

Work 2040

Scenarios for the future of work



1/2017

ISBN 978-952-5844-24-5 Work2040-scenarios (pdf)

ISBN 978-952-5844-25-2 Work2040-scenarios (Paperback)



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Demos Helsinki & Demos Effect

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How to Read

IN THIS WORK 2040 REPORT, you will find three scenarios for the working life of the future. They present different possible futures, along with observations, new phenomena and perspectives related to them. The scenarios create opportunities for action and choice, and help conceptualize why work is important.

The scenarios show the different ways in which job functions, descriptions, work methods and what we think of as work can change. We hope they will also show that we get to decide the future of work. We already have the abilities to avoid the pitfalls on our way towards the future of good work.

We wanted to investigate the transformation of work together with pioneers of Finnish working life. Sitra, Varma, Tieto Oyj, the Finnish Tax Administration and Trade Union Pro joined us as partners in the scenario study, each of them looking at the future of work from their own perspectives. Additionally, a notable number of Finnish experts and researchers on work and the transformation of work participated in the workshops. In the project's workshops, it was discovered that while desirable work-related futures are easy to imagine, the path to the desired future is not necessarily a smooth one. The scenarios help us understand the side effects of decisions made now and in the next few years, and build the best possible working life for as many people as possible.

> January 2017 **Johannes Koponen** Demos Helsinki

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Introduction – "A Hard Day's Night"

It's been a hard day's night, and I been working like a dog It's been a hard day's night, I should be sleeping like a log But when I get home to you I find the things that you do Will make me feel alright

You know I work all day to get you money to buy you things And it's worth it just to hear you say you're going to give me everything So why on earth should I moan, 'cause when I get you alone You know I feel OK

> — John Lennon, Paul Mccartney (The Beatles), A Hard Day's Night, 1964

IN A SONG FROM 1964 by the Beatles, the protagonist works only because he believes it will please his partner. It is more common to say that one works for a wage. So work offers a means for making a living, but also for belonging in society and gaining the appreciation of others. In 2017, the song's phrase "I work all day to get you money to buy you things" manifests itself in the life of many knowledge workers as continuous accessibility. Around half of wage earners think about and do interesting work-related things in their free time. Thirty-six percent have to stretch their workday often. The everydayness of work also appears as hurry: for 76 percent, work involves schedules that are too tight.¹

From the 80s to the present day, rather big changes have taken place in Finland's occupational structure. The workers of 2017 represent a different group than a couple of decades ago. Part of the progression is slower and part of it is uneven, because the working population replaces itself over decades. For example, a student studying coding in comprehensive school this year will receive their MSc in the early 2030s.

At times it is hard to notice the transformation of work, for the concepts and vocabularies of work have been born in the era of industrial work. In physics, work means overcoming obstacles. In human work, of course, mental, linguistic and information flow obstacles have "At times it is hard to notice the transformation of work, for the concepts and vocabularies of work have been born in the era of industrial work."

to be overcome. The work done by humans can thus be thought of as shared action. In a report published by Sitra,² Esko Kilpi defines work as the interaction of people who need each other. According to Christopher Dejours, who also represents this kind of a perspective, work does not only mean production but also learning to live together.³

Philosopher Hannah Arendt made a distinction between three different forms of activity: labour, work and action. Labour is needed to satisfy our biological needs, such as eating. Work is needed for making the world

¹ Tilastokeskus: Työolotutkimus 2013

² Kilpi (2016)

³ See Lybeck (unpublished). According to Dejours, "Work is the coordinated activity deployed by men and women in order to face that which, in a utilitarian task, cannot be obtained through the strict application of the prescribed organization."



suitable for human use, for example, when building a bookshelf for books.

According to Arendt, labour is both hurried and ineffectual. The products born from labour are quickly used up and followed by more labour. In reality, we cannot detect such rigid borderlines, but Arendt asks an important question - is most of the work we do simply labour, meaning, in a sense, unnecessary effort? On the other hand, Arendt does not include action in wage labour because action is done only for its own sake, not for economic exchange value.

People use work to describe who they are. Work thus helps build meaning for one's life. In 2013, 37 percent of Finnish wage earners found work to be very important. Usually, the importance of work increases as people age. In studies on working conditions, the content of work matters more for women than for men. Men emphasize wage over content. However, the transformative trend indicates that for both genders, the content of work has become more important and the importance of wages has decreased. At the same time, one third of employees feel they do not have time to delve into new things enough or work as well as they would like to.⁴

How could working life transform into

something where people solve problems and find their work meaningful? The discussion about the meaning of work and the concern over the adequacy of meaningful work bring to light the need to analyse what kind of work people want to do.

QUESTIONS RELATING TO THE NATURE OF

WORK are becoming increasingly important as work looks for new modes. The effects of the global competition of work can be seen, for example, as layoffs in Finnish pulp mills. On the one hand, the automation of work and accelerating digitalization are seen as future society's saviours, but on the other hand as a force that will supplant humans. An often recurring theme in the discussion is technological inevitability. It cannot yet be said for certain whether the development will be seen in the case of individual workers or if joblessness will increase in society as a whole.

It is difficult to think of an aspect of life or society that would not be linked to work and working. The societal role of wage labour can be seen everywhere in a welfare state's institutions. A major upheaval of structures would challenge the taxation and pension systems, for example.

We need new explanations for work. Discussing work will only become sensible once

we understand that work is a more fundamental activity for humans than simply the time spent at the workplace, confined to an employment relationship. A large part of work is not work done in exchange for employment relationships or pay. The good society of the future depends on how well we manage to understand and redefine what work is.

You are now reading the Work 2040 scenarios. The publication examines alternatives to the current forms of work. The three future scenarios presented in the report have been created in workshops together with top Finnish experts. The scenarios help us highlight central phenomena that must be discussed together. These phenomena are, for example, the consequences of disappearing professional identities and the new demands that hyper-productive problem solvers place on companies and education.

What is it like to live in a world without stable professions?

What is it like to live in a world where laborious effort and routines are the smallest component of people's work?

What is work like when it means meaningful shared activity?

Let's find out!

⁴ Tilastokeskus (2013): Työolotutkimus

What is Changing in Work?

IN 2016, Finnish people, politicians and the media are discussing jobs – and the lack of them. It is not an exaggeration to say that work is the single most important determining factor of a human's status. That is why people closely follow what is happening in employment and how politicians solve the working life challenges of today.

In recent years, the Anglo-American media has published plenty of pieces on the end of work due to automatisation. In Finland, the whole transformation of work has been called a fairy tale on the basis that the statistics of working life do not point to significant change.⁵ According to the statistics, wage labour in Finland seems to have retained its position. Trends that break down wage labour, such as the growth of gig work, receive disproportionate amounts of attention in the media. On the other hand, in September 2016, The Guardian wrote: "statisticians do not have the faintest clue about the size of the gig economy."⁶ Fortune magazine also remarked⁷ that the transformation of working life depends on what figures one chooses to look at. In Great Britain, for example, the number of self-employed people in 2014 was the highest it had been in 40 years.⁸ The wage level of self-employed people had fallen on average by 22 percent since 2009.

The discussion on the transformation of work often involves determinism, which does not take into account the effects of the labour market system, politics and people's moral choices. Therefore, the mechanisms that produce work must be examined. In Finland, too, many working life structures and jobs are based on mass production,⁹ whose golden age humankind has already passed. Mass production relied on cheap energy and sufficient raw materials, and constantly needed a larger workforce. The existing management systems, division of labour and wage labour have been born in the time of mass production.¹⁰

- 8 Office of National Statistics (2014): Self-employed workers in the UK
- 9 Boyer, R. (2004)
- 10 Julkunen (2008)

Since production can no longer rely on cheap non-renewable energy, sources of raw materials that feel endless and a growing workforce (and purchasing power), the system of mass production has to be replaced with a new way of value creation.

In the work of the future, value will not be created in the same way as in the time of mass production. The importance of services has been growing for a long while already. The unlimited distribution enabled by digitalization has permanently changed, for example, the entertainment industry, its pricing and eventually work. On the other hand, the scarcity of resources encourages sharing essential commodities. An artist does not make money from record sales anymore. In the future, a real estate agent will not be selling the maximum amount of apartments, but will instead be maximizing the use of various spaces.

The authors of a recent report¹¹ published by VTT Technical Research Centre of Finland, conducted under the Government's analysis, assessment and research activities of the Prime Minister's Office, propose that there are two

11 Dufva et al. (2016)

⁵ Helsingin Sanomat 25.3.2016. Also Statistics Finland's Anna-Maija Lehto in her keynote speech at the Nordic Working Life Conference in Tampere, November 2016.

⁶ The Guardian 13.9.2016

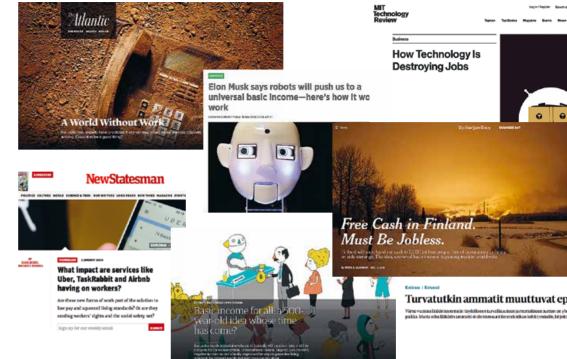
⁷ Fortune 15.9.2016

independent branches affecting the conversation on working life. One emphasizes work's productivity and the other its meaning, and the conversations do not converge. Currently, work creates content for life and attaches individuals to society. If the importance of a job or employment in people's lives decreases, more and wider forms of communality and ways of attaching to society will arise alongside employment.¹²

What is changing, then? According to a future report¹³ commissioned by the Ministry of Economic Affairs and Employment (TEM), people's working hours, ways of doing work and working conditions in 2030 will be considerably more individualized than in the 2010s. The new opportunities created by information technology will promote individualization. People's values and lifestyles will diverge as a consequence. Due to an ageing population, the labour supply will decrease, which will hardly be compensated by workbased immigration. At that time, companies can begin to offer even more individualized deals for the most skilled.

In 2030, the organization of work will have

13 Alasoini, Järvensivu & Mäkitalo (2012)



moved more and more from rational organizations towards utilizing the organization's cultural features and people's diversity. Both TEM and VTT¹⁴ believe that collectivity in the organization of work will change in the near future. We will then be focusing more on workers than jobs. In addition to the economic perspective, working life will have to be examined more from a humane, social and ecological sustainability perspective.

Similar features also surfaced in this project's workshops and in the scenarios they helped to construct. It seems that the meaning of good work in the future will arise in networked interaction. So-called metaskills such as critical thinking, the ability to learn new things, control one's use of time and recognize what is essential will be especially necessary in work.

The need for many of today's skills will decrease. However, it is possible that in the future, value creation and hence livelihoods, will be based less on the production and consumption of goods than they are at present. More value creation based on people's activity and interaction may arise in their place.^{15 16}

¹² Work is a positive way of attaching to society and if that opportunity does not exist, people link together functionally in other ways and seek recognition. These ways can be positive, such as volunteer work or negative, such as criminal communities.

¹⁴ Dufva et al. (2016)

¹⁵ Hautamäki, Leppänen, Mokka & Neuvonen (2017)16 Kilpi (2016)



How Was This Scenario Report Made?

THE WORK 2040 SCENARIO WORK's material was gathered between June and October 2016. The publication was written based on the material. The methods used for the scenario work were environmental scanning, online questionnaires, vision definition, outlooks, the backcasting scenario method and expert interviews. Before the scenario material was collected, a base report was made, which was based on examining the operating environment, a literature review and a background questionnaire. Visions for the future of work and the paths for getting there were created in the workshops organized in Helsinki.

1. Environmental scanning and background questionnaire

The environmental scanning was done during summer 2016, with the help of the literature review and abstract. They were used to describe different work-related meanings, trends, change phenomena and lever points, meaning opportunities to make an influence and possible normative goal states. An online questionnaire was conducted specifically for mapping the desirability and probability of change phenomena.

2. Expert workshops

The most important output of the Work 2040 future study came from the workshops organized for experts. The first workshop focused on developing a vision of the work of the future, and in the second the broadcasting method was used to construct scenarios of how that vision could be reached. The participants represented a wide group of experts from different organizations. A list of the workshop participants can be found in the *Authors* section.

A normative vision for the working life of the future was defined in the vision workshop organized in September. The first workshop and its methods are described in more detail in the chapter entitled *A Co-Developed Vision of the Work of the Future* on page 14. Paths to possible and desirable outlooks were created in the backcasting workshop organized in October. The second workshop and its methods are described in more detail on page 13, in the infobox *What Are Scenarios*?

3. Summary of scenario material and analysis

Recurring themes, differences and similarities were identified from the scenario material, meaning the output of the workshops and the mapping of the operating environment. An understanding of work-changing phenomena was thus formed. The material formed the basis for the report's scenarios.

4. Expert interviews

The ideas of workshop participants were tested in expert interviews. Possible change paths and the effect of different contexts were also identified with their help.

5. Constructing and analysing scenarios and outlooks

The outlooks and scenarios were constructed on the basis of the workshop material. The groups originally created a total of six scenarios and outlooks in the workshops. Three different scenarios were formed based on similarities and differences, in which the scenarios and outlooks of two groups combine. A large amount of material was condensed into a more digestible whole. Condensing it to three scenarios facilitates analysis and helps bring up interesting points of view.

What Are Scenarios?

SCENARIOS are justifiable stories about the future. They help identify different options and the opportunities that society's actors have to make an influence. Scenarios illustrate different strategic options and the timing related to them. With their help, the chosen strategy can be justified in the long term.

Scenario working is a future research method with which the central variables (phenomena, actors) in terms of the subject and their possible realization options in the future are identified. The scenarios in this report describe different possible and partially desired future paths, whose realization is justifiable based on the present state, history and prevailing trends.

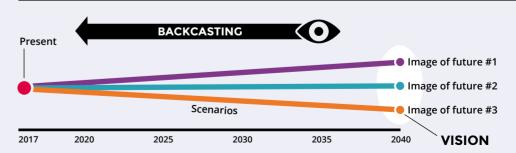
The backcasting method was used in the scenario working. Backcasting is based on defining desired and possible outlooks, or visions. Paths from the future towards the present are created with the help of these visions. This helps prevent getting too caught up in what things look like at this moment.

Desirable, believable, probable and possible futures

SCENARIOS CAN BE desirable, probable or possible. Furthermore, they should be reasonably believable; otherwise they will not encourage action.

All scenarios also show the downsides of decisions, not just a utopian ideal world. Reality is messy and desirability does not mean the same thing to everyone. Demos Helsinki's scenario process is based on a sufficiently desirable goal state, but all scenarios also have their problems. Bringing up problems allows the critical evaluation of the decisions that led to them. In order to understand the scenarios, it is important to note that they do not represent Demos Helsinki's, the partner organizations' or workshop participants' goal state and none of them as such describe a likely future that will come true. Their function is to help decision makers and others who influence the future to evaluate their activity and choices in the long term.

That the scenarios belong to a possible world means that a scenario cannot bypass the laws of physics. A scenario is merely a single point in the probability field of future alternatives, so the scenario will never come true as it stands. However, the probability of the progressions can be evaluated by examining their expected delays, configurations of power and the desires of influential parties.



A Co-Created Vision of the Future of Work

THE VISION WORKSHOP organized in September 2016 began with verbalizing the desired future state. According to it, people's trust in society will remain high in the future, inequality between genders and groups of people will be reduced, people will be happier than now and life will feel important. Based on these background assumptions, visions of what else could be wished from the future and what it would take for these wishes to come true were created.

In the vision workshop, the groups first discussed what the desired future of work means for different group members, organizations and society. After that, the groups specified what the good future of work they defined could mean in the year 2040. Additionally, it was determined how pensions, salaries and taxation could be formed. Finally, the perspectives were put together through imaginary persons. In this report, they respond to the question "What do you do for a living?" in 2040. The outlooks set in 2040 that the workshop groups worked on differed from each other in five ways in particular:

- 1. DAILY WORKING HOURS. In some of the futures, people's daily working hours decreased radically, whereas in other envisioned futures work took up an increasing amount of people's time.
- 2. INCOME INEQUALITY. Some of the futures led to a clear increase in income inequality. In other possible futures, changes in income inequality were smaller. In addition to income inequality, another potential causal factor of inequality was people's ability to influence their work.
- **3. MANACEMENT.** Substantial differences in management concerning doing work were found between groups. Some groups highlighted the need for individuals to manage their activity more effectively. For others, managing teams and small networks was central.

4. LIVELIHOODS AND THE NATURE OF WORK. All groups discussed the fragmentation of work. Groups differed in how scattered the sources of people's livelihoods are and how lasting and stable the amount of work is in people's lives.

The workshop groups also produced marked similarities.

- 1. CLOBALIZATION OF THE ECONOMY WILL DEEPEN. The deepening networking of the economy on the global level was an assumption held by all groups. This will naturally affect Finland's working life: Finnish work will position itself primarily in a global framework. Nations potentially turning inwards by 2040 was not seen as desirable on a grand scale. This kind
- of external development happens in one scenario, however.
- **2. WORK WILL FRAGMENT.** Although groups differed in regard to the degree of frag-

mentation, all groups stated that work would be split between more employers and into different forms of working.

3. WORK WILL RETAIN ITS MEANING. The groups produced outlooks in which the meaning of work in people's lives had changed. Still, in all possible futures, work retained its meaning in terms of society, people's livelihoods and for creating purpose.



THE SHARED GOAL OF WORK IN 2040 AS DEFINED IN THE WORKSHOP

THE WORK DONE BY PEOPLE in 2040 will still be important for people's livelihoods and essential for society's productivity. In 2040, well-being in working life will be taken care of with the help of livelihoods, gender equality and authority related to one's own work. Self-management and skills related to it will have become more common as a positive phenomenon.

In 2040, the difference between employment and unemployment is interchangeable: the employment of individuals has become easier, but full-time wage labour has decreased. Income consists of many sources, but nonetheless predicting one's own income is possible.

HOW DO THE CHANGE PHENOMENA OF WORK FEATURE IN THE GROUPS' DESIRED STATES?

Will work disappear?

THE CONCERN over the disappearance of jobs can be seen in the groups' visions. With regard to desired futures, the groups mainly highlighted the meaningfulness of work. Many groups emphasized how meaningfulness is found from solving so-called wicked problems, such as climate change. So it is clear that in the vision of good work, work will not end, but in the desired future work will include more meaningful shared activity.

How will job descriptions change?

A certain degree of fragmentation of job functions, the disappearance of certain job descriptions and the diversification of job functions were apparent in all groups' discussions. There were clear differences between groups' views on how much and how cross-sectionally the changes will be seen in society. Still, the hope that predicting one's



livelihood will be easy arose in all discussions. The structures of work cannot be expected to change completely in 25 years. In 25 years, it is also likely that there will be long careers under one employer, as well as routine work and unnecessary work. At the same time, job descriptions might change significantly. How great a change is believable and possible?

How will skills change?

SKILLS WILL CHANGE along with job descriptions. The diversification and human-centeredness of skills was apparent in the groups' discussions. So-called soft skills were highlighted. The groups did not think it was desirable or likely that skills based on human interaction would change or disappear. Rather, these skills were thought to become more pronounced.

Will a basic income help?

A BASIC INCOME is somewhat of a buzzword; a patent solution suggested for the change phenomena of the economy by several different parties. A basic income cannot replace the feeling of meaningfulness derived from work. A basic income can be part of solving income formation, but it alone is not enough for the foundation of a good societal vision.

How will work become a part of the wider aspects of life?

THE CENTRALITY OF WORK in life can be seen in the visions that the groups produced. Of course, the subject of the discussion pointed towards this too, which was the future of work and not, for example, the future of liberation from work. No group emphasized liberation from the "burden of work".

SCENARIOS OPEN PATHS TO THE WORK OF THE FUTURE

THE THREE SCENARIOS presented in this report depict three different kinds of futures. They reveal alternative progressions and give ground for discussions over how change phenomena should be prepared for. The names of the scenarios are Honourable Toilers, Flexible Producers and Magicians' Economy.

The scenarios describe what people are doing in the year 2040, in what different ways society can function, which things can change and which actors can direct change. These future scenarios are not the progressions that are most likely. Their task is to bring to light certain potentially central phenomena, which are already apparent now, but also to identify the central actors of change. They open up some of the possible future developmental paths and highlight important similarities and divergent change phenomena, so that change makers are better equipped to make solutions in their own contexts.

HOW WILL THE TRANSFORMATION OF WORK CHALLENGE THE PROJECT'S PARTNER ORGANIZATIONS VARMA, THE FINNISH TAX ADMINISTRATION, TIETO OYJ, TRADE UNION PRO AND SITRA?

	SITRA	VARMA	ΤΙΕΤΟ ΟΥJ	FINNISH TAX ADMINISTRATION	TRADE UNION PRO
WHY IS THIS ORGANI- ZATION A PARTNER OF THE PROJECT?	Sitra's mission is to promote the sustainable growth of Finland's economy, stable and balanced progress, as well as international com- petitiveness and coopera- tion. That is why the future of Finnish work is a central area of interest for Sitra. Sitra has several initiatives, such as a vision of sustainable well-being, which address the work of the future.	Varma is a pension insur- er for work done in Fin- land. Varma's mission is to look after the statutory earnings-related pension provision of employees and entrepreneurs. It is clear that changes related to doing wage labour will influence Varma's mis- sion in several different ways.	Tieto is a changemaker. Tieto estimates that in the future, information will be the largest continually growing producer of so- cial and economic added value. Tieto's goal is to make use of the oppor- tunities of a data-centric world and produce value for individuals, organiza- tions and society through them. How will this be apparent in the futures of good work?	The Finnish Tax Ad- ministration is a major employer. How will the transformation of work affect, firstly, the Tax Administration's ways of doing work, and secondly, in what ways and where taxes are collected from in the future?	Trade Union Pro is one of Finland's largest trade unions. Trade Union Pro's members are trained superiors and experts of the private sector, irrespec- tive of their field. Trade Union Pro is a member association of the Finnish Confederation of Salaried Employees (STTK). How will the transformation of management, work meth- ods and job descriptions, for example, affect the position of employees? How can the trade union reform?
OPPORTU- NITIES	Sitra can be making Finn- ish work into activity that is globally influential and increases economic and mental well-being. The transformation of work needs new concepts and their incorporation into people's everyday lives.	Varma has an exceptional audience with Finnish companies and employ- ees. The Finnish pension system can be made sus- tainable by understand- ing the transformation of work.	The ways of doing work In expert companies like Tieto Oyj have already changed and are still changing. What does this mean for recruitment, modes of collaboration or the working environ- ment, for instance?	The work done in the Tax Administration is meticulous, de- manding and at times strenuous. Can alter- ing job descriptions and offering new tools increase the meaning- fulness of the work?	Trade unions have faced var- ious changes in the market economy and work during the time they have existed. Active- ly reacting to these changes has secured improving working conditions and better lives for workers. This opportunity also exists now.
THREATS	The economic operational environment is challeng- ing: if thinking differently cannot be encouraged in Finland, the reformation of Finnish work may remain mere words.	If the structures of wage labour change signifi- cantly, it may be difficult to bring about new sustainable structures in the pension system. Additionally, inter-gen- erational tensions will be highlighted in the transformation of job descriptions.	Tieto needs highly skilled labour and an open world where information and people move. An iso- lationist world poses a threat.	Changes in in- come-based taxation, increasing income inequality, unof- ficial employment relationships or wage payment methods, for example, create prac- tical challenges for the Tax Administration.	Trade unions are in a difficult spot in protecting workers' rights in a world where those without an employment rela- tionship are in a worse posi- tion. This can be a risk.



Summary

SCENARIO CHARACTERISTICS

Scenario 1 Honourable Toilers: a world where work belongs in controlled everyday life. Work is stable and employment relationships are steady.

IMAGINE: a new era of nation states, high employment, small differences in wages, a generally low wage level, flexible entry into retirement and wages do not increase.

Scenario 2 Flexible Producers: a world where work is episodic, reduced working hours and lots of employment relationships

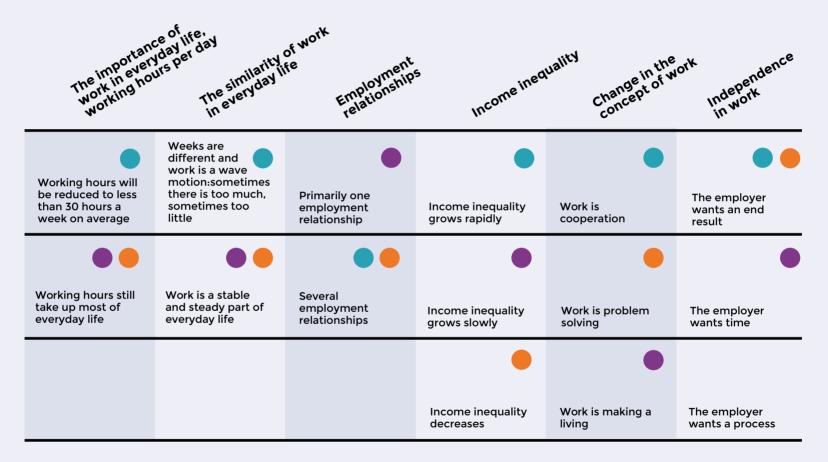
IMAGINE: The EU's role has become significantly smaller. As a response to this, and along with the hyperconnectivity¹⁷ of business and work as well as the Internet generations coming to power, global citizenship and solidarity have strengthened. Entrepreneurship becomes much more common, work is intermittent, the profile of employment relationships changes, the economy is strong and income inequalities do not become huge.

Scenario 3 Magicians' Economy: a world where work is stable, but employment relationships are multiple

IMAGINE: Global trade has further faded the borders of nations. Strong economic polarization leads to the strengthening of a global and connected elite, which guarantees free movement. Local responses to polarization differ considerably, however. States compete over big corporations' investments and some of the states wither. The highest educated 5 percent of the population is responsible for 60 percent of the national value added, there is lots of unearned income and a large part of the population are net receivers of benefits.

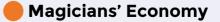
¹⁷ Increasing connectivity between objects and humans, see Demos Helsinki (2015)

SCENARIO DIFFERENCES



Honourable Toilers

Flexible Producers



SCENARIO 1

Honourable Toilers

The central observation of the scenario is that work and job are different things. In this scenario, the current employment relationship remains a part of work culture, but the actual content of work for many workers changes into varied ad hoc gig work. This is possible through reducing the friction of recruitment. Employees have a secured salary and employment relationship and companies find the right person for each task easily. In the scenario, people's professional identity is increasingly replaced by their job identity.

Recruitment companies reducing friction balance the structural unfairness of the new economy, distribute work and secure livelihoods. They are companies in which not only transaction or value are shared, but also lifestyles, political agendas and the construction of meaning. Recruitment companies can be switched in accordance with one's life situation.



SCENARIO 1

How does a recruitment company-based labour market work?

The disappearance of job descriptions and the fragmentation of job functions in the scenario do not necessarily mean that working long careers in employment relationships has to be abandoned. In the scenario, socalled recruitment companies take as their core business the effective supplying of skilled workers into various duties. This kind of model is already in use in consulting jobs in the programming field, for example, where companies who take good care of their skilled workers sell them to other organizations to carry out problem-solving duties, even for extended periods of time. When these recruitment companies employ more and more workers, they have increasingly good opportunities to support people's individual development by offering them interesting duties. The key competitive advantage of recruitment companies is their data on labour demand and people's competencies, passions and desires.

INCOME INEQUALITY IS LOW: 45 percent of people have an average income. There are not large differences in working hours within the middle class. In addition to a large middle class, there are also some who make 1,000–2,400 euros a month in 2017 currency and some peak earners.

Organizational culture changes notably, which also changes management training and coaching for managing your own work. The teaching of self-management begins already in nursery school. Interaction coaches graduate from management training. There are half as many superiors as in 2017.

In 2040, 45 percent of the working age population have higher-level educations, which creates pressures for education: in the scenario it is primarily adaptive and quick to react to changes in working life.

'The Bases of Good Work's Bases' and 'The Expanding Middle Class' scenarios created in the workshops have been incorporated into the Honourable Toilers scenario.

Current topics in the Honourable Toilers scenario

Will work disappear?

THIS QUESTION has a central role in the scenario. The scenario expects wage labour to retain its position: therefore jobs will remain.

How will job descriptions change?

THIS QUESTION ALSO COMES up in the scenario. Although work is done in an employment relationship, the shape of job functions has not remained unchanged. Indeed, the central problem of the scenario is how fragmenting job functions can be carried out meaningfully when job descriptions disappear.

There will be work upheaval in many dimensions

THE HONOURABLE TOILERS SCENARIO highlights the role of general competence at the expense of expertise, specialization and gig work. So in practice, the following components driving the transformation of work will be highlighted: market convergence, digitalization's ability to bring new jobs into the marketplace, gig work becoming more employment relationship-based and the strengthening effect of technology on the capabilities of doing work. As a result of market convergence, meaning the merging of previously entirely separate markets, recruitment companies will gain significant competitive advantage from their extensive group of workers.

Will basic income help?

IN THIS SCENARIO, the problem of subsistence is solved largely with gainful employment and a high employment rate. The meaning of work is attached to the job, not work performance. A person also adopts a certain lifestyle through the job, which is strongly attached to their identity.

How will work become a part of the wider aspects of life?

WORK IS STILL a central part of life in 2040 but working hours have decreased slightly nonetheless.

Observation: Work will not disappear

One's livelihood will diverge from the workplace and working hours

THE MARRIOT HOTEL CHAIN EMPLOYS well over a hundred thousand workers. Its toughest competitor, the company AirBnB, has about 1,600 employees. However, it is easy to forget that over a million people receive income through AirBnB. There are many ways of doing work at AirBnB, such as cleaning the apartment and giving keys and advice to tourists. The actual payment comes more from renting the property. The workplace and livelihoods diverge.

In the future, part of one's livelihood will be generated from property. The GetAround service in San Francisco peer-to-peer rents thousands of cars for a few dollars per day each. Car owners benefit from renting their car because they get to reduce the costs used for investing in the car. So, the price of the car falls for all parties while the use rate of the car increases. New communities, shared workspaces and many forms of social economy are doing the same. At the same time, the price of commodities approaches zero, and work and the compensation from work decrease. On the other hand, inventiveness enables the individual tailoring of services, whereupon people pay for different things than before. For example, a salesperson in a clothing store gets access to information on the customer's purchase history and preferences, and the customer pays more for the creative combination and use of these than for the products themselves.

Work and the job are different things

THE AUTOMATION brought about by digital transformation is no longer limited directly to fields operating with the physical world. In the English-language media, robots have been writing news that can easily be compiled using data for years already. These include, for example, baseball scores or small news on

earthquakes. The redistribution of work taking place through the platform economy also breaks down traditional professions.

The work of a translator, for example, is threatened by services such as Duolingo, where translation happens while users on the other side of the platform are learning to speak English. The program distributes the same translation task to enough people so that it can statistically deduce the right answer. The translation costs nothing because the translator wants to learn the language. Artificial intelligence will arise as the second threat. Since 2011, Google's Brain team has been developing artificial intelligence based on the operational logic of the brain's neurons, which learns through trial and error like a small child. In 2016, Google Translate has started to become artificial intelligence-based on the part of dominant languages and the quality of its translations has notably improved¹⁸.

All these services enable a productivity leap, after which the same job function can be

¹⁸ New York Times 'The Great A.I. Awakening', http://www.nytimes.com/2016/12/14/magazine/ the-great-ai-awakening.html

carried out with a smaller amount of work. Six times as many cashiers as self-checkout attendants are needed, for example. Therefore, if the same employer does not offer a new job function, many have to find a new job. Technological unemployment refers to when the labour demand in individual job functions decreases as a consequence of the increased efficiency of work.

In the past, people have always found something sensible and new to do. Now, the change is faster and so the growing pains are tougher too. In the United States, the productivity of work has gone up by 73 percent between 1973–2015. In the same period of time, hourly wages have risen by 11 percent. Productivity has thus grown 6.6 times faster than wages.¹⁹

Work will not end, however.

WORK can be defined in many ways, but none of these definitions allow for work to disappear. Jobs, however, can disappear, at least in the sense that the competencies required for a job will change. Work and jobs are thus different things. Although work will not be

running out, it is possible that not everyone can find a job or that education will not be able to keep up with the changing demands of working life.

¹⁹ Economic Policy Institute: Productivity-pay Gap. http://www.epi.org/productivity-pay-gap/

Follow this: Population ageing might halt reform

CITIES DO WELL in the Honourable Toilers scenario and the countryside declines, when the population ages due to migration and protectionist politics. What does an ageing population mean for decision-making?

In most major economies, in Europe, China and the United States, according to population projections over a third of the population will be pensioners, meaning 65-year-olds or older, until 2050. The population grows because people live longer. Meanwhile, the section of the population that produces economic growth does not grow.

For a long time already, the global economy has been slowed down by a decrease in birth rates. Between 1960 and 2005, the global workforce grew by 1.8 percent a year. Now, it has fallen down to just over one percent and keeps falling, since birth rates go down along with the spreading of education and wealth. Of the populous countries, only Nigeria and the Philippines have a rapidly growing workforce.

What are the cultural and other effects of

an ageing population? Introducing changes in the workplace will not become easier, at least. At worst, we could be facing a rigid society controlled by traditional structures.

Global Institute, the research department of consulting firm McKinsey, has estimated that half of the economic growth in the last 50 years has come from the advancement of technology and half from an increased workforce. Population growth will now fall during the next 50 years and the growth of the workforce will fall even before that. That is why we are in need of an unparalleled leap in productivity. This time, however, we are dealing with an existential leap into the unknown. According to McKinsey's estimates, productivity growth has to be 80 percent faster than previously in history in order for economic growth to be maintained on a global level.

Population changes will look quite different, though, if they are examined on a smaller geographical scale than on the level of countries. The population can grow either through birth rates or migration. In Finland, the population is growing in large university cities and their metropolitan areas for both reasons. Young people are moving into the cities. The rate of urbanization will accelerate in Finland, too, since Finland is at the tail end of Europe in terms of urbanization.

It is harder for young people to meet each other in a world of nation states, closed borders and walls. The density of cities and random encounters directly correlate with the number of patents and other measures of innovation. It may therefore happen that demographic factors slow down reform.

A counter-phenomenon of this kind of a demographic trap is also possible: when competent workers cannot be found, it is necessary to invest quicker into automation. It may well happen that in a world of neo-nation states, the countries with the largest relative numbers of elderly people will be the quickest to set up the automation systems that enable a productivity leap.²⁰

20 Read more: Kauhanen (2014)

RIITTA SUPPERI / KEKSI / TEAM FINLAND

SCENARIO 2

Flexible Producers

The Flexible Producers scenario is a world where work has broken up from organizations into networks and from employment relationships into productions. Productions mean that independent entrepreneurs and work collectives get together for a limited period of time to work on a specific production. The work is based on shared problem solving. When the problem is solved, the Producers disband to other groups and productions.

In this scenario, then, working life is production-based work where individual people and small companies sell their expertise to each other in loose networks. Above all, work is related to solving the great problems of humanity, such as climate change. Careers are winding instead of linear. The continuous learning of new things and training have been made easy and worthwhile in the scenario's world, so individuals move from expert work that demands higher education to more routine gig work, and vice versa – flexibly.



SCENARIO 2

Work and livelihoods come to people from many different sources, unevenly. There is hard competition in networks over the available work productions, but on the other hand, cooperation is also necessary in the fragmented world of work. People build informal support networks in their own fields in order to receive support in an irregular working life. Continuing uncertainty over how to ensure sufficient income for different people is managed with versatile basic social security. Basic income has been introduced to even out income uncertainty.

The Flexible Producers' world is truly global also in terms of labour mobility. Work is divided into hyperconnected value chains around the world in which individuals work together. Over the years, this has raised even more world citizens who feel that they are each other's peers regardless of nominal differences in nationality. Solving the global problems of humanity has become an important meaning and source of work around the world.

The 'Sustainable Broadway' and 'Trampoline Ecosystem' scenarios created in the workshops have been incorporated into the Flexible Producers scenario.

Current topics in the Flexible Producers scenario

Will work disappear?

SOLVING GLOBAL PROBLEMS is central in this scenario and will provide enough work.

How will job descriptions change?

WORK WILL FORM around productions. People have specialties but will also lend themselves to other duties if the execution of the production demands it. People often have specialties in many fields, for they train themselves continuously. Specialization and gig work are highlighted in the scenario, not general competence or automation. The platform economy's services makes finding work productions easier.

Will basic income help?

IN THIS SCENARIO, the challenges of livelihoods and production-based work are solved with basic income. Meaningfulness is produced by work that focuses on important problems. It may therefore be that in this scenario, the longing for meaningfulness is a central motivator for people to join work productions whenever possible.

How will work become a part of the wider aspects of life?

WORK IS DIVIDED unevenly between different producers in the scenario. For some, the significance of work as one of life's central elements diminishes, for others it might even increase.

Observations: Job descriptions change and job functions diversify

GIG WORK will become more common.²¹ According to a study commissioned by the European umbrella organization of services workers' unions, 12 percent of working age Swedes, for example, have worked within the sphere of the so-called gig economy through service platforms, in the middle ground between wage labour and entrepreneurship.²² In the United States, an estimated 22 million people are already using platform economy services annually with nearly 60 billion dollars.²³ According to Pew Research Institute,²⁴ one fourth of Americans have earned money through the platform economy. The study differentiates between labour platforms, such as ride services or doing cleaning work, and capital platforms, through which things such as used items are sold, for example. There are differences between those who do gig work. Research reveals that low-educated people from low-income households primarily earn money through platforms based on labour, while the white, educated and affluent section of the population do so through capital platforms²⁵.

Gig work is not a positive or negative phenomenon per se. It often increases the uncertainty of the employment relationship, but it also provides some people with flexibility and freedom.

Gig work and mixed work are different phenomena

GAINFUL EMPLOYMENT has an effect everywhere in society: on the relationships between genders and generations, on social safety and civil rights. Although the terms of gainful employment have changed, employment relationships have partly become more fixed-term and self-employment has become more common, wage labour has retained its position in Finnish society. The nature of work in many job functions is changing into mixed work,²⁶ since employees can complete increasingly diverse tasks with the help of technology. For example, a postman can take care of the flowers, keep an eye on the condition of the house or collect data on road damage. Gig work is different to the fragmentation of job functions, that is, mixed work. The conflation of gig work and mixed work in public discourse is due to the terms work and job getting mixed up.

The disappearance of job descriptions

IF LARGE AMOUNTS OF IN-DEPTH INFOR-

MATION or technically demanding skills are not needed for doing work, the boundaries between job descriptions fade,²⁷ and so work "de-professionalizes." That does not mean the same thing as the disappearance of pro-

²¹ Hill 2015

²² Huws & Joyce 2016

²³ Harvard Business Review 14.4.2016

²⁴ Pew Research Institute 2016

²⁵ New Statesman 5.1.2016

²⁶ Sitra 03.11.2014

²⁷ Asplund, Kauhanen, Vanhala (2015); Työn tuuli 24.11.2015

fessions or, more correctly, the disappearance of job functions. In practice, it is about a change where more and more people with general level competencies can do work that has previously demanded specialization: for example, by using the Wordpress blog server one can make websites without in-depth coding knowledge. Artificial intelligence can help a nurse make diagnoses that would have previously required medical education. So, the disappearance of job descriptions does not directly mean the disappearance of gainful employment, but that job descriptions combine and their boundaries fade.

The acceleration of the disappearance of job descriptions would lead to the breaking down of traditional professional identities, and on the other hand to new ones being born. When professional identities are no longer based on clearly demarcated knowledge or expertise acquired through training, work identities are constructed from many pieces. The value created by an employee consists of, for example, empathy skills, the ability to combine different wholes, search for information or inspire others. The change can be significant: in the history of work in the industrial world, there has been a shift from guild-based division of labour to emphasizing specialist expertise. Statistics show that the number of specialists has had the largest relative increase. The trend would therefore turn in the opposite direction.²⁸

With the help of education,²⁹ it is possible to react to new competency demands and produce more well-rounded skilled workers, which will expand job descriptions. Indeed, progress that supports the disappearance of job descriptions can already be seen in education today. Finland's comprehensive, upper secondary, vocational school and polytechnic curriculums have become increasingly phenomena-based, where the students' ability to piece together large wholes is emphasized. Universities have made initiatives in the direction of broad study modules. Then again, we need both specialized know-how and easily applicable skills. Unidirectional development may leave critical skills in the margins of education.

Technological development causes the unification of many markets: for example, it is worth it for real estate owners to become actors in the energy sector by installing solar panels on the roofs of new buildings.

The degree to which job descriptions will disappear in the future depends in many ways on the development of technology. A major assumption in the disappearance of job de-

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scriptions is that work can be done with the assistance of technology, without notable expertise. In that case, the ability to incorporate expertise into technical solutions is crucial. It is indeed possible that the value of expertise will rise considerably in the near future, if expertise can be effectively transferred to a wide audience.

Conclusion

THE CONTENTS OF PROFESSIONS will diversify (mixed work) and employment relationships will slowly become more temporary (gig work). It is worth addressing the diversification and fragmentation of job functions separately. Diversification can be seen both in expert work and in the aforementioned gardener-house watcher-postman's daily routine. Although this kind of diversification increases the variety of job functions, it can also take up time from an employee's actual specialty.

²⁸ ETLA 8.10.2015

Follow this: Basic income will not solve everything

BASIC INCOME has been a remarkable socio-political initiative in the conversation regarding the change of work. In very recent years, it has also been tried out in practice. In order to have a fruitful discussion on basic income, it is important to first understand what it means.

Basic income is talked about as one idea, but actually there are two very different models behind it. The first one is a unified gratuitous basic income for all. To exaggerate a little, one basically only needs a pulse to receive it. Full basic income means a model where one does not have to pay separately for other benefits. In Finland, it would have to rise to over a thousand euros according to the basic income task force.

The other version of basic income is based on Milton Friedman's idea of a negative income tax. In it, society inversely taxes someone who does little work, meaning their income is supplemented up to a certain limit. In turn, taxes are taken out of a high-earner's salary. The model aims to facilitate receiving work and remove welfare traps. The basic income proposals put forward in Finland usually rely on the model where higher earners return their basic incomes in higher taxes.

From the perspective of work, basic income aims to solve the problem of subsistence in a supportive way at the turning points of working life and when work is only available in bits. At the moment, we usually join society through work.³⁰ If jobs that are attainable through certain competencies disappear, and we are not able to distinguish between work and jobs, a way of joining society in a meaningful way also disappears. In the future, the feeling of meaning and participation in the public sphere on the part of those who do not do work in its present meaning will have to be taken care of in some other way.

Some kind of model containing features of basic income, which will simplify social security and undo benefit traps, should eventually come to fruition. For many foreign observers such a thing has already, in a sense, been formed with the current structures. But basic income is not the philosopher's stone that will fix all the adverse effects of the change phenomena of work. More information on the effects of basic income will be gained from new experiments, but it is important to have realistic expectations towards it.

³⁰ Koistinen 2014, 248



SCENARIO 3

Magicians' Economy

The Magicians' Economy is based on comparatively widely accepted inequality: in 2040, a small percentage of people are substantially more productive than others (hyperproductivity³¹). They are employed by competitive global business clusters and produce the majority of economic value. However, this elite is meritocratically selected and their work widely funds society's services as well as a large part of other people's work. Income predistribution comprehensively ensures the opportunities for success and socioeconomic status is rarely inherited.

Monetary income inequality will grow, but it is possible to get something other than monetary compensation from work and exchange, due to which subjective standards of living are not really disturbed. The largest problem that is formed from the differentiation of competitive and non-competitive work is increasing regional inequality.

Finland has come out on top in the societal change, for it has managed to attract global companies with its easily utilizable and extensive civil data used for product development.

³¹ See e.g. Harvard Business Review 24.8.2015



Current topics in the Magicians' Economy scenario

Will work disappear?

JOB FUNCTIONS in the scenario can be roughly divided in two. There are the global, extremely complicated problems whose solution only a small part of the population is focused on. Then there is work that requires lots of working hours and people skills, of which a large part is care work.

How will job descriptions change?

THE SCENARIO does not take a strong stance on the disappearance or preservation of job descriptions. The globally active expert elite has a clear area of expertise and many others will likely have a reasonably permanent employment profile.

Expertise is highlighted in the scenario at the expense of specialization and gig work. Technologized work will demand new kinds of specialties.

Will basic income help?

IN THIS SCENARIO, livelihoods are for remuneration or at least strongly directed towards job functions. Working provides life with meaning and people are directed towards work that is empathetic and feeds internal motivation.

How will work become a part of the wider aspects of life?

WORK is a central aspect of life in this scenario. Alternative ways to experience fellowship and communality are not presented.

Observation: Education develops people skills

ACCORDING TO The Survey of Adult Skills (PIAAC) conducted by OECD, one third of Finnish wage earners (31 percent) feel that their education and work do not correspond with each other. Fourteen percent of employees thought that their education level was too low in relation to the demands of the job. On the other hand, one in six (17 percent) people do not use all their skills in their work. Additionally, high unemployment³² kept about 8 percent of the workforce idle at the end of 2016, for example.

According to a 2013 study by Statistics Finland, one fifth of wage earners feel the threat of being laid off and one fourth are afraid of being temporarily laid off. Previously, the consequences of the transformation of work have mainly been reflected in the career choices and careers of the next generation to enter working life: a farmer family's children left to work in factories. Now, the structural change is faster and more significant.³³

Then again, computers are constantly catching up with us in the things that we are traditionally good at. That is why we have to begin to consciously build up our people skills. Empathy, creativity, intuition and curiosity are abilities that computers and robots do not quite have. The abilities are not only important in themselves, but also indispensable tools for building innovations, economic development, new markets and a better society.

British think tank Nesta has proposed increasing art education in school in the interest of preparing for the working life of the future. The conclusion is that while not everyone will become an artist, supporting people skills will help in every profession of the future. In Finland, too, it is possible to increase art education at every education level.

³² Suomen virallinen tilasto (SVT): Työvoimatutkimus [verkkojulkaisu]. ISSN=1798-7830. Helsinki: Tilastokeskus [viitattu: 2.1.2017]. Saantitapa: http://www.stat.fi/til/tyti/

³³ Leppänen, Koponen: Suomi työpaikkojen jälkeen

Follow this: Hyperproductivity will challenge the economic balance

IN THE MAGICIANS' ECONOMY SCENARIO, a hyperproductive section of the population looks after the well-being of everyone else. In the Honourable Toilers scenario, the ability to work is equal. It is understandable that speaking about differences in productivity is shunned. It challenges many of the basic assumptions of the welfare state. Despite this, it is important to try to find out to what extent hyperproductivity appears in the world and the extent to which it is possible to provide everyone with the opportunity to be hyperproductive.

The emergence of hyperproductivity is possible in the future thanks to technological advancement in particular. When artificial intelligence is developed to better support human labour, productivity differences in doing work become more pronounced. Even small productivity differences between individuals or production units are highlighted when the results of work can be scaled ever wider more easily. In addition to this, technological development will inevitably bring with it new ways of bringing productivity differences into view through measurement and monitoring, which will further increase the likelihood of hyperproductivity.

When power in society is distributed in accordance with performances, abilities and competence, one can talk about a meritocracy. In the Magicians' Economy scenario, the hyperproductive create better lives for others through, for example, services that create comfort and satisfy basic needs. They also agree to substantial redistributions of income. So in this meritocracy-based society, the responsibility of solving shared problems is handed to the most able individuals. Equality is primarily based on equality of opportunity. Every member of society has equal opportunities to not only develop, but also display their abilities through work.

The meritocracy of the future will be based on productivity differences in working life and being able to most accurately demonstrate them. Hyperproductive workers will be elevated to serve globally competing companies, and the added value they produce is many times higher compared to the average worker. Assistive infrastructure (both mechanized and automated, as well as human assistants) will improve hyperproductive people's use of time. The time of merited individuals is used extremely efficiently for solving difficult problems.

Meritocracy is based on trust: the elite are committed to developing society and are accountable to society for their actions. In addition to this, society has a widely shared understanding of valued competencies. For example, charismatic leadership, technical ability or being academically analytical can be emphasized in different situations. The rationales of meritocracy can thus be, for example, ones that value traditions, feed efficiency or highlight creativity.

We can already see the first sprouts of an enlightened meritocracy as part of a wider

social contract. Some technology firms are striving to transfer their know-how into social entrepreneurship and solving societal problems. The role of companies in solving societal problems is becoming more pronounced. A good example of this is the San Francisco business incubator, Y-Combinator, which promotes basic income as a financial model of the future. Putting hyperproductive individuals in the spotlight can also lead to the individualization of success, as well as the growth of income inequality.



In Conclusion

Is wage labour a natural part of life?

IF CAPITALISM constantly produces more with less, why does the same amount of work always have to be done?³⁴ In Work Without End, published in 1988, Benjamin Hunniccut writes that in the 1920s the reduction of work seemed perfectly possible. Trade unions advocated reducing work and up until 1932, the reduction of work was part of the political agenda of both the Republicans and Democrats. In 1930, the International Labour Organization ordered the prohibition of forced labour. A recommendation to cut down working hours to 40 hours per week was made at the same time. In Finland, this amendment to the Working Hours Act was made in 1965, and a five-year transition period was added to it. Today, the standard working hours are still just under 40 hours per week and it has become somewhat unquestionable and self-evident. Why?

Work has become a natural part of life.

When we get to know a new person, we ask them at least one important question: "What is it that you do, by the way?" We know that it means, "What do you do for a living?" This has not always been the case. For now, however, we believe in the nobility of wage labour, at least as long as the people around us get their due for it. If well-being does not seem to follow from hard work, will we begin to question the intrinsic value of work?

No political party in a long time has seriously proposed a way out of a work-centred society. In the Work 2040 workshops, each group rather underlined than downplayed the importance of work in the future. But when wage labour runs society, those without work feel useless. The feeling of uselessness is not limited to the jobless: people in wage labour can also feel like their work has no meaning.

Gallup conducted a study on working conditions in 142 countries in 2011-2012. The study revealed that only 13 percent of workers globally engage in the work they do and are committed to it. 63 percent answered that they feel indifferent towards their work. Gallup estimates that the reduction in productivity caused by indifference costs Great Britain, for example, 50–70 billion pounds a year. The human cost of indifference cannot even be measured. In Finland, 35 percent of wage earners are "enthusiastic about their work" meaning they completely agree with the statement. ³⁵

Work can also harm the environment or well-being.³⁶ A huge part of work is based on marketing, producing and distributing products to consumers that are useless or harmful from many perspectives. David Graeber³⁷ has written critically about the increase of different kinds of administrative jobs. Entire occupational groups interpret the adherence to rules or maintain the balance of a system. A lot of work is also done because people working long hours do not have time to clean or watch their dog, for example. The unequal division of labour creates services that would not exist without the scarcity of free time.

By dividing and streamlining labour, hu-

³⁴ The Correspondent (2016)

³⁵ Tilastokeskus (2013) Työolotutkimus

³⁶ Jackson (2009)

³⁷ Graeber (2013)

manity has managed to free up a great number of people from immediate breadwinning to doing other activities. In the welfare state we can study, take care of the kids at home, retire and take sabbatical years. We assume that quire a large number of citizens do economically valuable wage labour and fund the benefits of others. Work has not decreased as Keynes predicted in 1930, but piled up instead.³⁸ Work is divided unevenly between people and also during an individual's life, as first we study for years and then move on to consuming the surplus produced by others.

Provided that work will hold its ground as a central way of producing meaning and one's place in life, perhaps the meaning of the word "work" should be examined. From this perspective, a conceptual conversation about what work is, is not by any means unnecessary. Work will continue to be important, but in the future the concept of work may expand to include new activity that currently falls outside the market economy. On the other hand, the limited carrying capacity of Earth forces us to evaluate the environmental effects of work and thereby also its intrinsic value.





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