

Another 100 Days: a Digital New Deal for Workers

salon.thefamily.co/another-100-days-a-digital-new-deal-for-workers-dd557e767df3

28/10/2015

TheFamily Papers #002

By [Nicolas Colin](#) (Co-Founder & Partner) | [TheFamily](#)

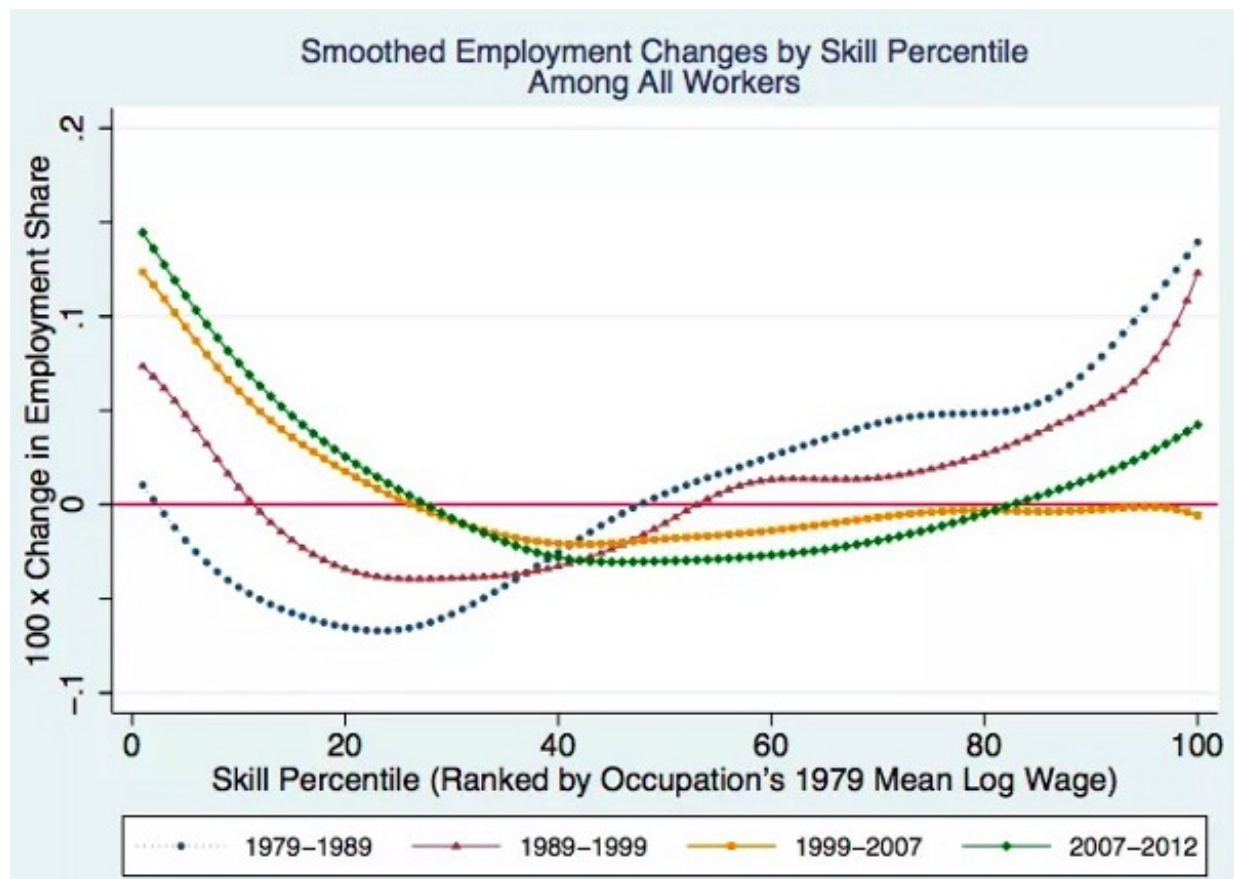
As far as jobs are concerned, two spectres are haunting our societies—one that is supposedly destroying jobs, the other that is transforming them:

- the **spectre of automation**, i.e. the idea that most jobs will disappear as they are replaced by [robots](#) or software, which will throw us all into the oblivion of uselessness and poverty;
- the **spectre of the gig economy**, i.e. the idea that the few remaining jobs won't be salaried, but rather they will mostly be freelance, thus completing the "[great risk shift](#)" that Jacob Hacker wrote about [ten years ago](#).

A recent [paper by the French Council of Economic Advisers](#) (*Conseil d'analyse économique* or [CAE](#), of which I am not a member, although I did co-author the paper) sheds light on these two phenomena, drawing the conclusion, however, that they are actually (still) marginal ones. [[English-version PDF here.](#)]

Workers replaced by robots

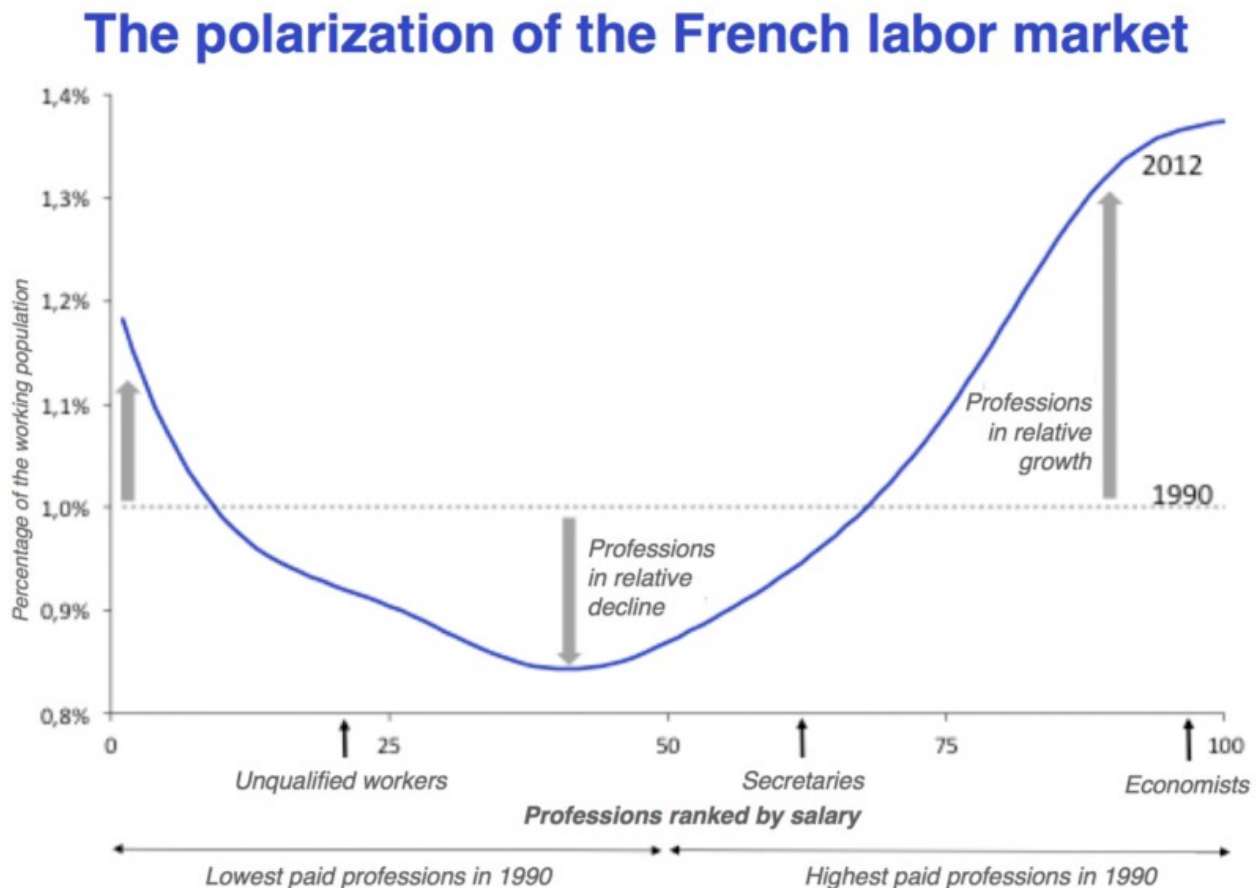
Some jobs do disappear because of robots, but not all jobs. An increased [polarization between "lovely jobs" and "lousy jobs"](#) has concerned every developed economy since at least the 1980s.



David Autor showing the polarization on the American job market

In the US, [David Autor](#) pioneered [research](#) that showed how middle-class jobs in offices and factories were gradually replaced by service jobs at the lower end of the revenue ladder and creative / managerial jobs at the higher end (see graphic opposite).

The same phenomenon is at work in France. But, as suggested in the CAE paper, one specific problem is that many lousy jobs are never even created, with the result instead being massive unemployment. The main culprits seem to be, among other things, the minimum wage (which is said to be too high, especially in less-developed areas of the country) and the housing market (which makes it impossible for those with lousy jobs to find decent housing close to their work).



Shifting strengths of each socio-professional category in the working population (1990-2012)

Source: Catherine, Landier & Thesmar (2015)

Why do middle-class jobs disappear? Technology does indeed play a key role. The Fordist mass production economy created lots of jobs that executed routine tasks within an integrated supply chain designed under the principles of [Taylorism](#). Now, the digital economy makes it easy to replace humans with machines that execute those same routine tasks.

Routine jobs in the Fordist economy gave rise to the middle-class

And it's no wonder that this hurts: for decades, those were the most attractive jobs. People didn't need to be highly educated to perform them and they came with good wages, job security and a social safety net. They basically gave rise to the middle-class and the very idea of working families (father at a factory, mother at an office or a retail store nearby). And now those are precisely the jobs that are easily replaced by robots or software.



The digital economy is only amplifying a preexisting trend. Robots have been present in factories for decades, gradually replacing factory workers at the bottom of the revenue ladder. Additionally, while routine jobs may be the easiest to replace with technology, they have also been the easiest to relocate overseas. A routine task performed by a Western worker can easily be documented and standardized to the point that a worker from a less-developed country can replace them. This was a concern long before the rise of the digital economy—just watch the factory scene in *Primary Colors*, originally set in 1992.

John Travolta as Gov. Jack Stanton in “Primary Colors” (1998)

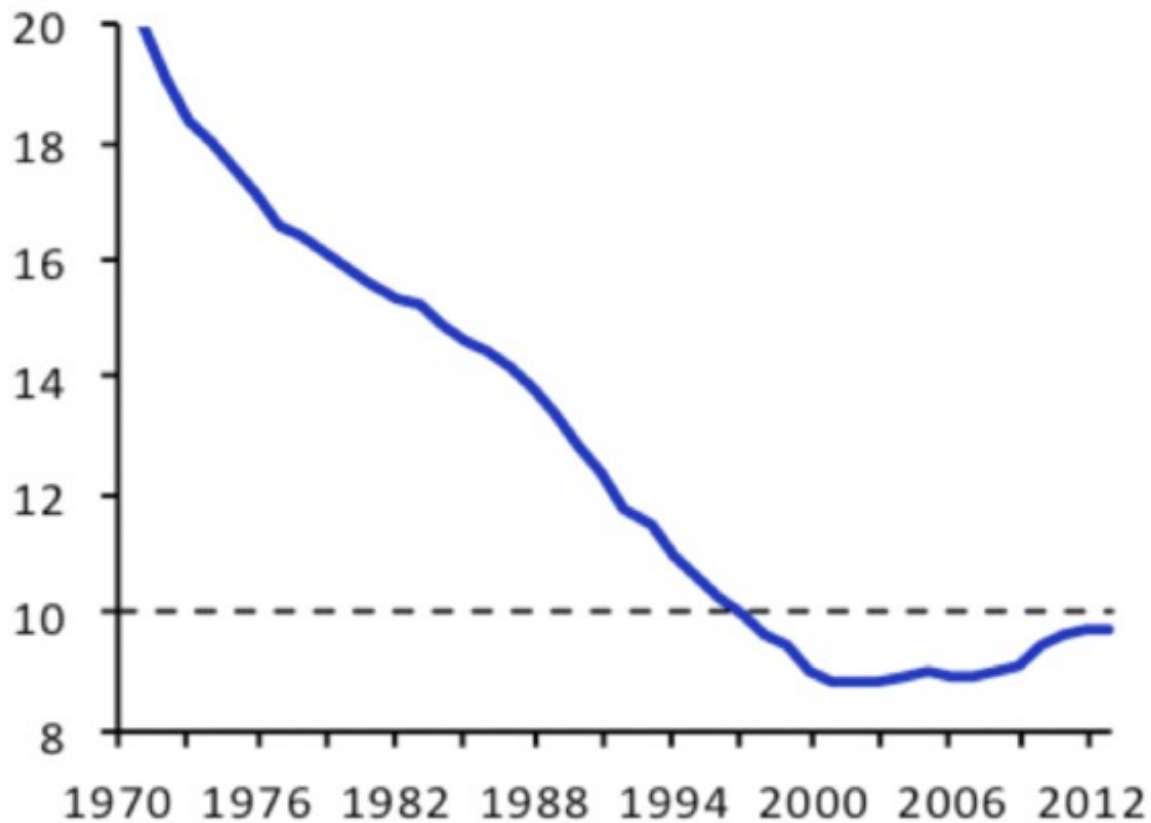
The difference with digital technology is that the replacement process affects more than just routine tasks—or rather it shows how far we can go in the process of routinization:

- more **educated professionals** are now being replaced with software. The common point for intellectual professions currently being [eaten by software](#) is the mastery of vast amounts of knowledge. Today, thanks to artificial intelligence, this knowledge can be mastered by autonomous software, thus leaving to humans only the personal service / caring side of the job: think about IBM's [Watson](#) (healthcare), Watson-based [Ross](#) (legal) or [high-frequency trading](#) (finance);
- technology enables the **transfer of tasks to the customers** themselves, either individually (I can now type on a computer myself, a task rendered so simple thanks to software that no secretarial jobs are needed anymore) or at the aggregate level (entire professions are gradually overthrown by contributing users: consider travel guide writers vs. TripAdvisor, encyclopedia writers vs. Wikipedia, or journalists vs. Medium). In all these sectors, professionals are replaced with user communities working for free—because the tasks are relatively small and there are [other motivations driving them](#).

Salaried workers replaced by freelancers

As for freelance jobs, they are on the rise in France, but they're nowhere near the numbers seen in the early 1970s. Sure, there are more freelancers than ten years ago. But there were many more non-salaried workers a few decades ago. Today they represent less than 10% of total employment (see graphic below).

The renewal of independent workers



Non-salaried workers as percentage of total employment (in France)

Source: INSEE

(The US is a different story: according to [a recent study by Freelancers Union and Upwork](#), in 2015, nearly 54 million Americans—34% of the workforce—participated in some form of freelance work. The trend is accelerating.)

It is not at all certain that the digital economy plays a central role in this rise of freelance work in our developed economies. In fact, many people even question our [capacity to measure what is going on in this economy](#). However, there are many obvious reasons why the gig economy is probably on the rise in the digital world:

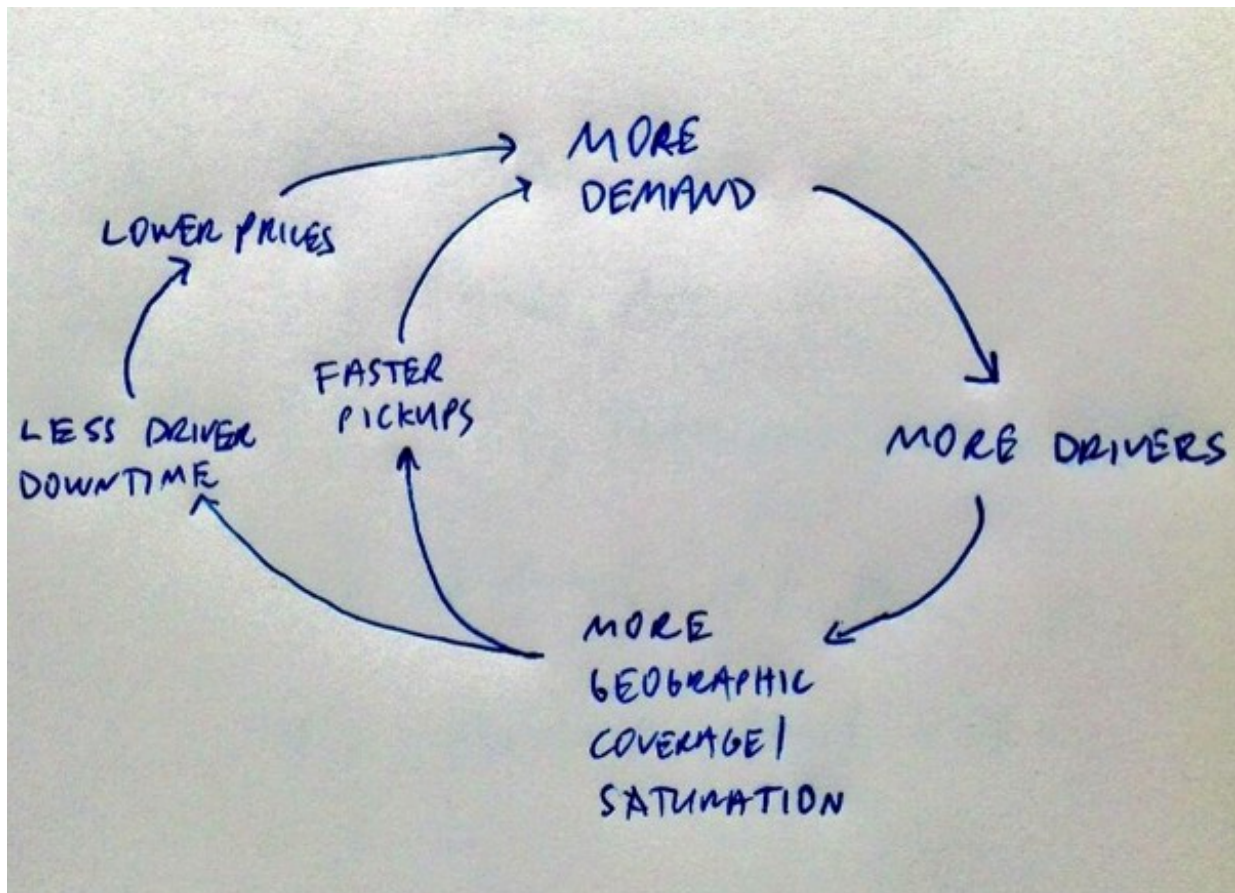
- **transaction costs** are down: thanks to smartphones and social networks, it has never been easier to [match supply and demand](#) through vast marketplaces such as Amazon, Uber, or Airbnb. Managing identity and reputation and securing transactions are key features of the giant platforms that give rise to the gig economy;
- the amount of **required investment** in necessary assets is also tumbling. Photographers are a case in point. A few decades ago, professional photographers needed several cameras, other costly materials for lighting and setup, and a dark room for developing their photographs. Because all this was so expensive, the profession was dominated by stable workers under contract with agencies, and it was the agencies who made the investments in shared assets. Today, you can be a photographer with only a relatively cheap camera and a laptop running Photoshop. So why bother signing a contract with an agency?
- **education** is less critical. You can do the same job (or even find a better job) with less education, because technology, not education, makes all the difference. [Tim O'Reilly raised this point](#) regarding taxi drivers vs. ride sharers in a recent post in the series [The WTF Economy](#);

- finally, freelance work benefits from a more favorable **legal framework**. In France, for instance, in 2009 it was made far easier to be a freelancer thanks to the “*auto-entrepreneur*” status, which enables individuals to bill for their services without incorporating a company.



Taxi drivers are not employees: they're already independent

The digital on-demand economy's central feature is not that it facilitates the replacement of wage labor with self-employed people. On the contrary, many “Uber for X” startups aim at sectors where workers were already independent due to history or preexisting trends (such as cleaning services or individual transportation). In those sectors, the digitization of independent work is in fact progress: it optimizes matching supply and demand; it makes it easier to reward performance and to track down poor quality work; it makes the transactions more secure; it helps improve workers' productivity, by identifying training needs and deploying productivity tools and methods; and finally, it renders whole sectors more transparent from the government's point of view, since payments that are made through digital platforms rather than cash can curb fraud and improve regulatory compliance, notably regarding taxes.



Various network effects in the Uber business model: a transformative effect on the market ([drawing by David Sacks](#))

Yet there is something happening beyond existing trends. In certain sectors where platforms have reached a larger scale (ride sharing being the most famous example), the growth of on-demand jobs has had a transformative effect. The number of new entrants is increasing, and productivity and quality increase at the same time. This combination of more independent workers who are more productive triggers a systemic, radical change on the market, such as with independent taxi drivers replaced by more ride sharers on Uber or Lyft, who also happen to do a better job, thus [triggering a massive increase in demand](#).

None of this (automation + gig economy) should lead us to the conclusion that jobs will disappear. But future jobs (whether salaried or freelance) will be radically different: augmented by technology, requiring a different (probably more limited) education, and facilitated by the proper institutions (most importantly [social safety nets to mitigate critical risks](#)). Also, we will more and more have several jobs at the same time: as [Nick Grossman](#) and [Elizabeth Woyke](#) argued in a recent (free) [Ebook published by O'Reilly](#), "rather than a single job from a single employer, we now have access to many jobs from many sources, in many shapes and sizes. As this happens, the very notion of a "job" is being unbundled into its component parts."

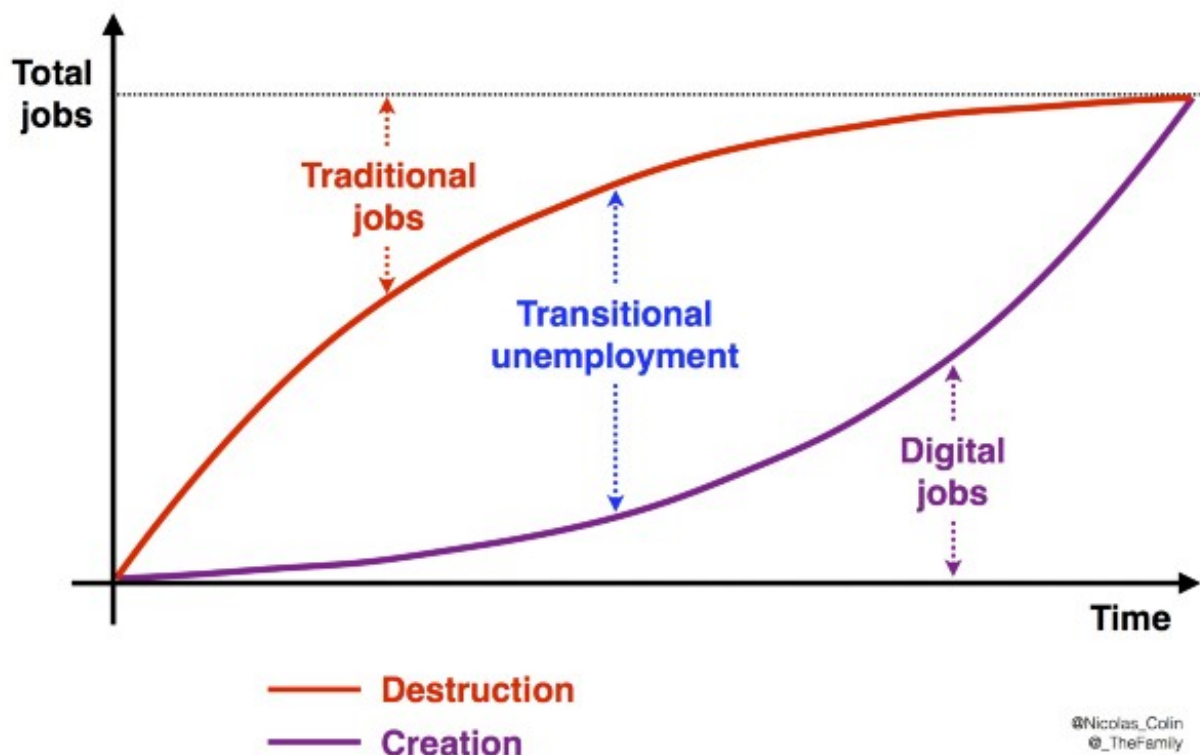
What is now at stake is the transition between these two states of our economy: how do we make it easier for workers, companies, and societies as a whole? Don't we need another New Deal?



The New Deal triggered the transition towards a flourishing Fordist economy

Transitional unemployment

Creative destruction is the long-term process through which jobs in the traditional economy are gradually replaced by jobs in the digital economy. In theory, the destruction process is a logarithmic curve: firms destroy jobs as technology enables cheaper production. As for the creation process, it is an exponential curve: at first, it is difficult for new, innovative firms to create jobs because they're still searching for their business models and, like all radical innovators, they face a hostile environment.



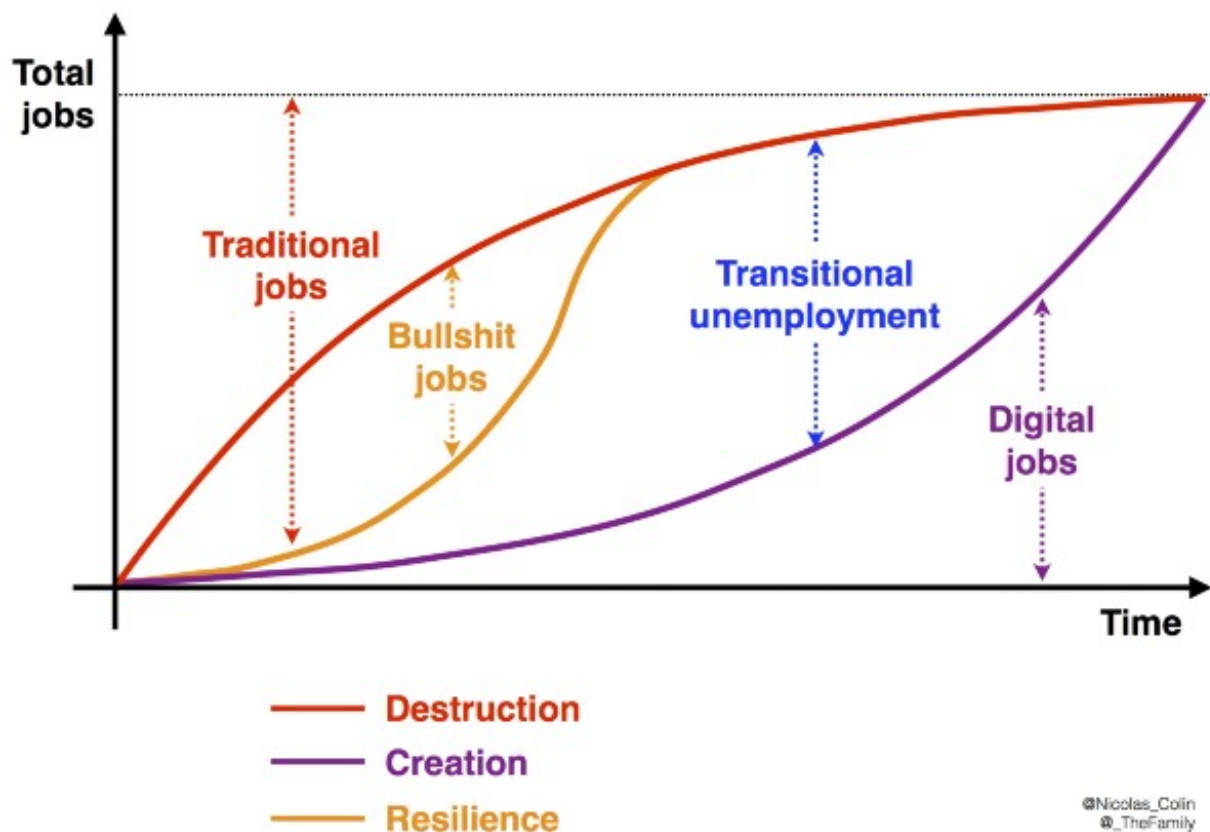
@Nicolas_Colin
@_TheFamily

As explained by the graph opposite, creative destruction creates massive transitional unemployment because most people find it difficult to switch from one economy to the other. In fact, transitional unemployment will keep on increasing until the digital economy finally takes over and creates enough jobs so as to compensate for the amount of destruction. There are multiple reasons that explain this transitional unemployment:

- **skills** are different in the two economies, so people have to train for the new jobs—not necessarily in order to become engineers or developers, but to learn how to become better at performing the non-routine tasks that are not bound for automation (essentially, learning to become [better and more caring service providers](#));
- whatever their skills, **older workers** find it [difficult to enter a new economy](#): it's a different culture, and starting at the bottom means a loss of revenue;
- the (hopefully) temporary absence of adequate economic and social **institutions** makes digital jobs less attractive than traditional ones: why jump into the digital economy if you lose all of your benefits and security by doing so?
- again, as is already the case in France, the **housing** market makes it difficult for the less educated to [find decent housing close to where they are needed](#). Factory workers had to live near the factories, where real estate was abundant and cheap. Service workers, on the contrary, have to live close to where the customers are—mostly in dense metropolitan areas where the housing market is strained;
- finally, many new jobs are simply illegal according to preexisting **regulations** that have been rendered obsolete by technology but that endure nonetheless. And even if these jobs are not illegal, strictly speaking, [corporatism](#) slows down their development.

Resilience

Fortunately for workers in the traditional economy, existing organizations are resilient and destruction is initially slowed, turning the theoretically logarithmic curve of destruction into an S-curve of delayed destruction. Perfect market mechanisms, under which jobs would be destroyed as soon as technology is ready to replace them, are distorted by institutions designed precisely (and, in general, rightfully) to save existing jobs that come under economic stress.



The jobs that are maintained against the process of creative destruction certainly provide a great number of households with necessary revenues. But this is not entirely good news: those jobs often happen to be the famous “[bullshit jobs](#)” (as [pointed out by David Graeber](#)), artificially kept alive to provide people with an occupation even though the same tasks could be performed better with digital technologies. As a result, those jobs tend to create frustration and anger for both customers and workers. Their usefulness is doubtful even (or mostly) for those who have them.



Bullshit jobs are not confined at the bottom of the revenue ladder

It should be noticed that bullshit jobs are not only those at the bottom in giant bureaucratic organizations. Joining a traditional company to be the executive in charge of general support services or information systems resembles a bullshit job—one that wouldn’t exist if the organization made better use of cutting edge technology. [Being in charge of restructuring a failing traditional company](#) is a bullshit job as well: it’s an uphill battle, nobody wants to make it easier, your best employees leave because they see the writing on the wall, and it will probably end up in failure no matter what. Billion-dollar industries are built entirely on bullshit jobs: think of the consulting sector, whose sole purpose is, as Walter Kiechel III puts it in [an inspiring book](#), “*Greater Taylorism*”. It’s certainly rewarding to work in the consulting business, but what’s the point of “Greater Taylorism” if Taylorism itself is doomed by the digital transition?



The traditional economy, now disembarking passengers at an accelerating rate

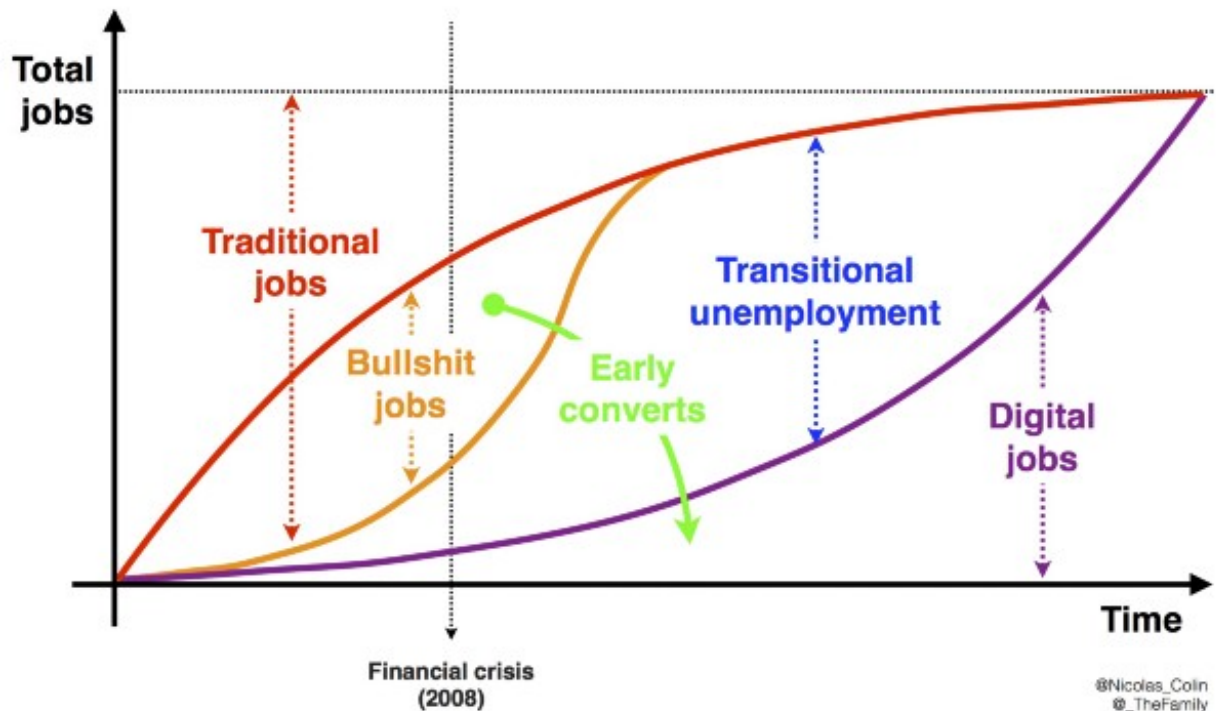
Ultimately, however, resilience is defeated as the process of acceleration speeds up. As it reaches full-speed, bullshit / useless jobs disappear at an accelerating rate. There are many reasons for this:

- under pressure to become more digital-friendly, established companies intensify their search for **efficiency**. Some workers, usually the best, get tired of stagnating wages and flying coach instead of business. They start considering opportunities on the other side, in the rapidly deploying digital economy;
- those who don't consider the option of joining the digital economy are sometimes forced into change: downsizing, restructuring and **bankruptcies** are central features of the current **failure age**. The more the process of destruction progresses, the more the resilience efforts are concentrated on organizations in which it is particularly difficult to get rid of workers—the public sector or state-subsidized jobs in the private sector. But even the government ultimately starts laying off workers due to a loss of tax revenues (just consider the **situation in the UK**);
- meanwhile, various **opportunities** in the digital economy continue to multiply for workers: joining a digital company as an employee; founding one's own startup; beginning to freelance thanks to the large platforms of the on-demand economy (which now exist both for less educated workers and for highly educated workers: for example **Uber** or **TaskRabbit** for the former, **Clarity** or **Axiom** for the latter).

The financial crisis as trigger

A big economic and/or financial crisis is needed to trigger the acceleration of job destruction in the traditional economy. The financial crisis of 2008, even though it didn't have much to do with the digital economy, hit traditional companies so hard that they didn't have any choice but to finally lay off those workers whose jobs were preserved out of pure corporatist resilience. As **John B. Judis noticed a few years ago in *The New Republic***, those jobs are gone forever and any politician who promises they will be back is either lying or delusional. We are now entering a new stage in which destruction is accelerating while creation is still struggling: hence all those future of jobs / Uber / robots articles on the front pages of every magazine in 2015. At this point, traditional firms are converting to massive layoffs while digital firms still face an adverse environment. Workers

are feeling the pressure and hate their government, while social insurance programs are slowly running out of steam because of the systemic crisis.



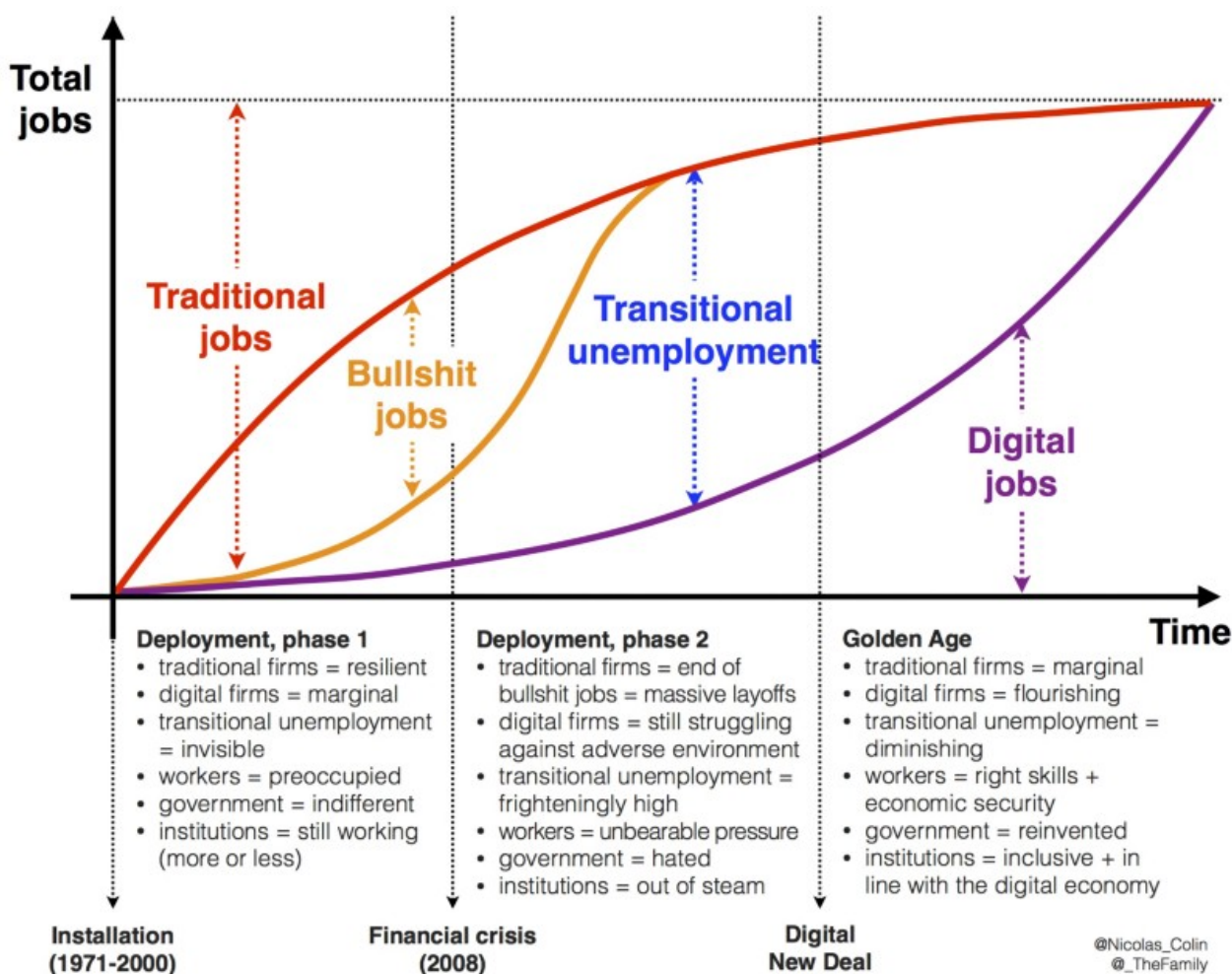
Workers who have already fled the traditional economy were the early converts. They were the first to see that there was a problem in traditional firms. Whether due to the boredom of bullshit jobs or any other reason, those [striving to find a purpose](#) have decided to switch from the old economy to the new, and are thus facing many problems which, hopefully, will fade with time. Digital firms are still struggling to create the jobs of tomorrow (mostly because of regulatory barriers and lack of capital), and those who have already worked for some time in traditional firms are judged when they try to join digital firms, as they're supposedly too old, already set in their ways, not willing to earn less money, and aren't fit for the fast-paced culture of digital economy. These early converts bear more risks and often have the impression that they lost the bird they had in the hand, but their role is critical: they're spearheading a massive migration of the workforce that is bound to happen anyway.

Towards a Digital New Deal

Will we enter the third stage anytime soon, when a Digital New Deal will finally trigger massive job creation in the digital economy and take down transitional unemployment? There are still many obstacles on that road. Some will disappear in time, as part of the workforce gets older and reaches retirement age. Others will take considerable efforts on the part of both emerging digital companies and governments. Among them:

- acknowledging that jobs in the future will not be for highly educated workers only. There's really **no need for everyone to go back to school** to get an engineering degree. In fact, the over-qualification of the workforce may become a major problem in the near future: our higher education system is still preparing people to take managerial positions in traditional, Taylorist organizations that will soon be gone with the wind;
- enabling the massive creation of new jobs for the less educated by removing **regulatory barriers**. For instance, as [Bruno Palier and I underlined in an article published in Foreign Affairs](#), *"in an increasingly digitized economy, many routine health-care tasks that under current law require doctors could in fact be accomplished by nurses supported by software and other technology. Regulatory reform could thus simultaneously lower costs, increase employment, and improve health-care outcomes"*. James Bessen used a similar example in this [2014 HBR blog post](#), but there are many examples in virtually every sector;

- solving the problems on the housing market so that less educated workers, even though they will be more productive and accordingly earn more money, can find **decent housing** in an urban environment. On this issue, see the impressive work of [Enrico Moretti](#), discussed in Kim-Mai Cutler's [article here on TechCrunch](#);
- accelerating the deployment of **back office solutions** for independent workers as well as salaried workers who will switch employers more often or will have several employers at the same time. It should be clear that in the fast-paced world of technology, transitioning from one job to another should be facilitated by having the possibility of testing the water before jumping in: what would be the framework and resources needed for trying out a new job on the side while still retaining another?
- being **more open to workers from traditional firms**. So far, it has been difficult for those who already had a long career in traditional firms to find a job in a digital firms. Ageism is one of the core problems that prevents migration from the traditional to the digital economy;
- setting up the **institutions** that will make those new jobs (less routine, more independence) more attractive for everyone, not only the young or those who are too rebellious to suffer under a boss's thumb. Among those much needed institutions are social insurance covering unprecedented risks, and organizations such as the [Freelancers Union](#), which was designed to [help digital workers defend their interests](#).



Ultimately, as happened with the New Deal, the effort will be huge enough that it will initiate a virtuous macro-economic circle: more people will enter the digital workforce and create more demand for new digital products, which in turn will help create even more jobs. [Carlota Perez](#) explains it all in this interview by [Fred Wilson](#) below.

Carlota Perez: one of the most articulated visions of the future of our economy

TheFamily and the jobs

TheFamily doesn't think that the digital transition goes together with net job destruction. However we observe every day just how difficult it is for new jobs to emerge because of outdated corporatism and regulations, and the lack of resources for [Entrepreneurs who have the will, creativity, and energy to create them](#). Here is what we do to help them overcome these obstacles:

- we operate our [proprietary ecosystem](#) to empower Entrepreneurs in a toxic environment;
- we invest in startups that are in the business of [supporting the new workers](#), notably in the on-demand economy;
- we stress the spectacular success of a new generation of digital startups that will massively create the jobs of tomorrow. [Save, a company specialized in repairing your smartphone and other electronic devices](#), is a case in point: after less than two years of operations, they will soon employ more than 700 workers in a dozen countries—all salaried workers that Save had to train itself because nobody has ever really been trained to repair a smartphone!
- finally, we inspire all stakeholders, including the government, with events and publications such as this paper—which you have now finished reading. Time to share!



Jobs that didn't exist before: repairing smartphones and other connected devices—see <http://www.save.co>

Here is a reading list I highly recommend for anyone willing to better understand institutions and the future of jobs:

- Kevin Drum, [“Why Screwing Unions Screws the Entire Middle Class”](#), *Mother Jones*, 2011.
- Clayton Christensen, [“A Capitalist's Dilemma, Whoever Wins on Tuesday”](#), *The New York Times*, 2012.
- Kevin Kelly, [“Better Than Humans: Why Robots Will—And Must—Take Our Jobs”](#), *Wired*, 2012.
- Kim-Mai Cutler, [“How Burrowing Owls Lead To Vomiting Anarchists \(Or SF's Housing Crisis Explained\)”](#), *Techcrunch*, 2013.
- Edmund S. Phelps, [“Less Innovation, More Inequality”](#), *The New York Times*, 2013.

- James Bessen, “[How Technology Creates Jobs For Less Educated Workers](#)”, *Harvard Business Review*, 2014.
- Adam Davidson, “[Welcome To The Failure Age!](#)”, *The New York Times*, 2014.
- Sara Horowitz (founder and executive director of Freelancers Union), “[America, Say Goodbye to the Era of Big Work](#)”, *The Los Angeles Times*, 2014.
- Nick Grossman, “[Regulation, The Internet Way: A Data-First Model for Establishing Trust, Safety, and Security](#)”, *Regulatory Reform for the 21st Century City*, 2015.
- Nick Grossman & Elizabeth Woyke, *[Serving Workers in the Gig Economy, Emerging Resources for the On-Demand Workforce](#)*, O'Reilly, 2015.
- Tim O'Reilly, “[Networks and the Nature of the Firm](#)”, *What's the Future of Work?*, 2015.
- Tim O'Reilly, “[Workers In A World Of Continuous Partial Employment](#)”, *What's the Future of Work?*, 2015.
- Venkatesh Rao, *[Breaking Smart, Season 1](#)*, 2015.

I also think you should read that one I wrote with [Bruno Palier](#) on the future of welfare: “[The Next Safety Net](#)”, *Foreign Affairs*, 2015.

Finally, the [CAE paper](#) I co-authored with [Augustin Landier](#), [Pierre Mohnen](#) and [Anne Perrot](#) is now [available](#) in English.

(This is an issue of TheFamily Papers series, which is published in English on a regular basis. It covers various areas such as entrepreneurship, strategy, finance, and policy, and is authored by [TheFamily](#)'s partners as well as occasional guest writers. Thanks to Kyle Hall and [Laetitia Vitaud](#) for reading drafts of this.)

[TheFamily Papers](#)

[The Updated List, in Reverse Chronological Order](#)[medium.com](#)

[So ... what is TheFamily? \[1/3 \]](#)

[At its heart, TheFamily is a story about three people who shouldn't be working together. When you compare our...medium.com](#)