THE TECHNO-APPARATUS OF BODILY PRODUCTION

A New Materialist Theory of Technology and the Body

Josef Barla

[transcript] science studies
What if the terms “technology” and “the body” did not refer to distinct phenomena interacting in one way or another? What if we understood their relationship as far more intimate – technologies as always already embodied, material bodies as always already technologized? What would it mean, then, to understand the relationship between technology and the body as a relation of indeterminacy?

Expanding on the concept of the apparatus of bodily production in the work of Donna Haraway and Karen Barad, Josef Barla explores how material bodies along with their boundaries, properties, and meanings performatively materialize at sites where technological, biological, technoscientific, (bio-)political, and economic forces intra-act.

Josef Barla is a postdoc researcher in the Biotechnology, Nature and Society research group based at Goethe University Frankfurt. He studied Sociology and Philosophy at the University of Vienna. His research focuses on questions at the intersection of technology, ecology, (techno-)biopolitics, and care.

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Introduction

What we need is to make a difference in material-semiotic apparatuses, to diffract the rays of technoscience so that we get more promising interference patterns on the recording films of our lives and bodies. Diffraction is an optical metaphor for the effort to make a difference in the world.

—Donna Haraway/Modest Witness

Over the last few decades, the idea that technology is not the Other of the body has become more and more pervasive in poststructuralist and posthumanist theories. Jacques Derrida, for example, reminds us that “there is no natural, originary body: technology has not simply added itself, from the outside or after the fact, as a foreign body” (Derrida 1995: 244). For Derrida, technology is “‘originally’ at work in place in the supposedly ideal interiority of the ‘body and the soul’” (ibid). Similarly, Donna Haraway argues that “technologies are not mediations, something in between us” but rather “what Merleau-Ponty called ‘infoldings of the flesh.’ What happens in the folds is what is important.” (Haraway 2008: 249)

Both Derrida and Haraway seem to suggest that technologies and bodies are inextricably entangled with one another. Technologies are to be understood as always embodied technologies while material bodies have to be considered as always technologized bodies. What remains unclear, however, is the question as to how to understand the embodiment of technologies, and how to make sense of the role of technologies and technoscientific practices in the processes of the calling into being of particularly materialized bodies.

Discourse theories and especially the concepts of performativity and interpellation have been crucial tools for understanding how and which subjectivities and consequently also bodies come to matter, but they also remain limited. Judith Butler, for example, provides us with a robust account of how regulatory
practices performatively produce the bodies they govern by hailing them into being. Instead of referring to “a singular or deliberate ‘act’”, the notion of performativity, here, denotes “the reiterative and citational practices by which discourse produces effects that it names” (Butler 1993: 2). Precisely because for Butler matter is “a process of materialization that stabilizes over time to produce the effect of boundary, fixity, and surface” (ibid: 9), bodies are not given and fixed entities with clear-cut boundaries and properties but have to be understood as “the effect of power, as power’s most productive effect” (ibid). Far from reducing bodies to arbitrary products of language, Butler gets to the heart of the very materiality of bodies. However, in an important sense, the material dimensions of the regulatory practices through which bodies are performatively enacted remain undertheorized.¹

Departing from these insights, this book engages with the question of how to understand the material dimension of regulatory practices from a perspective that regards bodies as always already technologized bodies and technology as always already a part of ‘us’. Stories about the power of technologies and technoscientific practices to shape, discipline, objectify, and even determine the body have been and still continue to be of fundamental importance for critical analyses of social power relations and inequalities. But what if it is not only too easy but also too limiting, both theoretically and politically, to assume that technologies function precisely according to particular social power relations and interests that have been inscribed into them, disciplining and objectifying a mere passive body? What if, what is needed in critical approaches to technology and the body is also a story of technological failure instead of the same old tales of the domination and disciplining of the body through the means of science and technology?

Feminist theorists such as Donna Haraway, Rosi Braidotti, Marilyn Strathern, and many others have stressed the need for new stories, new methods, and new figures to emerge in order to arrive at better understandings of our past, present, and future in a world that has been thoroughly transformed by technobiopower and biocapitalism. Rather than mirroring an otherwise mute and inaccessible world, figures and concepts function as promising tools for actively en- and revisioning more liveable futures in a common world. Figures and concepts are thus always material and embodied, they are always part of the world in its becoming. The concept of the apparatus of bodily production is perhaps one of the most powerful tools that allows for new stories about technologies and

¹ Cf. Karen Barad’s productive engagement with Butler’s notion of performativity in Meeting the Universe Halfway (2007), as well as chapter three in this book.
bodies in their entanglement with one another to emerge, contesting a thinking that differentiates between original and (illegitimate) copy, the natural and the artificial, dynamic mind and passive ahistorical matter.

What lies at the heart of this book is the attempt at a return to the figure of the apparatus of bodily production in order to take it a step further. As the potential of figures comes from “the join between the figurative and the factual” (Haraway 2000: 24), my aim lies in outlining a new materialist notion of the apparatus of bodily production as both a figure that allows us to shift our attention to concrete sites where biological, technological, social, economic, and political forces intra-act and in doing so mutually materialize a particular phenomenon, and as a speculative tool for engaging with questions of power and becoming that pervade those sites. In doing so, a deeper understanding of how not only particular knowledges about bodies but also specifically reconfigured bodies come to matter in the context of the technosciences shall be developed. Instead of already starting with an understanding of the body as a mere object or as a surface on that powerful technologies and technoscientific practices act upon, the question for the generative and unruly potentials of bodies will accompany this book.

Employing the concept of the techno-apparatus of bodily production as a speculative tool for the taking into account of the regulatory practices through which bodies materialize along with their boundaries and meanings, this book will put forward an understanding of the relation between the body and technology as a relation of indeterminacy. As an ontological concept, the notion of indeterminacy is not about a lack of knowledge, but rather about spatio-temporal undecidability. That is, instead of designating that ‘we’ cannot know where the body ends and technology begins, the notion of indeterminacy highlights that it cannot be determined in advance and once and for all, where the boundaries between bodies and technologies run. It is only through particular material-discursive practices (in which not only humans but also nonhumans take part) that particular boundaries and properties manifest and become meaningful. From this follows that bodily being is always technologized being and technologies always embodied phenomena. In an important sense, however, such an account does not intend to conflate technologies and bodies, or to erase differences, as well as questions of accountability and responsibility. On the contrary, it implies that both technologies and bodies are always themselves multiplicities or assemblages. In doing so, it affirms not only that bodies and technologies are entangled with one another in multiple ways, and with very different ethical and political consequences, but also the fact that neither technologies nor material bodies can be understood ahistorically and static. Indeterminacy “does not mean that there
are no facts, no histories, no bleeding – on the contrary, indeterminacies are constitutive of the very materiality of being”, Karen Barad (2014: 177) reminds us. As “a mode of existence” (Latour 2002; Simondon 2016), technology is at the heart of questions of mattering. As Haraway reminds us, technologies are about particular ways of making intimate connections, and it “matters which ones get made and unmade” (Haraway in Kunzru 1997). That is, it matters whether ‘our’ intimate connections with technologies are aiming at the appropriation and commodification of the generative forces of human and nonhuman bodies for the demands of the political economy, or working toward the realization of more livable futures for everyone.

This book is divided into four parts. Following Deleuze and Guattari’s call to produce maps rather than to draw exact copies, the aim of the opening chapter is twofold. First, I will critically engage with pivotal sociological and philosophical debates on the relationship between technology and the body. Since mapping is never an innocent practice but always situated, I neither want to produce a linear history here but rather reconstruct genealogies, nor do I want to present the produced map as the only possible one, as it is only one story and how it could be told. In doing so, I will argue that while social constructionist approaches to technology were highly successful in contesting technological determinism, material bodies in their multiple and dynamic entanglements with technologies had been largely ignored. That is to say, while the dichotomy of technology and society has been contested, the dichotomy of technology and the body, and with it the dichotomy of the natural and the artificial, the organic and the mechanical, remained largely untouched. As I shall point out in this chapter, feminist scholars were not only the ones who highlighted a number of problematic blind spots with regard to questions of power within this body of work, but also those who brought the lived, material body back in. Despite the fact that the body has been conceptualized in a number of highly insightful and productive ways, as soon as the question of technology comes in many of these approaches tend to understand the relationship of technology and the body as one in which the latter remains a mute, disciplined and disempowered object or even a mere surface on that technologies and technoscientific practices act upon. This is particularly, but by far not only, true for analyses of new reproductive and biomedical technologies. As a consequence not only the relation of technology and the body is understood as a relation of connection rather than one of entanglement, but the dichotomies of the natural and the artificial, nature and culture, interiority and exteriority, active and passive, human and nonhuman are reinforced as well. Moreover, while the body remains a silent and passive one, a body that is constantly threatened, meaning, disciplined, surveilled, fragmented, and funda-
mentally reworked by particular technologies and technoscientific practices, technology tends to become a placeholder for social power relations, and hence mere politics by other means. In doing so, as I will problematize, many of the approaches within this framework seem to assume that there is almost a guarantee that technologies function precisely according to certain individual or collective interests and social norms that have been inscribed into them.

Second, against this backdrop, I will argue that what gets lost in many of these understandings of the relationship between technology and the body is nothing less than the possibility to understand how bodies materialize in their entanglement with political, technological, technoscientific, biological, economic, and other forces, precisely without understanding the bodies involved as mute and passive objects. Rather than denying the effects of power and technologies on material bodies, I argue that what is needed are theories, concepts, and methods that allow us to take into account not only the facticity of material bodies but also their potentials to be unruly and to ‘kick back’; or in other words, following Deleuze’s reading of Spinoza the question has to be what bodies are capable of rather than what the body is. Such an approach might promise a deeper, or at least a fundamentally different, understanding of how and why technologies can also always fail in their attempts at reconfiguring bodies for the demands of the political economy. Traversing narratives which understand material bodies either as brute passive matter or first and foremost as effects of powerful discourses and technologies (including technologies of the self), such an approach has to start by acknowledging that there is no such thing as the body but only bodies in the plural form, which are always assemblages themselves. What is more, such an approach also demands for a reworked understanding of technology; an understanding that regards technologies as clearly political and yet without equating them with mere politics by other means, allowing for new stories not only about technologies but also material bodies and agency to emerge.

Drawing on Bruno Latour’s notion of technology as a process rather than a product or a mere artifact, in chapter two, I put to the fore an understanding of technology denoting a particular mode of being and knowing, a mode of engaging with our world as part of it, while technologies in the plural form will refer to relational matrices, that is, to specific worldly constellations of mobilizations and reconfigurations which happen between heterogonous actors. I will point out in this chapter that Latour’s substantially through the philosophy of Michel Serres and Gilbert Simondon influenced notion of technology as a process that “liquefies all things and at the same time gives them new durability, solidity, consistency” (Latour 2013: 225) might allow us to go well beyond narratives that circle around an understanding of technology either as mere means to an end
or first and foremost as materialized and condensed social relations. Such an account not only shifts the view from objects to relations, from fixed and static arrangements to fluid becomings, but also suggests that rather than talking about technology in the singular form, inquiries always have to take into account technologies in their multiple entanglements with other social, culture, biological, economic, and scientific forces. However, while such a reading of Latour’s philosophy can be regarded as successful in providing us with a relational and processual understanding of technologies, Latour has surprisingly little to say about material bodies. As I point out, the body only appears either in the context of biological or even organicist metaphors for “science in the making”, or as an entity that is being affected. Nevertheless, it is this second idea which is highly influenced by Spinoza and Nietzsche that not only promises an understanding of the body as always being entangled with other bodies, and therefore as always an assemblage itself, but might provide us also with an understanding of bodily activity or agency which breaks with the dichotomy of active and passive, subject and object, individual and collective. It does so in so far as it regards the body as an entity that is always put into motion, “meaning ‘effectuated’” or “moved”, as Latour (2004a: 205) states, by other bodies. Bodily agency, therefore, is something that emerges only in and through entanglements with other bodies (human and nonhuman ones alike), rather than being something that bodies as distinct entities already possess. I conclude this chapter by arguing that not so much the relationship between technology and the body, but rather technologies and bodies as parts of particular apparatuses are to be taken into account.

Chapter three elaborates this argument, constituting the theoretical and methodological heart of this book. To this end, this chapter follows Donna Haraway’s and Karen Barad’s call for developing diffraction apparatus in order to be able to study bodies and technologies in their manifold entanglements with one another. In doing so, I first engage with Donna Haraway’s figure of the material-semiotic actor as a generative axis of the apparatus of bodily production, defending it against a number of false accusations and misreadings. At the same time, I argue that even though Haraway has much to say about the material-semiotic actor, the figure of the apparatus of bodily production itself remains rather underdeveloped, and thus conceptually and methodologically vague. In what follows, I demonstrate that by drawing on Haraway’s insights the feminist quantum physicist Karen Barad further elaborates the concept of the apparatus of bodily production in an important sense. Reading quantum field theory (in particular, the works of the quantum physicist Niels Bohr), feminist epistemologies, and poststructuralist theories diffractively through one another, Barad develops a posthumanist account of performativity that not only allows for
a deeper understanding of the epistemological but also of the ontological dimensions of technoscientific and other practices. Discussing Barad’s key concepts, I point out in this chapter that her account of performativity and materialization not only brings to the fore the ethical dimensions of becoming, but might also provide us with the foundations for an actualized understanding of technobio-politics. It is precisely Barad’s reworked understanding of apparatuses as generative material-discursive practices (in the sense of material, embodied concepts rather than as instruments which are limited to laboratories or other places), as I will demonstrate, that promises to be of fundamental value for a reworking of the concept of the apparatus of bodily production.

Instead of mirroring reality or functioning as mere metaphors, concepts work toward “the dramatization of processes of becoming” (Braidotti 2013: 164). Hence, in what follows, my aim in this chapter lies in outlining a concept of the techno-apparatus of bodily production as both a figure and a speculative tool. While as a figure, the techno-apparatus of bodily production refers to sites where human and nonhuman, biological, technological, social, political, and economic forces intra-act and in doing so performatively enact specific phenomena whose boundaries and properties cannot be separated from the very apparatus of bodily production through which they came to matter, as a speculative tool, it functions as a mapping practice for the analysis of material-discursive practices through which bodies along with their boundaries and meanings come to matter. These two aspects of the concept the techno-apparatus of bodily production cannot be separated from one another. Neither can the fact that as a situated researcher one is always part of the world one seeks to understand through apparatuses of knowledge production; rendering one accountable for the boundaries, the inclusions, and the exclusions at stake.

The concluding chapter, chapter four, ties together the insights and arguments developed in the book by turning to two concrete “worldly examples”, as Donna Haraway (2000: 46) would put it, exploring them as techno-apparatuses of bodily production. Drawing on Lundy Brown’s groundbreaking work “Breathing Race Into the Machine. The Surprising Career of the Spirometer from Plantation to Genetics”, in the first part of this chapter, I turn to the spirometer, a medical device for measuring lung capacity and ‘vitality’ with a deeply racist history. In contrast to Brown however, I argue that, rather than representing a mere technical instrument in which race and social inequality somehow have been inscribed into, it might make more sense to understand the spirometer as a techno-apparatus of bodily production – that is, as an assemblage consisting of technical, scientific, medical, economic, political, and biological entities, relations, and forces. In doing so, I demonstrate that understood as such a
techno-apparatus of bodily production, the spirometer can be taken into account not only as producing the very phenomenon it seeks to measure, namely, ‘vital capacity’, but also as performatively enacting the corresponding bodies, marking black bodies, due to their alleged lower vitality, as less effective and resilient ‘by nature’ compared to their white counterparts. Thus, in what follows, I put to the fore an understanding of vital capacity as the material-discursive effect of the bodies, technologies, politics, discourses, social relations, and the environmental influences involved; rather than being only a brute natural fact or a mere social construction. I conclude that such an account demonstrates that measurements have not only epistemological but also ontological, and therefore ethico-political consequences in determining who is eligible for compensation payment when it comes to disability and serious illness and who not, whose lives matter and whose not.

The second part of this chapter focuses on the Human Provenance Pilot Project, a project initiated by the UK Border Agency with aim to combat undocumented migration with the means of new biometric technologies and technoscientific practices, targeting primarily the bodies of African asylum seekers. The project operated following the assumption that bodies cannot lie, and neither can isotopes and genes. Consequently, the UK Border Agency believed that a combination of DNA ancestry testing along with strontium isotope analysis could reveal an applicant’s “true country of origin” (UK Border Agency 2009a). Analyzing the project as a techno-apparatus of bodily production, I demonstrate that despite its aim, the project has not so much revealed supposed truths about the bodies tested but rather sought to technoscientifically enact what counts as an authentic body that is bound up with particular geographies, geologies, and political images. What is more, the bodies the project sought to materialize were not just any bodies but bodies marked by ethnicity, nationality, and race, illustrating, as I argue, that it would be a mistake to believe that with/in genomics race would become less meaningful on a subdermal or molecular scale.

In both cases, as I display, the concept of the techno-apparatus of bodily production as a figure and a speculative tool not only provides us with an understanding how apparatuses function as material-discursive regulatory practices, enacting particularly re(con)figured bodies, but also suggests how these apparatuses failed in doing so, in so far as in neither of the cases discussed the bodies and technologies involved behaved as expected. While in the case of the Human Provenance Pilot Project the bodies tested could not be addressed as mere passive objects of knowledge or even as information storage devices that could be read like an ‘open book’, difference in vital capacity in the context of the use of the spirometer becomes evident as neither a natural biological fact, nor as a
social construction, but rather as the material-discursive effect of technological, biological, political, cultural, and economic forces. It is precisely for this reason that naturalizing the variability in vital capacity in living, breathing bodies in order to achieve a certain political affect, proved and continuous to prove to be difficult.

Even though technology as a mode of being is inseparable from ‘us’, the convergence of novel bio-genetic and information and communication technologies not only produces more intimate entanglements between technologies and bodies, the artificial and the natural, the digital and the analog, but also calls for novel figures and concepts for analyzing the ethico-political consequences of these very entanglements with regard to what counts as matter and how matter matters. Instead of departing from the idea that technologies are either not much more than mere tools that can be used for liberating or oppressing purposes, or an exterior/ized Other to material bodies, constantly threatening them in their integrity and supposed ‘naturalness’, this book puts forward the idea that what a particular technology or a particular body can do remains invisible or undetermined as long as ‘we’ understand both as separate, distinct entities. Only if ‘we’ shift our attention to the techno-apparatuses of bodily production as performativ practices of simultaneously generating matter and meaning, we might be able to learn what concrete bodies and technologies in their entanglements with one another can do. Therefore, rather than trying to get rid of technology, ‘we’ need to integrate it even more deeply in our concepts of subjectivity. Contributing to ongoing debates in new materialist and posthumanist theories of technology and the body, this book aims at a deeper understanding of the processes of the materialization of particularly re(configured bodies in the context of the technoscience, and thus at a more materialist understanding of performativity.