De dashboardsamenleving

Citation for published version (APA):

Bamps, D. (2020). *De dashboardsamenleving: van improvisatie tot providere*. [, Maastricht University]. Maastricht University. <https://doi.org/10.26481/dis.20201118db>

Document status and date:

Published: 01/01/2020

DOI:

[10.26481/dis.20201118db](https://doi.org/10.26481/dis.20201118db)

Document Version:

Publisher's PDF, also known as Version of record

Please check the document version of this publication:

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English summary

This dissertation investigates potential processes of social ordering in societies of the future. It is a discursive contemplation consisting of a collection of arguments that are constantly and progressively examined and polished in a self-critical writing process. In addition to thought experiments and philosophical reflection, this dissertation is based on five empirical studies, the most important findings of which are summarised ad hoc in the text below.

The general aim of these studies was to investigate whether processes of social ordering could be improved upon, especially with regard to the moral behaviour of citizens in an increasingly complex society. Broad's thinking was particularly inspiring in this respect, with its distinction between 'substantive vitalism', which seeks out new substances as realities become more complex, and emergent vitalism, which seeks out new methods of organisation and integration rather than new substance.¹

We identified Boutellier's fingerprints in emergent vitalism, which is why this dissertation will first embark on a reconstruction and deconstruction of his ideas. In *The Improvising Society*, Boutellier set out to study social ordering processes, a lateral thought exercise that began with the idea of immanent order and shed new light on the complexity of organisational and integrative aspects of today's society. It is understandable that citizens experience chaos and confusion, as immanent order is fundamentally invisible at the surface and takes place at a much deeper, systemic level. By harnessing the field of complexity studies, we can explore this systemic level and reconceptualise order based on formal, mathematical logic (Barabasi). This approach can explain the alternative, systemic order that Boutellier calls 'organised freedom'. In that sense, the comparison can be extended to a good jazz performance, which is also a form of "organised freedom". "Beneath the speed, the confusion, the cacophony, there are still rhythms: rules that create direction" (Boutellier). The same applies to processes of social ordering and chaos. Although Boutellier sketches a realistic and inspiring outline of a new social order, it is not an unproblematic one and there are some critical reservations to be had. The main ones are summarised below:

First of all, the comparison of society with a jazz orchestra is, in several respects, overly simplistic. Secondly, Boutellier's overly selective reading of complexity theory proved to be problematic to some extent due to a lack of consistency and unambiguity, the possibility for multiple interpretations, overly facile generalisations based on natural sciences, and the danger of repetitive, systemic patterns resulting from destabilisation and destructive preferences. Socially speaking, this would simply lead to conflict and war (Piepers). Thirdly, there is no explicit, normative frame of reference in Boutellier's social order. The problem is that citizens cannot deduce a normative body of rules for human conduct from the immanent order of society. Even if it were possible to show the ordering processes at a deeper, systemic level, this would in no way guarantee popular support.

The aim of this dissertation was to gain more insight into these dynamics and look for potential leads for improvement. This resulted in four research questions, which are discussed below.

¹ Broad, C. (1925). *The mind and its place in nature*. New York: Harcourt. Interpretation based on Murphy, G., *Human Potentialities*, Basic Books, First Edition (January 1, 1958).

1. How can 'organised freedom' be improved as a principle of 'social ordering'?

Although the improvising society is not wholly unproblematic, the systemic view of processes of social ordering on which it is based should not be rejected. A critical, constructive analysis, however, does open the door to another, non-systemic approach. As such, this dissertation develops an alternative line of thought and advances a complementary approach to processes of social ordering, shifting from 'emergent vitalism' to 'substantive vitalism', which tends to seek out new substances as realities become more complex, and adding a new dimension to the improvising society.

With this lateral path in mind, our exploratory study of future process of social ordering was continued in the form of a thought experiment, called the Moral MindSphere. This is a technology-based monitoring system built on cloud infrastructure that is used to safeguard a 'preferred morality'. For the sake of clarity, this would ideally not entail a heteronomous morality imposed by third parties and keep citizens firmly in the driving seat. In the author's opinion, this is the ultimate stage of development: autonomous morality supported by dataveillance, or the systematic creation and use of personal data to study or monitor the actions or communications of one or more people, used in this case to drive a data-driven morality in which AI is cast as the co-creator of "the good life". This is a new philosophy of governance we call ego-opticon. In concrete terms, this means that all citizens are given access to their own dashboard, the most pragmatic feature of a dashboard society, with the aim of transcending human limitations. This dashboard is a digital mirror that can show three reflections: of the past, the present, and the future. This was exactly the missing link in the development of an identity, as the Improvising Society was based on the assumption that "networks are not the cause of but a solution to perceived complexity" (Boutellier). The preconditions of such a philosophy can only be met in a dashboard society, which would allow for the creation of various facilitating applications.

For the sake of argument, the dashboard could be used, for example, as a moral compass, a tool used to operationalise one's personal actions in accordance with a determined set of values and standards and to evaluate said actions in consensus. Such a system would be a good fit for a society in which people are increasingly judging themselves and each other. Currently, however, this constitutes an entirely invalid hypermorality, as we have no yardstick by which to judge. This makes the exercise at hand particularly current and intellectually interesting, raising the question: "What if we did have such a yardstick?". The dashboard society is a new framework, a hypothetical type of future society in which people do have access to a calibration procedure or tool to improve processes of social ordering, which can be applied especially to the conscience of the people who make up the society or in situations that put the validity and reliability of our cognitive apparatus to the test.

The empirical study set up in collaboration with Idlab-Imec Ugent and UCLL to understand how technology can support human assessments, especially in the context of counseling sessions, was particularly informative in this respect. In these situations, computers could give a second opinion by generating reports of each session based on voice analysis and flagging certain transcribed interview fragments for potential severity. This would give the therapist access to a dashboard that they could use to check their own findings and adjust them where necessary.

2. How would technology assuming the role of a personal assistant and becoming part of the institutional layout of society affect the citizenship of the future?

This question presupposes the hypothesis that the citizenship of the future will in some way be distinct from how it is currently conceptualised. We opted to work up the concept of 'onlife citizenship', based on a paradigm shift that will see IT developments change how we answer fundamentally human questions, including the question of what it means to be a good citizen. The ambivalences of our time make heavy demands on citizens, and although technology assuming the role of a personal assistant will certainly not curb these demands, it will ensure that citizens are better equipped to meeting these demands.

First of all, it would allow for the emergence of highly advanced social sciences with myriad specialisms, from social physics to high-tech anthropology. This would enable scientists what was previously hidden with respect to social and interpersonal processes. For the first time in history, we would be able to use technology to invasively inventorise our behaviour and interpersonal interactions, resulting in a treasure map of unparalleled detail that could serve as a tool to improve every single aspect of civilian life. If all citizens were to adopt information exchange en masse, highly powerful computers would be capable of detecting patterns in and correlations between behaviour, causes and effects, the role of the institutional layout of society, and short- and long-term consequences. By the time that this 'algorithmic citizenship' has grown and reached its full maturity, 'providere', or foresight, would be a truly new attribute of citizens, as we would gain insight into the possible consequences of our future actions. In the best possible case, this would trigger a shift from 'convictions' to 'facts' (Latour).

Secondly, it would create the opportunity to harness technology, and robotics in particular, to serve citizens and society, which may involve robots assuming the role of personal assistants. To illustrate, we set up our own study on sex robots, along with elements in favour and against. The possible dangers of certain developments have been pointed out, as blurred boundaries between the real and the virtual, between humans and robots, for instance, would create unprecedented new problems.

The thought experiment on android robots with the anatomy of a child brought the discussion to the razor's edge, especially when the results of a 2010 web survey were presented at the 'Beyond the Death Penalty' conference in Maastricht. The study showed that there was a market for sex robots in general, whereas manufacturing android sex robots with the anatomy of a child was firmly rejected by a majority of respondents, who warned against the possible psychological, legal, and ethical consequences of child sex robots. Despite the respondents' many qualms, their worst fear came to pass just a few years later, when a child-sized sex doll appeared on online marketplaces in Japan 2013.

Thirdly, such a society would allow for the creation of a supplemental reality at the service of all citizens. A dashboard society would allow for Legislation 5.0, in which a digital judge, lawyer, or supervisor would constantly watch over our shoulder - not from a 'big brother is watching you' philosophy, but with what we would call a 'little sister approach', as a high-tech fairy god parent, of sorts. This would be a loved, desirable, and helpful assistant with no other interest than the interest of each individual citizen. At the same time, this would make it possible to improve how citizens balance pursuing their own interests and society's collective efforts, which would, in turn, optimize the coordination of structures and mechanisms that govern the behaviour of groups and individuals to reach the higher goal: the pursuit of a certain degree of permanence and social continuity; promoting moral coherence and transcending individual needs and interests.

3. How can moral coherence develop into transhuman conscience?

The potential of a substantive-vitalist thought experiment emerged most powerfully when considering the hypothetical evolution of morality itself in a society of the future. This type of morality would be entirely divorced from our own cerebral toolbox and have little to do with instincts, intuition and emotion, making it a sixth type of morality, beyond Verplaetse's quintipartite classification. This morality would be the product of a process of emergence that would gradually bubble up from the deepest crevices of our transhuman society, in which technology is used as an extension of mankind to overcome the shortcomings of human morality. Emergence is the process by which new attributes are created by the though the interaction of simple, small entities that do not possess said attributes. In a dashboard society, we would be those small entities. The network of individual consciousnesses and their contents united in the cloud by means of data exchange would form a massive, all-encompassing complex system that could spawn new moral attributes. One of these attributes has been described as a 'transhuman collective consciousness', a veritable superpower. Put a thousand, unconnected citizens under the supervision of a Moral MindSPhere and they will wonder around aimlessly. Put a million, interconnected citizens under the supervision of a Moral MindSphere and they will be capable of solving social problems that were simply unsolvable in the past: social order with an H+ connection.

In this context, we also addressed diagonal morality: a data-driven morality that connects fact-based personal moral convictions with higher-order ideals, or ethical frames of reference. In a thought experiment, we were able to imagine a society in which citizens constantly monitor and adjust their own behaviour based on facts, as well as receiving feedback from each other and from artificial intelligence residing in the higher layers of the dashboard society. Technology is capable of linking horizontal and vertical morality, resolving into a diagonal vector that would point us in the right way, as if it were the hand on our moral compass. The question as to why we would ever substitute our cerebral toolbox for a non-cerebral counterpart was also answered: functional self-optimisation. Whether or not mankind will grasp this opportunity for self-optimisation is a question of extreme sensitivity, especially as indications were found that citizens might not want to know how to live "well", also known as the paradox of normativity", during the empirical study.

The result of this ambivalent development is the superlative of what Latour calls a 'materialised morality'. The all-encompassing AI would give our conscience a voice. Peculiarly, this evolution would produce a technology that may change the defining characteristics of morality itself. We may be able to learn more about who we really are and who we think we are, and the relationship between the two, but there is also a risk that we may erode morality in the process. An analogy was found between the story of Prometheus, literally: he who brings foresight, Pandora's box, and the dashboard society. We can harness technology to learn more about good and evil, storing all our new knowledge in a massive digital repository, or data box for metaphorical consistency. Advanced forecasting software could then import this glut of data to generate prospective scenarios that could then be used to better coordinate processes of social ordering, especially in the long run. The question is what would truly happen if this box were to be opened, as it might bring about as good as it would misery and suffering.

4. What possible ethical dilemmas would arise in connection with processes of social ordering in a dashboard society?

With the help of a hermeneutic circle, all chapters of the thesis were re-examined and certain pressing issues were explored in greater depth. This resulted in one utopia and seven ethical dilemmas that would typify a data-driven dashboard society:

A *Teiresias dilemma* arises when the degree of information exchange reaches a critical threshold at which it could start influencing market forces. According to Hayek, rational economic order can only function properly when information is sufficiently disseminated and a certain degree of unpredictability arises. The dashboard society, however, would defragment information and maximise predictability (providere). This would lead to problems of choice, as AI will have to decide between fragmentation (unpredictability) and defragmentation (predictability) at key moments in order to safeguard the dynamics of society. This is linked to the way in which information is collected and distributed.

The results of a social experiment in which test subjects were asked to design a micro-society were particularly informative in this respect. Subjects had to come up with moral principles, including AI-powered information exchange in the process of consensus building, with the aim of ensuring that the chosen body of values and standards would be verifiable and accessible by means of AI (cybernetics). This society would be based on hypothetical living conditions in which citizens would, in principle, know more than they know now. After observing the various sessions, analytical induction provided a cautious clues confirming Hayek's problem, though extended to the playing field of standards and values in the creation of an imaginary society. First, it was observed that as the predictability and availability of specific information increased, moral consensus-building became more difficult, highlighting the sensitive balancing act that is acting on the basis of trust and acting on the basis of science. Secondly, it was observed that people do theoretically want to live according to a set of agreed standards and values, or what they would personally consider 'the good life', but as soon as their conceptualisation of 'the good life' is benchmarked against a set of preferred 'standards and values', they quickly feel uncomfortable and insecure.

A Nash dilemma occurs when AI has to help players in a society choose between a dominant strategy that will benefit the players themselves, e.g. by mitigating punishment, or society, which may not always be advantageous to the players. Cooperation should not be promoted if it does not serve the common good. Compensation can take various shapes and forms, ranging from economic compensation to social or relational compensation. This concerns the way in which citizens' decision-making processes work when they interact with each other and when they pursue certain predetermined goals.

A *Mnemosyne dilemma* arises when AI is given the opportunity to decide whether to include information a personal feedback loop. Principally, this is a matter of remembering or forgetting, but its practical ramifications are rather complex, as new problems of choice can present themselves at each step of the way, depending on the intended effect. It is not because someone would like to forget that forced memory could not be valuable to their learning process, and vice versa. Nor is it problematic because someone may want to remember a given event now and in the future. With regard to memory, there is a critical moment at which people cannot tolerate their memories. It is about people's digital memory in relation to their psychological well-being.

An *Ego-opticon dilemma* arises when AI has to choose which dashboard information to display that may cause suffering for the individual user (perhaps even resulting in a switch-off), but which would benefit society as a whole (the greater good). This concerns the question of

when the exchange of information should be allowed to serve the utilitarian principle with the risk that an individual scapegoat is sacrificed, by presenting unwanted information, for the sake of a majority. This concerns the meta-ethical frame of reference on the basis of which decisions are made.

The results of a scenario study in which respondents were asked to assess online futuristic ego-opticon tools. Although they appeared to be willing to use certain ego-opticon tools, they were uncomfortable with the idea of an overly perfectionist world in which we no longer own our own memories and thoughts, as this could generate an overload of both positive and negative intrusions.

An *Arkin dilemma* arises when mankind is no longer allowed to enter the playing field. In principle, this relates to mankind's potential inability to act according to the agreed ethical frames of reference in certain circumstances. For example, it is quite conceivable that robots would be far better at respecting the Geneva Convention in dangerous conflict circumstances than even the most elite of soldiers. In effect, this would disqualify mankind from performing certain acts.

A *Morpheus dilemma* arises when people in a data-driven dashboard society have to choose between happiness or truth. AI enables the creation of virtual experiences in only factual information that does not negatively influence people's feeling of happiness is permitted to exist. Would people choose this option, or would they prefer a fuller experience in which they could see, feel, and know everything? This is about the rehabilitation of eudaimonistic frames of references at the meta-ethical design level of society. A milder variant of the dilemma arises when one has to choose between realism and fiction. Even if it does not produce a sense of happiness, technology could be used to create illusions that would make it impossible for people to distinguish reality from fiction. Various applications may be devised for this, but whether such a situation is desirable at all or when it is and is not desirable, is part of the citizen's problem of choice. This was called the *Parrhasius dilemma*.

Finally, we can consider an information utopia, in which citizens are given the choice to exchange information in exchange for something meaningful, such as a discount or monetary benefits. At the same time, citizens can opt to prioritise their privacy and withhold information, thereby waiving their right to the benefits they would earn by sharing said information. This is linked to the desires that people have to contend with, which may be conflicting at times, the fact that people need resources, which means that people in a weaker financial position may be more inclined to waive their privacy, and the potential earnings models that may arise as the data-driven dashboard society is developed further.

The empirical study set up as a result of the Construction Living Lab experiment was particularly informative in this respect. During the renovation phase, certain low-income dwellings were fitted with new technological infrastructure that allowed for monitoring. At the same time, earnings models were developed to gain insight into the extent to which tenants would be prepared to share information in exchange for a discount on their energy bills or other forms of compensation. Alarmingly, it was found that particularly vulnerable tenants turned out to be willing to trade privacy for comfort or money.

Ultimately, the thought exercise presents a Januslike situation. The dashboard society is complementary to the improvising society and though it introduces improvements in several key areas, it also heralds new problems. A system is only as strong or good as its weakest link. Perhaps we do not desire a greater degree of knowledge because we consider happiness to be a lot more important. Imperfection and ignorance, then, may well be bliss. However, having too little knowledge can cause unrest and leaves mankind vulnerable. Perhaps that is why it is

so dangerous to materialise morality with AI, as it would impair mankind's ability to distinguish between right and wrong. It is not clear whether we will be offered the opportunity to live a normal life in the future and opt against enabling the technology used to make the world a better, more liveable place. In this context, it may sound as if technology is our only chance of survival, whereas the findings of this dissertation suggest that technology may just as well be the beginning of the end. However, as with any excellent system, the dashboard society also comes with the risk of reversal: when the very best system turns into its opposite, mankind is left with the worst possible outcome.