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Now we are in a position to summarise how to question subjectivation in relation to technology and innovation. In this last part, I propose an approach that I call the study of ‘materialising subjectivation’. I distinguish this term from what you might call materialising subjectivity. This, in a sense, is an expansion of Latour’s (2005b) account of the plug-ins or attachments to the human subject. While this is included in the approach I have tried to unfold, the focus here is on the materialisation of the process of subjectivation, rather than on subjectivity as some sort of entity. After discussing the method, I will attempt to answer the main question: how does the subjectivation of the patient occur in postpanopticism, in relation to questions of technology and innovation.

Materialising subjectivation

In his attempts to further the understanding of the ethics of technology, Peter-Paul Verbeek (2006) coined the term ‘materialising morality’ to denote attempts to endow artefacts with ethics. I take his cue, and connect this to the approach that I have taken in this study. If we acknowledge that technology ‘have’ ethics, it is a small step to consider that there may also be attempts to embed them purposefully. In this study, I made the connection to the subjectivity of individuals. Not only do technologies relate to us in a moral way, they also are part of a complex of relations that give shape to who we are. In reference to Verbeek’s (2005) discussion of ‘what things do’, I pose that we have to ask a number of additional questions to understand the relation to the subject. These questions are derived from establishing the relation between technologies and the four modes of subjectivation that I distinguished. Consequently, I propose that we may understand subjectivation better by asking four questions about technology. These questions are universally applicable. They are not limited by a particular time and space context. The answers, however, inevitably are. Subjectivation is highly contingent with historical developments, as Foucault has shown in his work. In this study, I have taken ideas on postpanoptic as a starting-pint to assess subjectiva-
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tion in our times. Before I draw conclusions about that, I expand on the questions first. I just provide the main threads, in order not to be repetitive. 

*What do things do in ‘social’ inquiries?*

The tools and instruments that we use in our inquiries are not neutral. We know that ‘grids of specification’ (Foucault, 1972) and even methods that claim an ‘objective’ lens at reality (Bourdieu et al., 1991) have a great impact on the object of inquiry. To go even further, they play a role in reconstructing this actual reality (Latour & Woolgar, 1986; Latour, 1999). Doing so, they play an indirect role in subjectivation, considering that submitting people to inquiries is one way of shaping them. We ought to study the concrete role that things play in studying individuals, groups and societies. This shows us how people are categorised, what parts of their lives are emphasised over others, which of their relations are given attention, etc.

*What is expected from things in governing relations?*

Questioning inquiries is likely to bring us in the domain of what we normally call politics. Often, the distinction between subjectivation by ‘modes of inquiry’ and ‘dividing practices’ is rather vague. In order to remedy this, I proposed to focus on the ‘government of relations’ as an alternative to ‘dividing practices’. However, as we have seen in chapter one, also this way it is not entirely possible to separate it from ‘modes of inquiry’. The reason for this is that the instruments that were developed for research purposes are often staged as political tools as well. In many cases, the assumption that there is a clean divide between science and politics is incorrect (Latour, 1993b). Research instruments in health economics, or innovation, are often authorised, or even co-developed by political institutions.

In order to grasp what things are expected to do in attempts to change relations between individuals, and within society at large, we first have to examine political ideas about these relations. Despite the legitimate aversion in the Science & Technology Studies community against social determinism, or technological instrumentalism (Achterhuis, 2001), it would be a mistake to ignore the fact that many politicians still believe in social engineering. In addition to that, nowadays they often believe in the notion that technical infrastructures provide a way of setting framework conditions without interfering directly (Dix, 2010). I argue that it is crucial to understand *attempts* at subjectivation, at least for the reason that these attempts are broadly published in
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political statements and broader communication. This way, attempted subjectivation becomes part of societal images of political relations.

By studying macro-actors, we do not only question what things are expected to do in governing ‘micro-relations’ between humans, or between humans and ‘things’. In addition to that, we study the role that a network of such mediated relations is expected to play in addressing macro-political issues. Being aware that there are likely to be conflicting paradigms, I propose to assess whether there are multiple macro-actor configurations ‘under design’ by different groups. An aspect that I have not taken up in my discussion is to what extent this opposition is picked up beyond the subpolitical level. Considering that ideas about reciprocity have always played an important role, I propose to examine to what extent this is an issue in a particular discussion. Teasing out ‘unfulfilled designs’ might be turned into a way of doing politics, asking questions like: ‘why are the relations that this design proposes more desirable that those of other designs’? Research can play a role in this process.

What may/do things do differently than expected?

Even though it is important to take attempted subjectivation into consideration, it is at least as important to question the discrepancy between what things are expected to do and what they actually do. Inevitably, this question can only be addressed once the things are actually in place. If this is not the case, it is still possible to question what they may do differently. In practice, this question is often asked. By studying critical reviews of proposals, it is possible to get a feel for the discrepancy between plans and outcomes that may arise after implementation. Apart from studying criticism within the political debate and within academia – as I have done – also public opinion may be taken into consideration. In addition to this, it is interesting to assess how criticism is received. What are the argumentation mechanisms that are put in practice? It is likely to be impossible to ‘prove’ intentionality in these mechanisms. Therefore, the objective should rather be to describe the practice of argumentation. It is likely that such practice is set in what I have called a ‘cluster of argumentation’. Apart from the subjectivation that may occur in the discrepancy between expectations and outcomes, also the argumentation that is provided to fill this gap is likely to shape the subject. It may result in policy changes, or it ‘hides’ the subject behind a virtually impenetrable cloud of interconnected arguments. One of the instantiations of this is that people
may be blamed for causing the discrepancy, rather than blaming the expectations.

*What do things do when we work on ourselves?*

The final mode of subjectivation involves purposeful attempts to work on ourselves. There are a number of aspects to be taken into consideration when we think about technologies and self-constitution. First, it is easily imagined that practices like reading, writing, speaking and listening are likely to be mediated by technology. Second, technologies may stimulate self-reflection, also in the sense in which Verbeek puts it (Verbeek, 2008). Finally, the material setting within which we reflect on ourselves and our goals is likely to have an impact on the way this practice is performed.

This does not necessarily imply, however, that technologies will always mediate a ‘free’ form of self-constitution. Self-practices may also be subject to the interests of others, or may in fact be applied as extension of the techniques of governmentality.

The approach that I summarise here is to be regarded holistically. There are structural links between the different questions. The questions about expectations and ‘unmet’ or ‘unrealistic’ expectations are a pair. At the same time, the question about self-constitution is only understood in connection to either, or both, of these questions. Our self-constitution is set against the background of other subjectivating practices, either or not intentional, or even ‘failed intentional’. We must not, however, make these questions rigid. There is a danger in stabilising a certain governmentality account, and then assuming that all forms of self-constitution that we see appear relate to it somehow. We must keep our eyes open for other ‘backgrounds’ against which self-constitution is set. In this sense, Latour’s (2005b) ‘follow the actors’ paradigm provides a good additional approach to keeping the study flexible. The actors might ‘show’ backgrounds that were not imagined previously.

*We have never been panopticised*

Boyne (2000) asserted that Foucault’s governmentality work is, in fact, post-panoptical. With this study, I hope to have provided more foundation for this statement.

It is not that we haven’t known what sets postpanopticism apart from panopticism. Isms like post-Fordism (De Giorgi, 2007), neoliberalism, global-
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ism (Fraser, 2003) and ‘informationism’ (Munro, 2000) are by now colloquial terms to express the state of our times. Add concept like flexibility and ‘liquidity’ (Bauman, 2000a), or even ‘foam’ (Bauman, 2000b), and the world seems to have, or be given, a different form.

The issue is rather that Foucault’s account is favourable over some of the others that I have mentioned. On the basis of this study, I would argue that accounts that attempt to update the subject of panopticism to our times are incorrect. The issue is not that the need for disciplinary measures is reduced, because of anticipation techniques like foresighting simulation and prediction. Neither is panopticism simply redundant because we have all been disciplined and have reached a state of normality (Boyne, 2000). Such views maintain the objective of fully disciplined citizens. I hope to have shown that political attempts at subjectivation are actually different under neoliberalism than before.

Also views that imagine the postpanoptical subject as fundamentally new are insufficient at parts. Bauman’s account is rather similar in its focus on the production of freedom, and on the way seduction is used as a mechanism. However, when he refers to Mathiesen’s Synopticon (Mathiesen, 1997b) – a ‘viewer society’ instead of a ‘viewed society’ – to argue that the direction of the gaze has inverted in postpanopticism, he misinterprets the argument. Mathiesen shows that there have always been practices that are based on the ‘many watching the few’ scheme, also in the era that Foucault describes as panoptical. Bauman is certainly right in arguing that there are many developments that make it difficult for the few to watch the many. However, the same applies as well, as the example of the electronic health record shows. It is interesting that different authors provide completely opposing accounts in this respect: think of Mathiesen Synopticon on the one hand and Zuboff’s Information Panopticon, or De Landa’s Panspectron (Munro, 2000) on the other. In certain contexts, these accounts probably apply rather well. If we take a step back to simply assess how certain relations work, or how they are imagined to work, we are likely to end up finding examples of both. I have tried to bring together a number of elements in Foucault’s work and that of others to provide such a generic, yet potent angle.

What we have to consider, however, is how fortunate the term ‘postpanoptical’ actually is. In this respect, I would first like to recall Rose’s remark again, that ‘Foucault’s disciplinary societies were not ‘disciplined societies’’ (1999, p. 234). Panopticism is a governmentality that has disciplinary tendencies. For some authors (e.g. Munro, 2000), however, postpanopticism does not refer to such tendencies. Munro refers to the idea that postpanopti-
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cal subjects escape effective discipline, because they cannot be monitored sufficiently anymore. This implies that, for him, postpanoptical societies are not post-disciplinary societies, but post-disciplinable ones. This is largely attributed to the rise of the information and network society. Effectively, this is a technological determinist way of reasoning: technology changed, so society changed. This does not at all imply that there are no more disciplinary tendencies, but just that they are no longer effective. I have tried to show, relying on Foucault, that the governmental tendencies of our societies are actually different as well. Therefore, the first lesson could be to speak of post-disciplinary societies, instead of postpanoptical ones. However, doesn’t Foucault’s notion of panopticism cover more than just discipline?

There is a more fundamental question underlying this, however. I try to explain this by referring to Bruno Latour’s (1993b) statement that ‘we have never been modern’. This has proven to be a good stick to stir up fundamental questions (see e.g. Sloterdijk’s assertion that ‘we have never been revolutionary’: Latour, 1993a). Postmodernism is one of the objects to receive blows in Latour’s essay. For him postmodernism is problematic, because it still acknowledges that there was such a thing as a ‘modern constitution’.

He does not believe that modern man is different from traditional man, in a philosophical sense. Neither is western man different from non-western man.

This way of thinking cannot be ‘mapped’ onto Foucault’s work without some adaptations. My claim is not that we have never had panopticism. In reference to Rose, however, we can argue that we have never been panoptical subjects, if that is understood as saying that we were once fully disciplined or normalised. If we followed this way of reasoning, panoptical subjects would actually be a different type of people than postpanoptical subjects. The formed would be disciplined, or disciplinable, and the latter wouldn’t. Such a way of reasoning introduces an artificial schism in history.

Should we drop the term postpanoptical altogether? If we consult with Latour, it seems that he does not entirely make the disconnection that you might expect: his solution is to consider a ‘nonmodern constitution’. First of all, it would be pointless to make an analogy to this and argue for ‘nonpanopticism’. As I said, the thesis of panoptic governmentality still makes sense.

One solution would be to just start using different terms, by speaking of neoliberal governmentality, for example.

Is that entirely satisfactory, however? If we look at Latour’s statement from another angle, we might wonder if it is actually weird to speak of postmodernism. Perhaps he is right in saying that we have never been modern, but does the statement still hold if we were to change it to ‘we have never
been modernists'? Latour does not deny that there were people who called themselves that, and that they were rather influential at it. From that point of view, it does not seem unreasonable to call oneself ‘postmodernist’, in the sense that one is a thinker who is faced with the consequences of the ‘modern constitution’. Following this logic, there also seem to be benefits to the term postpanopticism, in the sense that it describes a society and a governmentality in which the traces of panopticism are still visible. Postpanopticism is no radical break with the past.

My suggestion would not be to get rid of grand narratives, as many authors associated with postmodernism, or with certain branches of Science and Technology Studies have suggested. Rather, we need to reconsider how we deal with them. Even if we don’t study whether or not we are, or have been, modern, we should most certainly continue our studies of having called ourselves modernists. We should not proceed to call ourselves ‘non-disciplinable’, to set ourselves apart from previous generations. What we should do is to study to what extents there are, and have been disciplinary tendencies in our societies.

In order to do this, we need to acquire another vocabulary. Throughout this study, I have struggled with formulations like ‘attempted subjectivation’, ‘attempted self-constitution’ and ‘failures’. When discussing grand narratives, we have to take into consideration that big ideas are often attempts to do something, and that such attempts may fail. There is more to it though. If there is one thing to take from the Science and Technology Studies in this regard, it is that grand narratives are not to be understood from a social determinist point of view. Modernism was not merely an intentional creation. Countless mediations and translations took place to generate what we now call modernism. On the other hand, we should also take care not to fall back into post-structuralism and assume that grand narratives are only the effect of historically contingent practices.

**A postpanoptical subjectivation: subject of innovation**

Then, let’s turn to the main question that has occupied us in this study: how does the subjectivation of the patient occur in postpanopticism, in relation to questions of technology and innovation.

The first thing to be stressed here is that this concerns a postpanoptical subjectivation. Some choices were made that necessarily limited the scope. Foucault also partly worked in such a way. In some respects, he restricted his
reach by researching the subjectivation of ‘the insane’ (2004), criminals (1977), patients (2003) and ‘dangerous individuals’ (1978a), to name a few. Other modes of limitation were to restrict the scope by examining the subjectivation through a particular set of practices, such as the confession (1993) or sexuality (Foucault & Hurley, 1990). On the other hand, in his studies of panopticism (1977), governmentality (1991), neoliberalism (2008), and to some extent of self-constitution (2005), the focus on the subject was relatively unrestricted.

In this study, postpanopticism was narrowed down in several ways. First, I focused on technology and innovation. I have not meant to suggest that postpanopticism equals a ‘technological society’, as some do (e.g. Barry, 2001). In chapter one, I showed that technological change in economic processes was already discussed in the 18th and 19th century. In order to discuss this in a framework of postpanopticism, I connected it to neoliberalism. As we saw, this implied a surprising ‘merge of discourses’: neoliberal ideas proved to match better with a slightly ‘older’ tradition of thinking about innovation. It would seem relevant to assess whether other innovation traditions have postpanoptical tendencies as well. In a more normative sense: focusing on the second tradition of innovation theory – innovation as new products – would have an important advantage. The fact that this tradition takes the actual innovated artefact into consideration provides possibilities to open up the ‘black box’ that the first tradition keeps closed. Focusing on how new technologies are made allows us to ask the type of questions that have been central to this study. The first tradition merely asks questions regarding the impact that such artefacts may have once completed.

A more general way of addressing the issue of studying alternative traditions is: are there political discourses besides neoliberalism that have postpanoptical tendencies? Communitarianism seems to be a highly relevant candidate, particularly considering its ‘affair’ with neoliberalism over the past decade (Fyfe, 2005). Then, within the broad scope of neoliberal ideas about technology and innovation, I focused on a number of practices within the domain of healthcare: Diagnosis Treatment Combinations, the function-oriented description technique for health insurance policies, the Quality-Adjusted Life Years (QALY) calculation, the electronic health record, the personal budget, medical chat rooms and healthcare innovation projects in Living Labs.

What can we say now, about the ‘subject of innovation’? A combination of a Foucauldian account of neoliberal governmentality and certain concepts from the Science and Technology Studies proved fruitful in understanding attempts to engineer a new set of relations between individual and society.
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Staging perceptions of reciprocity embedded the ideas of the patient as a ‘principal’ and as a productive member of society in a way that would be mutually beneficial. Delving beyond the written accounts of policy papers, however, revealed a more complex image. The neoliberal version was only one of four possible ‘futures’ of the electronic health record. Given developments in standardisation and political preferences, it seemed a likely one, however. On the other hand, the recent refusal of EHR policy proposal by the Dutch senate seems to point in other directions. Rather than opting for the broad technical setup that would allow for macro-issues to be addressed, a more ‘moderate’ regional system seems to be favoured now.

The discussion of opposing macro-actors brought other issues forward, however. On the one hand, it seems likely that subjectivation is strongly related to a particular subset of patients. ‘Expert patients’ are likely to have a different status, just like young and higher educated ones. On the other hand, it seems that one patient can be subjectivated in multiple ways. In this sense, Deleuze’s remark that ‘[i]ndividuals have become ‘dividuals’ (1995, p. 180) seems to be rather appropriate. The same applies for Rose’s assertion ‘we are dealing [...] not with subjects with a unique personality that is the expression of some inner fixed quality, but with elements, capacities, potentialities’ (1999, p. 234).

The notion that the ‘neoliberal option’ is only one possible future does not mean that it loses its importance, even if it is finally not adopted. This is part of what the discussion of ‘failing expectations’ brings forward. The example of the personal budget shows that implementation is different than policy papers suggested. The patient is then subjectivated in relation to the perceived gap between expectations and outcomes. (S)he is met with increasing governmental control, and societal distrust (Linders, 2010). An interesting hypothesis would be that failing postpanoptical techniques lapse back into panoptical ones.

On top of that, (failed) neoliberalism provides the background against which attempts at self-constitution are set. No matter whether this concerns technology-mediated ascetic practices, or technology-induced self-reflections, these are framed in relations with existing technologies of government. This shows that the material conditions of self-development are important. This should not imply, however, that the question of who is able to perform self-constitution or democratisation is no longer to be considered.

In the end, the best description of this postpanoptical subject is probably the ‘subject of compromised self-constitution’. More emphasis on practices to give shape to the self are important in this respect, particularly in relation to
technology. However, this is only effective if we understand the ‘background’ better. Freedom practices are a complex phenomenon in a governmentality that promotes freedom. As Foucault already said, it is important to assess where the boundaries are, and to struggle for them.

And innovation?

What does all of the above mean for the practice of innovation? I have tried to position self-constitution as a pivotal construct in the making of new technologies. This has a number of implications, which we should regard with a certain degree of scepticism. First of all, self-constitution applies to all actors involved. There is no reason to argue that only users need to work on themselves. The same applies to designers, politicians, experts, etc. Formulated in such a general way, however, this is no more than somewhat naïve idealism.

This relates to a second point, which in itself is no less problematic than the previous statement. As Foucault has argued, in ancient Greece and Rome, there was a culture that expected people to develop themselves into ethical human beings. Presently, we have no such culture. Without concrete ideas of implementation, a normative claim that we would need to reinstate such a culture, transformed in line with the currents of our times, is equally empty as much-heard management parlour to ‘change mindsets’ or ‘empower workers’.

The third point, however, is that technology can play a role in such implementation. Let me add immediately that it is only a small step. Changing a culture requires much more than that. Technology plays a role in two respects. First of all, there is a relation to the type of technology that is produced. In line with Verbeek’s notion of ‘materialising morality’, we can devise more technologies that stimulate people to reflect, to discuss, to listen, to read, to write, but in a particular manner. What this particular manner is, still requires more discussion. Especially for media students, there are challenges to understand how new technologies mediate the transfer from consuming information to producing it. What is called Web 2.0 seems to have aspects that move in the direction that I present here, but there are counter indications as well. Anonymous reactions that are used to spill one’s gut are hardly examples of ethical self-constitution. It is not enough to just write up anything that comes to mind. Self-constitution requires a controlled and reflective way of doing this. More effort could be put into developing technologies that invite such behaviour. There are still many questions in this area: for
instance, are recent media like Facebook and Twitter the best ways of communicating reflectively? There are many sides to such a debate. The same applies to healthcare. The keeping of health diaries is just one example.

Also the process of developing technology is important from the point of view of a culture of self-constitution. In the last chapter, I mainly paid attention to the extent to which the self-constitution of users could be an organising principle for ‘participative’ forms of technology development. Allowing people to play a role in the technologies that they will, or might, use, requires a different attitude of other stakeholders as well. The case of Living Labs shows that participative trials are often primarily conceived from the perspective of designers, entrepreneurs, researchers or politicians. If we want to take the self-constitution of users as an end in such processes, Foucault’s ideas about self-development ought to apply to all actors in the process.

This, again, has the ring of a lofty, yet empty ideal. How do we go about putting this in practice? I believe this to be one of the major struggles that we face. The basic premise would be to inscribe the goal of the self-constitution of future users and the principle of self-reflection of other actors in the methods, charters or codes of conduct of innovation bodies like Living Labs. This would provide a foundation for participants to refer to, if they felt that these principles were violated.

Despite the practical attractiveness of such an idea, alarm bells start ringing when proposing it as a ‘solution’. First of all, it might suggest the potential of institutionalising an ‘ideal speech situation’, in the vein of Habermas’ work. Clearly, it is a utopian idea that Living Labs could be turned into free public forums by a set of guidelines. On the other hand, it is a starting-point. Methodologies like value-sensitive design (Friedman, 1996; van der Hoven & Manders-Huits, 2009) go into a similar direction.

A more Foucauldian approach to this problem is to create a facilitator position in innovation platforms to serve the process of self-reflection and self-constitution. This could be a modern-day ‘master of the care of the self’. Perhaps this sounds like a potentially archaic solution to a topical issue. On the other hand, the role that a facilitator of value-sensitive design plays is not all that different. A potential additional task for such a facilitator would be to question the origin of these values. We can translate abstract accounts of Foucauldians like Tully (2002) into a more practical role. Tully hold a plea for including philosophers to provide genealogies of the discourses that are at play in the context of a particular practice. In the context of an innovation project, we could imagine a role for a facilitator in questioning potential underlying motivations that different stakeholders are likely to have: consumer-
ist ideals, profit-orientation, a need for scientific output, etc. In the previous chapter, I argued for regarding self-constitution in relation to the development of ‘interests’. Something similar applies to values. In value-sensitive design, we need to reflect on the source of the values we apply.

Inscribing innovation platforms, and roles within them, in such a way brings another danger forward, however. Even though it wouldn’t seem to hurt if designers, entrepreneurs, researchers and politicians would ‘care’ more for the people who would end up using their innovations, we have to bear the much-discussed dictum ‘all is lost if you begin with the care of others’ in mind. Installing a position for additional reflection runs into dangers like thinking for the other, or expecting something in return. The relation between the care of the self and the care of others is a precarious one that requires reflection in itself. The ancient principle of ‘ethical distance’ seems to be an important one in this respect.