United States for a couple of years. May I ask what your role was there?

[Andrea]: So I served for four years, actually, in Washington, DC, in the Delegation of the European Union to the US, which is basically the embassy of the European Union, but for legal reasons we cannot define ourselves as an embassy, because the European Union is not a state, but the factions of the delegation of the European Union is by and large similar to the functions of a national embassy. So I served there between 2014 and 2018, and my title, if I remember it correctly, was Counsellor or diplomatic Counsellor for the Digital Economy. My dossier or portfolio was, as the name implies, digital economy was a very large dossier, because basically everything that had the term "digital" attached to it tended to land on my desk. As a matter of fact, perhaps fun to me, but two fun facts, one of the first things when I arrived in Washington and I was told that that would be my job title, which was not entirely clear to me (I knew what I would be doing, but the actual job title, it was not entirely clear to me), I remember the first thing I said is, "My job title doesn't actually make sense, because how do you define the non-digital economy, especially in the U.S.?" Nowadays, I mean, you could argue the same for Europe, but especially in the U.S., there is basically no sector of the U.S. or of the European economy which is not in large or in small part completely driven by or certainly influenced by digital technologies. So once again, if you can't define what something is not, then it's very difficult to define what the thing is. So ultimately in practice, in the end, I tended to focus on a wide range of topics, depending on the priorities of the day or of the month during my tenure there in the US. One of the very big issue was certainly the reform of the European privacy and data protection rules, the so-called General Data Protection Regulation, which was interestingly linked to what I do today, because one could argue that the way in which certain, certainly certain sectors in which data processing has always been at the core business model of companies, and not only thinking about the Googles and the Facebooks of this world - this is true in many of the advanced services sectors - but more and more even in more traditional sectors, the way which personal data is collected, analyzed, processed and then used, has come to the forefront of labour discussions. A silly example (well, not silly, actually, a very important example, but a common example) is the way in which labour unions are increasingly questioning or asking more information, more transparency, more accountability on the way which employers collect workers' personal data, which is not a new phenomenon.

I mean, if you look at traditional factory floors, it was always common to time the processes and to see how much a particular worker would take to perform the task, but nowadays we have a situation in which you can actually gather a lot more data about workers without even the workers' knowledge or understanding, and what makes things even more complicated is that sometimes it's good for the worker to collect that data because if you came, for example, from... Imagine that you provide every worker with a Fitbit or an equivalent health bracelet to make sure the pulse and all kind of the health data, you do that, and then you realize that a worker in that particular task is, you know, pressure is increasing and there are very good reasons to believe that that worker might have a heart attack in the next month or so because he has, or she has, pre-existing conditions. Well, as an employer, then you say: "Okay, I don't want that worker to die of heart attack, (a) because" - one would hope - "I'm a decent human being, and (b) because that's a mess in terms of insurance and everything, so I'm going to move that worker somewhere else." That is not bad for the worker, but of course the question is: Does the worker know about that, and what happens when that personal data which is collected is used not for that, let's say, positive reason, but to discriminate against workers or to put pressure on workers? My point here is that today, if I look back, I found it interesting that when I was in the U.S., the [unclear 56:21] was not the only thing that I followed, but the questions around privacy, and more generally data collection and data use, which then linked, interestingly, to the debate on artificial intelligence - because, you know, automated decisions are based on data, on the gathering of data, and then there is the question: How is this data collected and used, with which levels of transparency, etc.? So I find it interesting today to look back and to see that actually, those debates on personal data were, to me, in the U.S. and the political importance that those debates had in the U.S. were already signal of the way in which the use of data, the use of personal data, would play an important role in the debates on labour and the organization of the workplace that we are seeing today. Unfortunately, those two worlds (and, you know, I've had my feet in both worlds for some time now), I feel that those two worlds, so the world of people who deal a lot with, you know, the ethics and rules and the technological side of how you collect data and how you use data and the world of labour, labour research or labour advocates from whichever side of the employer-employee separation, if you will, they don't talk to each other a lot. So that's an area where I think we can do more and better.

[Federica]: Your experience in the U.S. is important for me, because I was going to ask you a question about Europe in the world. All these policies and reflections, the actions that Europe wants to put in place, I think, should consider or at least cannot ignore what goes on in the rest of the world, especially very important arenas like the United States or other large influential countries with their markets. So how important is it for Europe to know where it stands compared to the rest of the world, and how does this influence the policies, maybe even your own work, in the light of the fact that Europe needs to keep a relation with these other places in the world with which we trade all the time? We trade goods, and there is a flow of

people coming in and out all the time. So how does Europe, with its values and its actions in the field of work, relate, connects, finds a balance with the rest of the world? The big picture.

[Andrea]: That's a super interesting and also super complicated question, but I will try to be brief and unpack what I think are the main elements, at least for me. First of all, as you said, or as you were suggesting, I think Europe is not alone in the world, and it would be naive to think that we can take whichever choice we want to take without considering the positions of our main trading partners, our main political allies in some cases, opponents in other cases, so certainly the debates on labour markets in Europe cannot happen purely looking at Europe. We need to look at those in a global context. To me, what is really important from that point of view is to look at the realities that the trade, international trade realities, of complex economies, which means that there used to be the time where you could realistically think, "Okay, I'm going to repatriate, whether in Europe or in one single country within Europe, all the different parts of the production process of a good or of a service." And this has a number of short-term advantages. It certainly allows you to have more political control, including on how you want to manage labour markets. And to go back to the point on ideology that we were discussing before, there are some political forces out there which want that, which are arguing that that is indeed possible - mostly at the national level, not at the European level. I'll be honest, I think that's a complete fantasy, that if you look at the reality of complex - if it ever were true, but certainly if you look at the reality of complex production processes nowadays, the idea that you can repatriate everything and therefore manage directly and more independently your labour markets at the national level, I don't think it can ever be done even at the European level. It's complicated, because let's not forget that Europe lacks severely certain natural resources that are needed in almost all industrial sectors, including the digital sectors. Think, for example, about so-called rare earth materials which are needed to build the devices that we're using today, computers, smartphones, etc., which are, for the time being, seem to be concentrated mostly in China, in Africa. So that's one angle. We need to look at the realities of complex trade relation. And that doesn't mean that we can or we should, when we engage in trade negotiations with other countries, I don't think at all, nor it is the position of the European Commission, that we should compete on labour cost. That would be a mistake. We should also, and that's a point that is pushed very hard by the labour unions (and on personal point of view, I think they're completely right) that there should be no trade agreement with a third country unless we manage to impose labour conditions in that third country which are if not equivalent, at least comparable to labour conditions in our continent, in Europe. Otherwise we are basically putting our own labour force at a competitive disadvantage with third countries where labour standards are nowhere as protective as they are in Europe. So that's one way to look at the international dimension. The other way in which I choose to look at it is that - and I say this with a lot of admiration and respect for the United States of America, where, you know, I lived for four years; it's a country that, for both professional and personal reasons, I came to like intensely, and I think there are more than a few things which we Europeans could

learn from the Americans, in particular their can-do attitude, their pragmatic attitude. There is an issue... You know, the joke is always that when there is a problem, the American will look at the problem and the first thing the American will think is: "How do I fix the problem?" The European looks at the same problem and the first thing that the European thinks is: "Who do I blame for that problem?" Now, this is a bit exaggerated, but there is [unclear 01:02:41] there is a certain degree of truth in this. So a lot of respect for the United States of America. Also a lot of respect for China, and I think that people here in Europe really are very ignorant about China and that they underestimate the incredible history that that country has, and the way that China looks at Itself and the rest of the world is also a result of the millennial history that it has, and I think we make a mistake by looking at China as a Communist country to which we have to convey values and... If anything, the Chinese don't care for that, and they will not accept that kind of relationship. But having said all of this, I really feel that sometimes in Europe, we spend our time in auto-da-fé, to think about medieval times, and to complain how behind we are, how much we're losing the race on X, Y or Z, and put whatever kind of technology you want on X, Y, or Z. I think that sometimes we have to be a little bit more objective and realistic. I think that one Europe still has on average (and in macroeconomic terms, it's the average that counts; it's not the stars of the system; it's the average) - on average, we still have a very healthy population, a very well-educated population, a very innovative economy, labour markets which are... You will get different answers depending on who you ask, but if you look at the numbers, you have labour markets which are fairly flexible and still quite protective, with some worrying holes of protection for so-called new forms of work, and that's something that we should address in the proper way. So the world, Europe - or, you know, Europe is not as bad as people sometimes think, and I think that the main risk is that we berate ourselves that much that we try to mimic other parts of the world because they, I don't know, they are winning the race on artificial intelligence, or they are doing this or they are doing that. And by doing that, we forget that through the so-called European social model, we have managed to ensure not the only way, but one of the ways in which we have managed to ensure by now 59, you know, more than 70 years of peace in a continent that, for the past centuries, has known nothing but war. And this is not about being rhetorical, but it's about recognizing that in managing our labour markets, in managing our social protection system, in doing all of these things and in dealing with the impact of digitalization, we must have done something right, because we have managed to maintain a degree of social peace - and not without issues and problems. We had our terrorism, domestic terrorism. We had our own social conflict. We were in the middle of the Cold War. You know, we had a wall running - people like to think about wars in other parts of the world. We had a wall running in our continent. We managed to handle that, and, you know, if I may, I remember that - and I think it was the last event that I spoke at while I was in the U.S., and because it was my last event, I was going back to Brussels, I decided to be slightly less diplomatic than I usually was because I thought, "Who cares? This is a problem for my successor, not for me." And it was actually an event exactly about skills and labour markets and the dynamism of the economy, and it was in Silicon Valley,

in San Francisco, actually, and one of the... I think it was one of the other panelists that made a point, which is the typical point that is always made in these cases, which is, "Well, Europe has a problem because look at the number of unicorns that you have in the U.S." For those who don't know the jargon, a unicorn is a private company which is valued at $1 billion or more. So it turns out that the U.S. at that point in time had like 13 unicorns, Uber plus a few others. China had, I don't know, five or six unicorns, and Europe had, depending on how you counted, zero, one unicorn. And I remember answered that question to that point, saying, "Who cares? Why would you judge the performance of a society, of a country, or whatever you want to call it of, a union of countries such as the European Union, on the basis of number of unicorns that you have?" To me, the metrics that are worth is, if you want to be a bit arithmetic about it, is, what is the average wage in the country? What is the so-called wage polarization (so, you know, the difference between the lowest wage and the highest wage)? And it turns out that time and again when that polarization, when that difference increases too much, then you have social tension. What is the level, the quality of public services? What is the average age expectancy at birth and in old age? These are the kinds of questions that I personally think we need to answer. If it turns out that having 100 unicorns, so private companies valued at 1 billion euros or dollars or more, produces all of these good effects, good and fair labour markets, possibility for people not only to have decent work, but also to excel if they want to, fair enough. I will all be for creating unicorns everywhere, but if it turns out that it either has nothing to do, so having unicorns has nothing to do, or -and the question is open there, to be fair; I don't claim to have the straight answer - but, you know, there are numbers suggesting that, in order to produce the economic environment which tends to create unicorns, these superstar companies, then there is something that you had to sacrifice, and usually, that something that you have to sacrifice is the kind of social security network or protection which in Europe we came to appreciate very much. So I guess the bottom line is, Europe has issues in terms of levels of employment, especially [unclear 01:08:48] employment? So I think we need to, as the Americans would say, wake up and smell the coffee more quickly than we have been doing until now on what is how to handle digitalization without running around like Chicken Little that the sky is falling, but also without thinking, "Yeah. Doesn't matter. It will fix it by itself." It won't. We need to have an active intervention, so we need to have the debate. So, realizing all of these issues, if you will, but also not forgetting that we are a continent which can claim quite a few successes by and large, not only in terms of technological progress, and we have successes there as well, but, more importantly to me, in the way which technology has been used for the public good, for the greater good.

[Federica]: Thank you very much, Andrea, for your time and for sharing with us your experience in this field and showing us how one can have a truly intelligent, fair and constructive discussion around these complex themes that are close to the heart of the European Commission, and I'm glad that we got a chance to expose a bit of the behind-the-scenes work, if you will, because indeed it does not always translate quickly, nor evidently, in the lives of all of us.

But the fact that it is there is a demonstration of a strong sense of civilization. So I'm very glad we got to talk about that. And the reason why I could invite you on the podcast today is that I had the chance to meet you last year, so I would like to thank the organizers of the EU-US Young Leaders Seminar, the teams of the Fulbright Erasmus+ and Marie Sklodowska-Curie programs. Thank you very much to them, and thank you very much, Andrea, for being on Technoculture.

[Andrea]: Thank you very much. I really appreciated the opportunity and also the questions, which were - I must say - much more intelligent questions than the ones that are usually asked when talking about the future of work. So thank you very much.

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