

Self Practices and the Experiential Gap: An Analysis of Moral Behavior around Electricity Consumption

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Abstract: As a way to mitigate climate change, ways to reduce electricity consumption are being explored. I claim Briggie and Mitcham’s experiential gap offers a useful framework to understand the workings of our environment regarding this consumption. Via Foucauldian ethics, which holds people need to relate to their environment through ‘self practices’ in order to make moral choices, I argue that the complex and opaque electrical network makes it particularly difficult to consciously curb consumption. Efforts to make the network simpler and more transparent could enable engagement and ‘ethical consumption,’ but at the cost of decreased usability.

Key words: energy, electricity, consumption, Foucauldian ethics, experiential gap

Introduction

One of the great global problems of our time revolves around energy. A century of increasing wealth for an increasing amount of world citizens has resulted in an enormous demand for fossil fuel (e.g., Raupach et al. 2007). Next to the fact that easily accessible supplies are running low, the main problem with the consumption of fossil fuels is the influence the emission of greenhouse gases have on the composition of the atmosphere. Low supplies result in political instability when countries start fighting for the last bits (Correljé and van der Linde 2006), and resort to ever dirtier and less efficient ways of producing useful fuels.¹ Global climate change threatens agriculture, ecosystems, and communities around the world with changing weather patterns and precipitation distribution, and more frequent extreme weather events (Barker et al. 2007).

To deal with these issues, a large variety of solutions have been proposed, one of which being the reduction of our energy consumption. But this is said more easily than done (Jaffe et al. 2001). Although many of us know we should reduce our consumption, progress is made slowly, if it is made at all. One of the ways in which we use energy is by consuming electricity. Since electricity comes from a variety of sources (coal, natural gas, wind, nuclear, etc.) and has many uses (lighting, cooking, all sorts of electronic appliances, etc.), measuring electricity (rather than the amount of light emitted in a house) is a useful way of measuring a large chunk of someone's energy consumption.

To reduce electricity consumption, two strategies are typically embraced: technological innovation, and the appeal to 'ethical consumption.' Technological innovation revolves around efficiency improvements and other energy saving measures, like the automatic shutdown of an electrical appliance after a period of non-use. To change consumption patterns, appliances are labeled according to their efficiency, and our morals are addressed via public service announcements. But despite significant technological improvements and an increased 'environmental consciousness,' electricity consumption per capita is not declining (De Decker 2011, Steg 1999). What is holding us back? Why do our attempts at reducing electricity consumption fail to be effective?

If we accept that the emission of greenhouse gases via domestic electricity usage is a case of pollution due to the practice of many independent consumers, we see that the twin strategies of efficiency improvements and ethical consumption are aimed at both ends of this problem: attempting to make practices less harmful, and attempting to alter the practices themselves. But these routes take for granted the center of the issue: the electrical system and the context in which consumption takes place. Could there be something about the electrical system that makes it particularly difficult to reduce its usage?

This paper explores the idea that this is indeed the case. My aim is to describe the way we experience electricity, and to find out why this experience inhibits our making ethical choices about our consumption of electricity. In order to do this, I will use the concept of 'the experiential gap' as a way to understand why we are not actively involved with our electricity, and deal with a few technologies that aim to close or narrow the experiential gap, either by increasing the visibility of consumption, or by forming a much smaller network to produce electricity. Then, I will use Foucauldian ethics to understand why we need an active relation with our electrical system, concluding that the experiential gap inhibits the 'self practices' one needs to become an ethical subject.

The Experiential Gap

In “Embedding and Networking: Conceptualizing Experience in a Technosociety” (Briggle and Mitcham 2009), Adam Briggle and Carl Mitcham claim that it is useful to understand modern society as a *networked* society, rather than an embedded one. In an embedded society, parts are subordinate to the whole, and the parts have a strong relation with the whole. Disembedding occurs when these strong part-whole relations get dissolved, resulting in an ‘autonomization’ of the parts. These autonomous ‘ex-parts’ can become nodes in networks, where networks are understood as systems of relations or links between nodes. These relations are much weaker and more susceptible to change than the ones that form an embedded society.

To make this a little less abstract, we can imagine a self-sustaining community on an island without contact with the rest of the world. People living here are embedded in their society, and probably have a fixed task or role in this society. The local economy is tied to social relations, culture, schooling, etc. Then, on the mainland, it is decided to initiate a ferry service with the island. Suddenly, there is an influx of foreign people and artifacts on the island, and perhaps some of the islanders’ products are valuable elsewhere. The local economy gets disembedded and forms a node in the network of global economy, resulting in disrupted social relations, culture, and schooling as well.

Briggle and Mitcham describe five types of disembedding, the most interesting of which for us (and them) is ‘experiential disembedding.’ This entails the phenomenon that in increasingly complex networks, the experience of the effects of an action at a node becomes more distinct from the actual effects this action has on the network as a whole. The authors refer to this as the ‘experiential gap.’ To stay in the network idiom: “when individuals ‘ping’ the world with their actions, the return signals they receive are often distorted or muted” (Briggle and Mitcham 2009: 11). An example of this effect is described by Garret Hardin in “The Tragedy of the Commons” (Hardin 2009). If a pasture is shared by several shepherds, and these shepherds intend to maximize their income, the rational action for them is to add more sheep, even if this results in overgrazing and eventual exhaustion of the grounds. After all, the short-term benefit of adding another sheep—more wool and meat for this specific shepherd—is obvious, while the long-term harm—a little increased grass consumption per added sheep—much less so. (To make it even worse, it works the other way around as well: a single ‘environmentally conscious’ shepherd will not have much influence on the overgrazing problem, while their

income does decrease significantly if they decide to tend a smaller herd.) While all shepherds closely monitor the apparent effects of the size of their herds, they cannot but increase them. Yet, on the scale of the pasture (or the network), their actions are devastating.

Although disembedding and networking are characteristics of all societies, they occur in an unprecedented intensity in the modernizing development of the western world. Means and ends become separated in what Albert Borgmann calls the 'device paradigm' (Borgmann 1987): people only connect with commodities, while the machinery that produces them remains in the background. Modern production systems are only possible through a disembedded understanding of the world: resources are 'decontextualized' and reduced to their technical functionality, stripped from everything that could remind us of their origin.² The experiential gap is both a cause and an effect of increasingly large networks: the sense of autonomy and insignificance of one's choices makes it easy to take whatever one likes, and this taking enrolls a complex system of people and technology that makes sure you can get it.

It must be noted that Briggie and Mitcham offer a bit of a one-sided story. Technologies do not always have disembedding effects, and modernization does not always result in larger networks and increased experiential gaps. When inhabitants of a small town in the Chilean desert switched from delivery of fresh water by truck to a fog catching system, the network for providing them with fresh water shrunk considerably (Anonymous 1998). A technology like the skateboard can have an embedding effect among its users in a city: skateboarders become part of the whole of the skateboarding subculture and connect to their streets in new ways. Still, the concept is a powerful tool to recognize certain techno-social developments. As we shall notice shortly, it helps to form important insights in the way we consume energy, and this alone should prove its merits.

Electricity

The electrical system fits the description of disembedding and networking extremely well. Electrical power enters my house silently and odorless. The only thing I need to know about electricity, is how to hook up appliances to the network to make them work. I do not need to know that electricity is generated somewhere from primary energy sources, and that these primary sources and the process of generating electricity are sometimes very dirty and destructive to the environment. Since my energy bill is debited automatically, I do not even need to know that getting the electricity to my house costs anything. But if I do notice it is not for

free, I notice it is not very expensive, either. When I am writing this paper late at night, I am not experiencing any fossil fuel being burnt or squeezed out of Canadian tar sands, even though my slightly humming computer, the light in my room, and the refrigerator in the kitchen are quietly fed by this enormous network that provides us with electricity. Compared to medieval monks writing on locally produced parchment by candle light, my writing activity is highly disembedded (as I do not know where the things I am using come from) and networked (as I am having effects in far-away places like Canada or Nigeria, as opposed to the local parchmenter and chandler).

There are ways to (partially) close the experiential gap of electricity consumption, a few of which I will mention here. A 'kill-a-watt,' a little apparatus that measures the energy consumption of the appliance it is connected to, makes one aware of the 'silent and odorless' flow I mentioned earlier. But the numbers visible on the display still do not say anything about the impact of the consumption. It is at most a reminder that there is indeed a network that feeds my fridge. In network terms, the kill-a-watt shows the download rate, but not the downloaded content, nor the nodes where the content comes from. More sophisticated devices like 'smart energy meters' work on the household scale and make users aware of their consumption patterns during the day. They allow people to connect a peak in their consumption with the moment they come home from work, or the consumption during the night with the 'background noise' of appliances on stand-by. Still, they offer the same kind of information as the kill-a-watt. Electricity suppliers might inform their customers about the origin of their electricity: 10 percent wind energy, 60 percent from such-and-such coal-powered generation plant, 10 percent imported from a neighboring country, etc. This way, a part of the network is being revealed, but it remains incomplete. The sheer size and complexity of the network makes it practically impossible to understand all of the effects of electricity consumption.³

Another way of closing the experiential gap is to make the network smaller. One could opt out of the electrical network and use their own off-grid micro generation system, for instance with a small wind turbine or solar panel. Being dependent on the local weather conditions (and the natural day), results in a less convenient, but more embedded experience. The user might have to save energy for a few days in order to run a washing machine, or call it a day because the batteries of the computer run out. Whether this is an acceptable sacrifice is a complex matter I will touch on in the final section of this paper, but, for example, Jesse Tatum (1994) has shown that it is indeed possible to live and function off the elec-

trical grid in western society.⁴ A self-supporting electrical system is surveyable for the user, or at least considerably more so than the worldwide energy network. Actions (turning on a light) return much clearer signals from other nodes in the network (drainage of the battery).

But why do we need to know our impact before we act accordingly? We have been told we should conserve energy whenever we can, so why do we fail to behave properly? Why is it the case that an experiential gap results in poor decisions, even if we do know that somewhere in the network, resources are being depleted and greenhouse gases are being emitted? In the next section, I will use Foucauldian ethics to understand the importance of strong relations with one's surroundings in order to make ethical choices.

Foucauldian Ethics

In "Obstetric Ultrasound and the Technological Mediation of Morality: A Post-phenomenological Analysis" (Verbeek 2008), Peter-Paul Verbeek describes Michel Foucault's work on ethics in the second and third volumes of *Histoire de la sexualité* (Foucault 1984a,b). "For Foucault, ethics is not primarily about the question which imperatives we need to follow, but about the ways in which human beings constitute themselves as 'subjects' of a moral code" (Verbeek 2008: 19). So rather than developing a new moral code, Foucault investigates what the underlying framework is that enables people to become ethical subjects. The key term here is 'subject.' Usually, the word is used as a noun, as more or less the opposite of 'object': something active or autonomous, opposed to a world of passive objects surrounding it. But 'to subject' is also a verb, and the action of subjecting oneself to a moral code is the action in which Foucault locates ethics.

The act of subjection to a moral code forms the basis of every ethical framework. Living according to Christian morality implies subjection to the Christian god, utilitarians have subjected themselves to the rule that the action with the most favorable outcome is the ethically just one, and deontologists have subjected themselves to the categorical imperative. Subjection often happens implicitly, but according to Foucault, it was a rather explicit endeavor for the ancient Greeks. For them, "ethics was not about showing morally right behavior, but about living a good life" (Verbeek 2008: 20), so to become a moral subject was to practice and stylize one's behavior explicitly. This happened through a variety of ascetic and aesthetic practices, where 'ascetism' does not necessarily mean to abstain from all sorts of pleasures, but rather to consciously form a relation with urges and plea-

tures. Whether someone lives a good life, is defined by the relations this person has formed with their surroundings.

It is interesting to note that this is quite different from the idea of the autonomous subject, which is that subjects are to be rational beings, free from influences from the outside. “Freedom here is not the *absence* of factors that steer and shape the subject, but the very *relation* to these factors” (Verbeek 2008: 22). This is where, for Verbeek, technology comes in. Since technologies shape our choices—if only because of the possibilities they create—we cannot be understood as autonomous subjects, so in our technologically mediated society ‘traditional’ ethics is of limited use. Since Foucault allows for external influences, his framework shows insight on how technologies can be understood as ‘factors that steer and shape the subject,’ and how to form a relation to these factors.

In accordance with Aristotle’s four causes, Foucault discerns four aspects of moral self-constitution: the *ethical substance* (*causa materialis*), the *mode of subjection* (*causa formalis*), *self practices* (*causa efficiencie*), and the *teleology* of these practices (*causa finalis*). The ethical substance is where people understand their ‘ethical self’ to be, for instance in their intentions or passions. This ‘material’ takes shape by finding ways to deal with the outside world. The mode of subjection is the form which people use to develop their moral self, for instance a divine law, cosmic order, or rational rule. Self practices are ‘self-forming activities’ in which one takes some distance from what determines them, in order to form more of an explicit relation with it. Teleology, finally, concerns what the goal of the ethical subject is. Does one want to become free, immortal, pure?

How does this work with the electrical system? Our choices do not have much to do with the ethical substance in this case. The mode of subjection could be a rational rule, for instance a utilitarian one: “I should only use so much electricity that the added happiness for me is larger than the diminished happiness of others.” Depending on how broad the group of ‘others’ is defined (other people, future generations, non-human animals, ecosystems), one could possibly come up with some amount of electricity to be used. So far so good, but it is the self practices where the story gets troubling, as the design of the electrical system makes it difficult to explicitly engage with it. Its convenience makes it easily sink into the background, and its complexity makes it hard to see through. To take some distance and form an explicit relation with the electrical system, is therefore a difficult task. Finally, the teleology of the ethical practice remains open here, but is an important issue to understand what we really should do.

The experiential gap thus inhibits people from enrolling in self practices regarding the consumption of electricity. As a result, they are unable to properly 'stylize' their use of electricity according to their moral beliefs, and are led in their decisions by a system that they are unable to take a distance from. Technologies that close or narrow the experiential gap, like the kill-a-watt or a self-powering electrical system, do allow one to take more of an explicit stance towards their use of electricity. But this stance is no guarantee that you will make the 'right' decisions, it is rather a minimal requirement. Neither Foucault nor Briggie and Mitcham offer a conclusive argument that one should indeed switch to energy saving light bulbs. What they do offer is a way to make sure that people are in a position to make informed choices about the matter.

This analysis shows that often claimed drawbacks of environmentally conscious alternatives for polluting technologies, like being cumbersome or less pragmatic, are no mere side-effects that need to be overcome by smarter designs, but are rather essential to their functioning. It is exactly the attention of the user that these technologies demand, that makes them work. There are no shortcuts or easy ways out; to become an ethical subject, one must invest time and effort into forming healthy relations with the proper technologies around them.

This has significant implications for the expectations regarding strategies to reduce electricity consumption. Public service advertisements drawing on a moral duty to 'save the planet' by reducing electricity consumption are unlikely to succeed as long as the complex and opaque electrical system remains in place. I do not claim that ethical behavior is necessary to reduce electricity consumption, or ultimately to overcome difficulties of resource depletion or global climate change. There might be other ways to pursue these goals. Perhaps proper laws or tax incentives can persuade people into using less electricity, or renewable energy generation could turn the whole thing into a non-issue. Yet, if our hope is on moral choices of citizens, the technologies with which they interact need to be taken into consideration.

Regardless of the environmental issues that come with energy consumption, the above analysis brings to the fore how our behavior is strongly influenced by the technological systems surrounding us. If we accept that Foucauldian self practices are essential to develop moral behavior, it can be argued that technologies inhibiting these practices are inhibiting our moral development. Therefore, closing the experiential gap and thus enabling or even encouraging self practices can be understood as a moral goal for designers and users of technologies.

However, this is not as straight forward as it might appear. We use the electrical system exactly because it gets out of the way, so we can focus on the task at hand. A system more tailored towards moral behavior will inevitably be less user friendly, which makes this alternative less appealing when people are looking for a technology that fits their purposes. Only if prospective users recognize the moral issues inherent in modern technological networks, they might accept the reduced usability of systems that narrow or close the experiential gap; but the recognition of these issues is unlikely because of their hidden character. We thus find ourselves in a deadlock when it comes to asking users to switch to a system that allows self practices: they need to understand the moral issues to start using an alternative system, but the issues become apparent only after making the switch.

If this analysis is adequate, it becomes clear that the opaque electrical network impedes the development of the ‘ethical consumption’ of electricity. Making the network smaller or more transparent will improve the abilities of people to develop self practices, which improves their moral competence and could lead to more sustainable practices, but at the cost of reduced convenience. Whether or not that price is justified, the fact that it comes at a cost does reduce the likeliness of a widespread shift in this direction.

An alternative route revolves around making the network less polluting, e.g., by using renewable energy sources or deploying energy saving measures. This would not reduce the convenience of the system, but also would not allow for self practices by the user. This latter point is problematic if self practices are appreciated as an end in themselves, and if the ‘greening’ of the network is expected to come partly from consumers (e.g., when purchasing appliances or choosing their energy supplier), as this again presupposes a certain engagement with the system, which is exactly what is lacking in the conventional system.

Conclusion

Our electrical system invites easy and latent consumption of energy through its clean and silent design, while making it difficult to appreciate all the effects that come with using electricity. This is due to the networked nature of the system: technologies like the electrical system separate means (generating electricity somewhere far away) from ends (refrigerating beverages), resulting in large networks which cannot be overseen by a consumer. There is a discrepancy between the experience of a consumer of electricity, and the effects of this consumption on the rest of the network. This is the experiential gap. Technologies like the kill-

a-watt aim to decrease energy use in closing the experiential gap by increasing visibility; micro generation does this by radically decreasing the network size.

Closing the experiential gap is important because to become an ethical subject and make ethical choices, one needs to develop a relation with one's surroundings. This is what Foucault calls 'self practices': to gain some distance and form an active stance towards your environment. Complex networks with large experiential gaps do not allow relations to be formed with them, so people are unable to behave as ethical subjects when they deal with such networks. However, redesigning these networks to encourage self practices is problematic because this would reduce the convenience of their use. This entails an additional difficulty to the development of morally sound behavior of consumers. If we want people to develop themselves as ethical subjects, we should not just aim for moral education, but also for technologies that allow the forming of relations with them. Failing to do so will lead to a society in which people might be willing, but are not able to reduce their energy consumption.

Notes

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1. A hundred years ago, one could practically pinch a hole in the ground in Texas, and oil would flow out instantly. Efficiencies of 100:1 (energy output:energy input) were not uncommon. To produce crude oil from Canadian tar sands, large amounts of fresh water and natural gas are needed, and efficiencies have dropped to around 9:1 (Shah 2004).

2. The food industry is a good example here. Most meat products available in supermarkets do not resemble the animal that they once were part of at all. A lot of people love those anonymous slabs of meat, while they have problems eating food that 'looks like animals.'

3. To make matters worse, even if one puts a lot of effort into understanding where their electricity comes from, it is but one of the many networks in which they are partially embedded. What are the effects of our food, or the clothing we buy? Our world is so complex that we will never understand our impact completely.

4. Since 1994, solar cells and batteries have come a long way, so one can imagine that living off the grid is more feasible now than when Tatum did his survey.

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