Digital labor as a co-working opportunity

Prof. Dr. Oliver Bendel shares his view about the role of AI in our working environment and to what extend AI and robotics will be used.

What is your view of the future of digital labor – are you cautiously optimistic and if so why?

AI systems and robots can support us in many activities, and replace us in some. We may have to work less in our money-earning jobs, perhaps only four or five hours a day, and then spend the rest of the day having fun. This would require a fair distribution of corporate profits. I am optimistic about the possible applications of machines and the ability of humans to adapt, but I am also pessimistic, as human greed will not diminish.

What do you think are the key drivers in the adoption of digital labor today?

An increasing number of AI systems will be developed with ever more varied applications. Factory machines will be more mobile than ever; they will be predominantly generalists, capable of learning from workers who show them how to do a job, or who move the arms of robots to determine tracking and movement. Cooperation and collaboration robots, so called co-robots, work in tandem with humans and complement each other perfectly.

Are the capabilities of machines overstated or underestimated? What is your view?

Well, it depends. The first chatbot hype started 20 years ago. Now we see the second hype. One can achieve much more with the dialog systems today than back then, but I believe they are overvalued. We see giant progress with robots and AI systems in the health segment – AI is good at proposing therapies. My discipline, in addition to information ethics, is machine ethics. The question no longer is, and has not been for years, whether we can teach moral rules to machines. Of course we can. The question is which moral rules to teach to which machines.

Machines can take over tiring and laborious activities in factory production and routine jobs in offices. They can even score in creative professions, but not in all: they still have problems with human language. Good articles and books still come from humans, as do good translations and good abstracts. However, there are powerful new tools in the field of translation, such as DeepL. Some activities are best done by machines and humans together. I already mentioned co-robots; machines and humans will also merge into cyborgs, with chips, data glasses and exoskeletons. Cyborgs will be very important in the future world of labor.

Is the key value proposition from the adoption of digital labor limited to enhanced productivity, or do you see other business applications for human-machine collaboration?

There are many fields of application. Security and surveillance robots will monitor many shopping malls and factory sites. Surgical and therapy robots will work in the majority of hospitals and clinics. Nursing and care robots will find acceptance. Package robots and delivery drones are being tested, but I am skeptical about the ground. The complexity of streets and roads should not be increased, and no rolling pitfalls should be introduced. Right now, the air still has free capacity, but probably not for much longer.

What are the factors that inhibit the rise of machines?

Cost is one obstacle. Certain robots still are very expensive to produce and operate. However, prices are falling; a certain co-robot is available for only €10,000. Ideological reservations are another obstacle: some are justified, but others are based on a questionable labor ideology.

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"Machines can take over tiring and backbreaking activities in factory production, as well as routine jobs in office labor."

Do you believe there are any tasks that machines cannot or will not do?

I already mentioned language skills. Machines are no good at writing journalistic or scientific articles or books. I would also mention the fine arts. Computer poetry is old and machines can now paint and compose, if not very well. It is not only the outcome that counts; the process of artisan and artistic creation is important. Humans have to be creative. Machines do not. More generally speaking, we can say machines will never develop feelings; they will never love or hate. We humans can love them – or hate them.

What, in your view, is the biggest risk in the adoption of digital labor?

There will be a long transition period of great uncertainty. Workers will have to learn new tasks and there will be less work for all. Workers will need more certainty amid the uncertainty to feel safe; perhaps the provision of an unconditional basic income would be the answer.

People in general are concerned about the rise of machines. What is your view?

Europe has been concerned about this matter for thousands of years. Some artificial creatures in the work of Homer and Ovid, and later in the Middle Ages and the Renaissance, seemed to be ghoulish visions, such as Talos, Pandora or the Golem. On the other hand, there are also some pleasant or funny appearances, such as Galatea, the Pygmalion love doll and Pinocchio. Machines are what humans make them. They can make us free or unfree. It all depends on us.

What do you believe is the role of regulation in the rise of machines?

Statutory regulation can support and restrict machine development, and ethical guidelines can accompany machine development. Several institutions and groups are working on this: the European Parliament has considered it, as has the IEEE Global AI Ethics Initiative. I was happy to contribute from the sidelines.

What will be the impact of the adoption of digital labor on the employment market over the short, medium and long term? Job creation or job reduction?

Less work will exist for humans – that is the purpose and intention of automation. Simple routines will disappear; they will be delegated not only to robots and systems, but also to customers. We will be defined less through our work, and the meaning of work will expand. There are many meaningful activities other than earning a buck.

What three tips would you give to organizations embarking on the digital labor journey?

1. Use robots, AI systems and information systems to support and unburden humans.
2. Do not use hardware and software to spy on humans or to make them dependent.
3. Leave the last say to humans, unless a machine has a better argument.