

## **Experiment: The experiment in living**

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‘There is nothing that is quite so reminiscent of Garfinkel’s demonstrational methodology as the “happening”, which, however, usually lacks the unblinking hurtfulness of Garfinkel’s technique, and may also have a larger social purpose.’

Alvin Gouldner, ‘Sociology as a Happening’ (1970)

### **1. Introduction**

Social researchers and theorists have long taken an interest in experiments, as a form of knowledge production and intervention that enjoys particular privileges in societies marked by the invention of the modern sciences (Stengers, 2000). But the ‘living experiment’ presents a special variation on the theme: unlike scientific experiments, this form of experimentation has been explicitly associated with the moral purpose of the improvement of society since its very inception. Thus, the nineteenth century philosopher John Stuart Mill, who is widely credited with inventing the term, ‘experiment in living,’ first used it to make the case for the affirmation of social and cultural diversity, as something that is distinctive of liberal societies. These kinds of societies stand out, he proposed, insofar as they ‘embrace the variability of human life’ and believe that ‘the worth of different modes of life should be proved practically’ (Mill, 2002 (1859)).<sup>[i]</sup>

Today, too, the genre of the ‘experiment in living’ is put to a variety of moral, political, as well as economic and so on, purposes. As such, I would like to argue here, the living experiment presents a notable device of social and cultural research: it provides a format or ‘protocol’ for exploring and testing forms of life, which is today widely applied across social life. And because of this, these experiments also present a useful site for sociological research in a more narrow sense: they can be used to explore collective practices of researching social and cultural change, as engaged in by actors who do not necessarily

identify themselves as ‘social researchers.’ Finally, these experiments also can be taken as an invitation or challenge to social scientists to come to terms with particular social and technological changes that are currently affecting social research.

In recent years, social scientists have proposed that their disciplines may be undergoing a transformation, as the resources and techniques of social research are being re-distributed among a variety of agencies inside and outside the university (Latour, 1998; Savage and Burrow, 2007; Adkins and Lury, 2009; Whatmore, 2009). Thus, social data are today collected by a wide range of agencies, from IT services to product designers and news media organisations, as they are developing new ways of analysing and using them. This situation, it is argued, is opening up for questioning once again the distribution of roles of social research among the different agencies involved. Some have argued that industry is increasingly claiming the edge of social research, thereby challenging the authority of academic social science (Savage and Burrows, 2007). Others, however, have suggested that this situation is not necessarily exceptional: social research has always relied on the active contributions of actors outside the university, and the division of labour among lay and expert actors in the conduct of social research has always been in flux (Callon et al, 2001). From this perspective, the question is rather how we should come to terms with a recent reconfiguration of research cultures: the active participation of social actors in the conduct of research is today increasingly recognized across social life.

In this chapter, I would like to turn to a particular version of the living experiment, namely experiments in sustainable living, to show how such a normative and conceptual problematic can be explored by empirical means. Sustainable living experiments are today conducted by a variety of actors, from journalists to mothers, engineers and policy-makers, as well as artists. As such, they provide an especially useful site for exploring the changing division of labour of research among agencies inside and outside the university. They invite us to focus not necessarily on what are the distinguishing features of social science that set it apart, or allow it to be demarcated, from research conducted elsewhere in society. But rather to explore how the circulation of social research techniques across social life can be rendered productive for social science. After discussing the phenomenon of the sustainable living experiment, and what they might tell us about the division of labour in/of social research in the current context, I will consider two empirical instances in more detail: 1) sustainable living blogs, which report on such experiments on the Web, and 2) an artistic experiment called *Spiral Drawing Sunrise* in which I recently participated in Amsterdam. Neither of these projects was initiated by social researchers, but I think that they both have something to

tell us about the re-distribution of the roles of social research.

## **2. The sustainable living experiment as a device of social research**

Living experiments that are specifically concerned with our relationship with nature or the environment have a long and intricate history. They can be traced back, for instance, to the ‘returns to nature’ undertaken by educated men in the second half of the 19<sup>th</sup> century, in their attempts to live a simpler life, which they documented in diaries and philosophical writings (Thoreau 2000 (1854); Heyting, 1994; Rowbotham, 2008).[ii] But this type of living experiment can also be characterized in terms of its formal features, and this is especially useful for clarifying their significance for social research today. Thus, experiments in sustainable living can be said to undertake the modification of habits and habitats according to a fixed procedure: they are a way of implementing changes in everyday routines and living spaces according to a protocol. These procedures may take various forms, with some dictating ‘one simple change a day,’ while others set a quantitative target, such as reducing energy use or waste by X per cent. To give an example of the latter, this is how the New York-based ‘No Impact Man’ defines his project:

[This] is my experiment with researching, developing and adopting a way of life for me and my little family—one wife, one toddler, one dog—to live in the heart of New York City while causing no net environmental impact. To do this, we will decrease the things we do that hurt the earth—make trash, cause carbon dioxide emissions, for example—and increase the things we do that help the earth—clean up the banks of the Hudson River, give money to charity, rescue sea birds, say.[iii]

No Impact Man, ‘What you need to know’ (22 February, 2007)

This description is taken from the No Impact Man’s blog, and as such it also can be taken to indicate a second feature of sustainable living experiments: they tend to involve the meticulous recording and reporting of everyday practices, the attempt to change them, and the consequences of such attempts, in various media. Arguably, indeed, the living experiment can today be said to constitute a genre of publicity (Marres, 2009): experiments in sustainable living can be encountered ‘on all channels,’ from popular television to the (semi-)professional world of blogs. Many of these projects are undertaken by journalists, though certainly not all: they feature a whole range of professionals and amateurs, from engineers and architects to environmental activists, policy-makers, farmers, students, mothers, and so

on. In this respect, the sustainable living experiment is perhaps best understood as a proliferating media form, the circulation of which involves the replication of sustainable living, or versions thereof, across social life. And this proliferation is especially interesting for social science, I would say, insofar these experiments can be seen to undertake a kind of social research.

Sociologists have long taken an interest in forms of research conducted by non-scientists outside the university, something which Michel Callon and others have called research 'in the wild' (Callon et al, 2001, see also Lynch, 1991). Perhaps most radically, authors working in the sociological tradition of ethnomethodology have argued that the label 'social research' may equally be applied to everyday social practices that are not defined as such by the actors involved: as they put it, everyday actors can be said to deploy social research methods in going about their ordinary activities, insofar as they are engaged in 'render[ing] everyday habits and settings visible-reportable-and accountable for practical purposes' (Filmer, 2003; see also Garfinkel, 1984 (1967); Button, 1991). Now whether or not one would want to agree with the ethnomethodological argument, it strikes me that this description is very much applicable to the aforementioned sustainable living experiments.

These experiments tend to generate detailed descriptions of everyday activities, like cleaning, bathing, and cooking. To give another example, the living experiment undertaken by the Canadian journalist Vanessa Ferquhson, in which she committed to making one 'green' change a day for the duration of one year, resulted in an endless list of everyday routines and things on her blog, from the hair conditioner that she stopped using to not driving her car on weekends. And initiatives like these can quite literally be said to be concerned with rendering everyday living accountable: by describing the objects and habits that make up everyday living, these experiments aspire to bring into view the environmental and social consequences of everyday living.

Furthermore, sustainable living experiments can be seen to deploy a particular research technique invented by ethnomethodologists: they can be said to perform something akin to 'breaching experiments,' the famous exercises performed by Harold Garfinkel and his disciples in the 1960s, which involved the controlled disruption of ordinary scenes (Garfinkel, 1984 (1967); Lynch, 1993). In these experiments, sociologists went about deliberately disrupting intimate interactions in their own personal lives, - for instance, by pretending ignorance of conventional expressions when talking with their husbands and wives. Sustainable living experiments can be said to enact similarly controlled disruptions of everyday ways of doing things: the Welsh blogger Suitably Despairing decided to clean his

house with vinegar, and Vanessa Ferquhson, after smaller interventions like not using hair conditioner, went on to unplug her fridge.[iv] In documenting such interventions these experiments render explicit aspects of social life that are not usually considered noteworthy, such as, the ways our hair smells, or the rooms we live in.[v] And in this respect sustainable living experiments could be said to apply the social methods of the disruption of everyday routines, in order to render visible the objects and settings of everyday life (see on this point also Michael, 2006).

Importantly, this interpretation of sustainable living experiments, as instances of the deployment of social research techniques in and as everyday life, suggests a particular take on the problematic flagged in the introduction: that of the changing relations between forms of social research conducted inside and outside the university. To begin with, the resonance between contemporary living experiments and older arguments from ethnomethodology can serve as a reminder that the distribution of roles among academic and other agencies of social research has been debated in sociology for many decades already. Accordingly, social researchers should not be surprised to find social actors deploying research techniques similar to those used in academic social research, as in sustainable living experiments. However, this does not of course mean that current processes of the redistribution of roles are not problematic. Thus, we can equally note that in sustainable living experiments social research techniques are today put to purposes that social scientists would not recognize as their own. That is, it seems important to acknowledge that sustainable living experiments today serve many different purposes, besides that of social research. Here I would like to argue that, if we are to adequately appreciate living experiments as devices of social research, then we must take into consideration this multiplicity of purpose.

### **3. Living experiments as multifarious instruments**

Sociologists of science and technology have long characterized scientific experiments as a distinctive form of knowledge production and intervention in society, and some of them have argued that one of their distinguishing features is that they may serve a broad range of objectives all at once. Thus, authors working in the subfield of social studies of science and technology have suggested that scientific and technological demonstrations, especially those that are conducted in public, perform a number of different roles simultaneously. On the one hand, public experiments provide a way of inserting new techno-scientific objects into the fabric of society - like the anti-conception pill or a sub-atomic particle like the neutrino. But, on the other hand, they also provide occasions to actively involve social actors in the process

of the societal ‘domestication’ of these new objects (Shaffer & Shapin, 1989; Latour, 1988).[vi]

Experiments, then, have been said to perform at least two functions simultaneously: they perform ‘ontological’ work, by facilitating the integration of new entities into socio-technical practices; but they also do an amount of social or political work, namely that of enlisting the support of social actors for technological or scientific projects. Recent social studies of public experiments have added to this an important political role of public experiments. According to Andrew Barry (2001), experiments have the capacity to accommodate a very broad range of political and/or ideological agendas - as for instance in the case of field trials with genetically modified crops, where experimental demonstrations were used as a vehicle for both pro-science, anti-market, as well as ethical arguments. Which is to say, public experiments also provide important sites for a politics of contestation, and not just for a politics of legitimacy or ‘enrolment.’

Sustainable living experiments can equally be ascribed the capacity to serve a multiplicity of purposes. They are performed by a variety of agencies in a range of different settings, and serve to enact a range of different forms of research, and moral and political agendas. Thus, sustainable living experiments are not just undertaken by more or less media-genic individuals, but also by a range of governmental, scientific and for-profit organisations. In Britain, an institution like the Building Research Establishment is involved in administering purpose-built experimental sustainable homes, in which the behaviour of inhabitants and the building itself are monitored by a variety of means, from sensors embedded in walls to smart electricity meters and attitudinal surveys. A whole range of other organisations are engaged in similar initiatives in the UK, such as the Sustainable Cities research programme at the University College London, which participates in research on a ‘retro-fitted’ council home in the London borough of Camden, and which equally involves the monitoring of the environmental performance of the building and its inhabitants, by means of sensors, smart electricity meters, and questionnaires. And then there are the community initiatives called Carbon Rationing Action Groups, which keep detailed records of individuals’ attempts to use less energy, from wearing more clothes indoors to taking less dirty trains. And so on. As the format of the sustainable living experiment is replicated across social life, it can be seen to take on a variety of forms, serve different objectives, and to carry multiple normative charges.[vii]

In this respect, the sustainable living experiment may usefully be understood as a multifarious instrument. This experimental apparatus, we then say, is being used to serve a

variety of objectives, which may not always be clearly distinguished. And this variety, and variability, of its purposes, may be what makes this experimental form a potent one. This is not the place to specify these different purposes in great detail, but to give an indication of their scope, they range from technological innovation to marketing to awareness raising. Thus, some versions of the sustainable living experiment can be seen to instantiate a particular regime of technological and social change: the monitoring and reporting of behaviours in and of domestic buildings is here a way of making technology critical to the performance of environmental change. But the ‘embedding’ of environmental monitoring devices in domestic settings also offers a way to transform utility services: electricity supply becomes a different kind of service when it includes feed-back about the customer’s environmental behaviour. Thirdly, some sustainable living experiments can be said to generate moral and political sensibilities, and to provide a way of exploring embodied and distributed ways of performing social and environmental change. As Gay Hawkins (2006: p. 7) notes, what is distinctive about living experiments is that they ‘involve the intensities of the body’ and as such may enable more intimate ways of ‘understanding how new habits and sensibilities emerge’ (see also Murphy, 2006; Grosz, 2005). From such a perspective a media format like the ‘green living blog’ can be appreciated as a form of moral inquiry or political experimentation, as it enables personal and embodied attempts to ‘try and live green in a world that is not so keen,’ as the title of one of these blogs puts it.<sup>[viii]</sup>

As the publicity genre of the sustainable living experiment proliferates, it is likely to serve an ever expanding and varying range of purposes. It is then precisely to the degree that the living experiment takes on the aspect of a multiplying genre, that it exhibits the feature of ‘multiplicity of purpose’ and may be understood as a multifarious instrument. The question now is whether and how social research should be included among its various purposes. If sustainable living experiments can indeed be understood as performing social research, this inevitably goes on in the context of multiple deployments of the living experiment. Indeed, to the extent that some of these other purposes are in tension with those of social research, sustainable living experiments must be defined as a critical site of social research. Social research must then be regarded as a contested objective, and the question is whether and how, under such conditions, an experimental form like that of sustainable living can be rendered productive for social research, that is, how it can be made to serve this purpose.

### **3. Living experiments and the re-distribution of research techniques**

To address this question, it is important to note that sustainable living experiments do not just deploy social methods in a general sense. They do not just exemplify the abstract sociological idea that social research is performed in and as everyday life, as social actors render it describable and accountable as they go about their lives. Rather, in rendering everyday living accountable, these experiments deploy particular research *techniques and technologies*, which are also part of the methodological repertoire of the social sciences: they make video clips that document mundane interactions, and they use software to do textual analysis. One could say then, that sustainable living experiments present an especially concrete example of the deployment of social methods in everyday life.

To focus here on the latter example, the use of software tools to analyse textual data has been part of the social science and humanities methods repertoire for a long time, and one instance of this is word frequency analysis - the identification of terms and categories of terms that are most prominent in a given text. Reports on sustainable living experiments on the Web, as on so called green living blogs, also use a version of this technique, as many of these feature tag clouds, visualisations that give an impression of the frequency of terms used by the blogger in question to mark up his or her recent posts (see Figure 1). Sustainable living blogs can also be seen to perform network analysis in more or less explicit ways, as they maintain blogs rolls of other sites and by linking to them produce recommendations which search engines and others rely on to rank these sites. By producing such links, bloggers are thus likely to influence the organisation of sustainable living networks on the Web (Weltevrede, ms; Marres, 2006). And this list of web technologies that resonate with methods deployed in social research could be extended to include the anthropological method of following objects among distributed sites, as some living experiments use tracking and tracing technologies, like RFID tags, to follow discarded household items and other waste, on their journey from the home to the processing plant.



Figure 1: Tag cloud, [www.fakeplasticfish.com](http://www.fakeplasticfish.com), Beth Terry's blog (accessed November 2009)

Techniques like tag clouds and blogrolls have been analysed as specific to digital culture (Rogers, 2009). But when we consider the use of such techniques in the context of sustainable living experiments, they resonate with the deployments of similar techniques in social research: textual analysis, network analysis and the following of objects are central components of their methodological repertoire.<sup>[ix]</sup> Such a focus on the similarities among research techniques used inside and outside the university, opens up a particular perspective on the question of relation between expert and lay practices of social research: it direct attention to the circulation of research technologies, and their adaptation to particular purposes in particular settings, as what partly determines which agencies may take on which research roles. The question of the distribution of roles in social research is then not just a question of *who* has access to or can lay claim to *what* resources and methods of social research. Rather social research has to be appreciated in terms of *how* research techniques are put to use. Arguably it is not the methods of social research themselves that determine what is distinctive about it. For instance, it was the specific ways in which word frequency analysis was put to work in social research, as in co-word analysis (Callon et al, 1983)) that made the decisive difference for social research. And this notion that ‘the quality of research methods reside in their use’, to use a variation on the Wittgensteinian phrase, may also be extended to research in the wild.

Can the adoption of social research techniques by a variety of social actors, in sustainable living experiments, be made to work for rather than against social research? In posing this question, I am asking whether living experiments, as they are performed across social life, can be approached by social researchers, as ‘elaboratories.’ This word was historically used to signal that the experimental work conducted in laboratories ‘went beyond mere observation,’ to tempt ‘nature to reveal its secrets’ (Hankins and Silverman, 1995). But, applying this term loosely, we can also ask whether sustainable living experiments could provide useful elaborations on social research techniques, by deploying them in different ways. In the remainder of this chapter, I will explore this in two empirical studies of sustainable living experiments: 1) a web analysis of sustainable living blogs, and 2) by adopting the role of participant in an artistic experiment in living.

#### **4. The living experiment as rendering device 1: the multiple ontologies of sustainability**

One of the reasons sustainable living experiments can be useful for social research, is that they may help to explicate the ‘ontologies’ of environmental living. As I mentioned above, sociologists have argued that public experiments do ‘ontological work’: they provide answers to the question of what entities the world is made up. Such an understanding of the public experiment, incidentally, suggests that experiments enable a particular re-distribution of research. It namely attributes to the empirical device of the experiment a capacity that is usually attributed to theory: the articulation of the entities making up the world. Such an ‘ontological’ understanding of experiments also has implications for how we understand the role of social research and theory in relation to it. If ontologies are articulated in experimental practices across social life, what then should be the contribution of social theory to the formulation of ontologies (Law and Urry, 2003)? Should social researchers seek to impartially describe the ontologies that are emerging in practice, or should they actively commit to particular experimental ontologies over others – something which Annemarie Mol and John Law have termed ‘ontological politics’?

Web-based analysis of sustainable living experiments provides a way of exploring such questions by empirical means. By analysing sustainable living blogs, we might give a tentative answer to the question: ‘what is sustainable living made up of?’<sup>[x]</sup> Doing Web analysis of living experiments could then be a way of studying ontologies in-the-making. And to the extent that the objects deployed in different experiments vary, the resulting ontologies might be rendered as alternatives.<sup>[xi]</sup> With this broader aim in mind, let me turn to a particular information format, which is widely used on sustainable living blogs, that of

‘green tips,’ with list actions individuals can undertake, under various banners: ‘ethical things that anyone can do’; ‘When Simple Things You Can Do Really Do Make a Difference’, ‘10 ways to be more sustainable with your vegetable garden’, and so on.[xii] Some of the items on these lists are fairly standard and frequently recur (‘Don't trash your old electronic equipment’; ‘use an indoor drying rack’). While others include more idiosyncratic advice (‘Ditch the New Year diet. It's not working.’). But, as a template circulating among Web sites, the format of ‘what you can do’ can also be relied on as a form of generating and organising data for social analysis.

We can thus decide to treat lists of ‘what you can do’ as providing inventories of ‘environmentalized’ everyday objects, and to try to detect variation in the kinds of things composing ‘sustainable living’ in different sites and settings. To structure the analysis, we can divide Web sites in two groupings 1) green living blogs, on which individuals document their or their household's attempts to lead a sustainable life; and 2) a green issue network, consisting of larger organisational Web sites, maintained by environmental organisations from the governmental, non-governmental and corporate sectors (see Figure 2).[xiii] We can then select ‘what you can do’ pages from each of these sites, and extract key terms for each source set, categorizing these terms according to natural and technological kinds (food, technology, chemicals, energy and so on). In order to bring variations into view, we list only terms that are unique to each of the two source sets, and code these terms according to four different modalities, from ‘efficiency measures’ to ‘materials and natural sources’, ‘change of use’ and ‘infrastructural change’ (see Figure 3, and the appendix for a brief description of the method used).

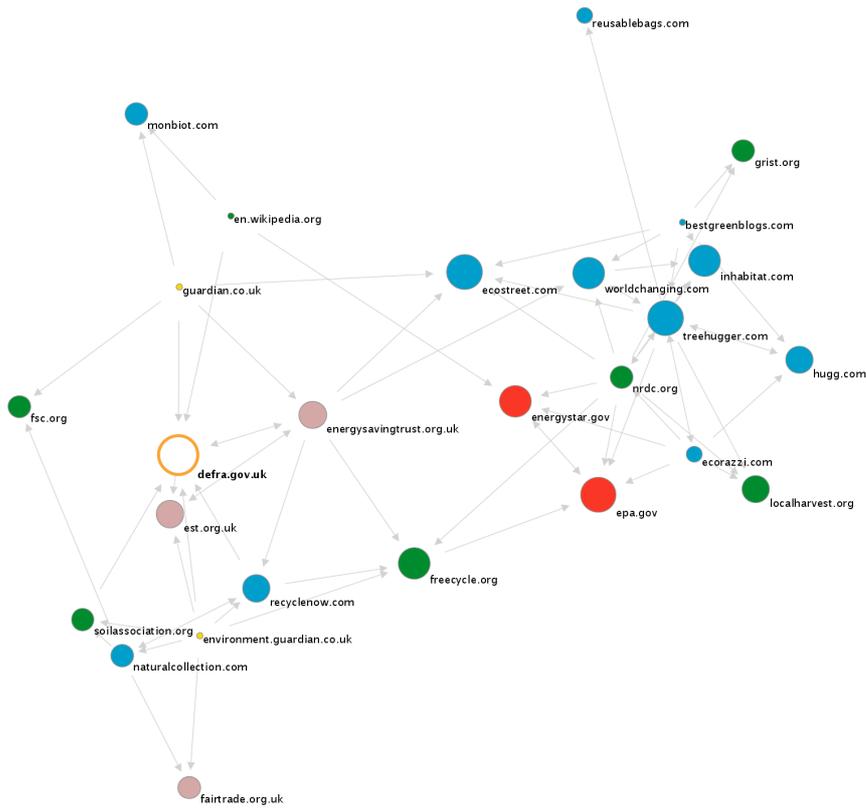


Figure 2 : Green issue network, located with Issue Crawler, March 2008

'What you can do': terms per category

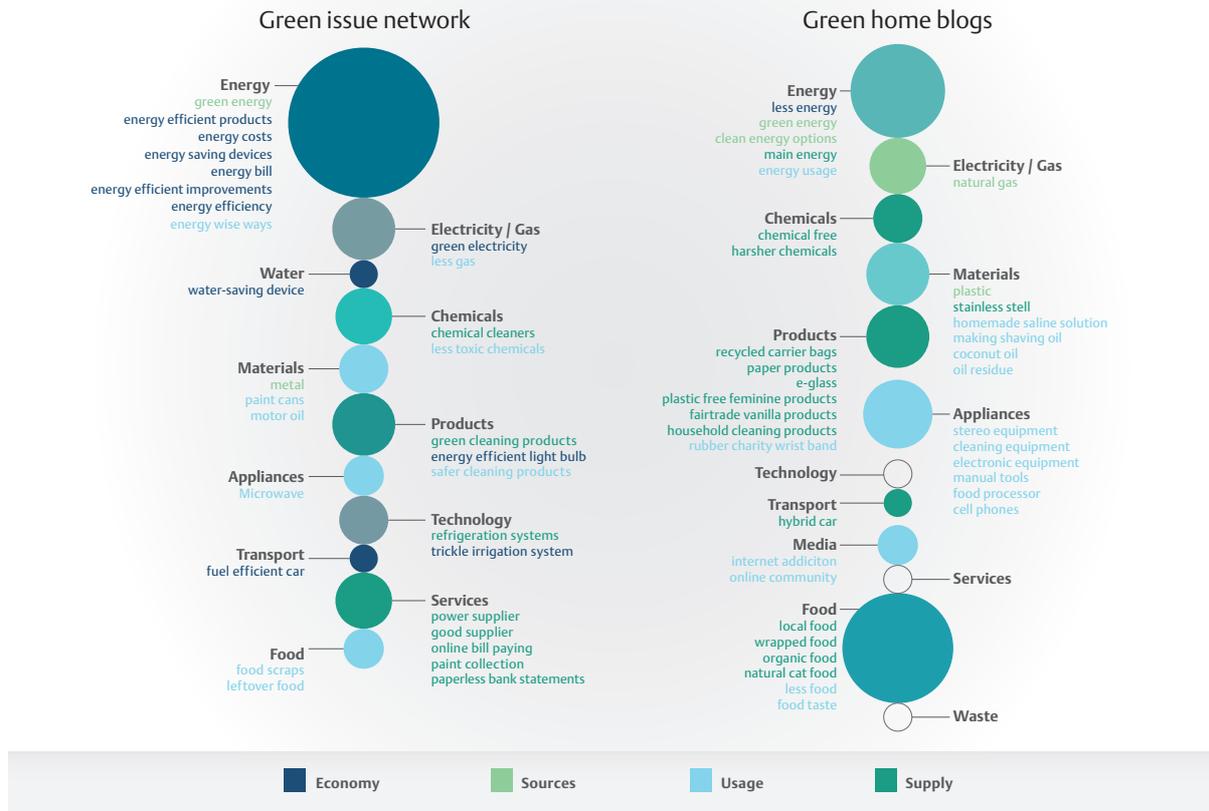


Figure 3 'What you can do: green blogs versus the green issue network,' figure designed by Ludic Design

The resulting diagram shows variations of various sorts in the objects composing sustainable living in the two source sets. Thus, energy and services are big items in the green issue network, whereas food and things - products, appliances, materials - are more prominent on green living blogs. Furthermore, the issue network contains many more objects and activities qualified in terms of efficiency measures (saving, efficient, cost) than green living blogs, and this qualification is especially prominent in relation to energy. Green living blogs, by contrast, include many more home-made things, from food to cleaning materials, and they focus on object-of-use rather than on infrastructural provisions. Such variation can of course be interpreted in various ways, but perhaps we can say that differing ontologies for sustainable living are being put forward by these Web sites: is it a matter of integrating energy into the service economy, or, rather, of re-inventing 'domestic' modes of production such as craft? Web analysis here provides a way of artificially fixing such ontologies, presenting a simple snap shot of what in reality is a dynamic informational space, and rendering comparable what circulates in the absence of clear boundaries.



Figure 4 'Spiral drawing sunrise: the finished work'; Esther Polak (2009), photo: Esther Polak

#### **4. The living experiment as rendering device 2: the happening of the setting**

The rendering of the variable objects composing everyday living is also the accomplishment of a rather different kind of living experiment, an artistic project called Spiral Drawing Sunrise. This experiment, in which I participated in the spring of 2009, was organised by the Amsterdam-based locative media artist, Esther Polak, and had the aim of recording a sunrise, in a public square in Amsterdam, with the aid of a sun-powered robot car, which might be called a 'phototropic' device or mobile hour glass (see Figure 4). As Esther explains in the video recording of that morning on the Frederiksplein in Amsterdam:

The robot car runs on solar energy, it collects a given amount of light each time. When it has gathered enough energy, it will take a step. So you can see, this morning, that was at half past seven, it took much effort to make a lot of small steps, but slowly but surely it has been making bigger and bigger steps and now it's

riding and here for instance you have the shade of a tree, so it's going a bit slower, and later on over there it will ride back into the sunlight.

Esther Polak, *Spiral Drawing Sunrise* (6 April, 2009)[xiv]

The cart was tied to a pole and continuously deposited sand (Esther kept refilling the bottle); which resulted in the spiral pattern, of which we later made prints using spray paint.

Like the living experiments discussed above, this experiment can be said to serve multiple purposes. It was an artistic experiment, which revolved around the idea of producing a record of a site-specific sunrise, and aimed to raise questions about the role of art in inserting technology in public spaces, and more specifically, the question of what happens to its relation with audiences and commissioners of art works in such a context. In this respect, this experiment had little to do with sustainable living in the usual sense of the term, but at the same time it resonated with both sustainable living experiments as well as with experimental social research. Thus, one could say *Spiral Drawing Sunrise* produced effects very similar to those of a sustainable living experiment: this experiment too, involved the modification of everyday habits and habitats, as it introduced an odd technological set-up in a square that people pass through every day (as I did myself for many years).

Secondly, even if the experiment's description that Esther Polak made available on the project's Web site did not refer to sustainability, the experiment did perform an operation that can be characterized in those terms: it provided a 'distant environment', namely the turning sun, with a tangible presence in the here and now. This fits very well with the technical definition of sustainability, namely to take objects, actors and effects that are distant in time and space into account in the here and now (Meadows et al, 1972). *Spiral Drawing Sunrise*, then, could be read as a dispositif to render describable and thereby accountable people's relation with the sun. However, importantly it wouldn't be quite right, to say that Esther's experiment had the effect of rendering everyday living or its settings, relations, or objects 'accountable.' Or if it did so, it did so in a particular way. *Spiral Drawing Sunrise* rendered the setting as a place of activity. And this is also where it resonates with sociological experiments.

Sociologists have recognized in artistic happenings dynamics similar to those of sociological experiments -- and more particularly, of Garfinkel's breaching experiments. For examples, Alvin Gouldner has noted that there is 'a common impulse' behind the happening and ethnomethodological demonstrations. Describing a famous happening that took place in Amsterdam in the 1970s, involving the release of chickens into a street, he notes that this

event involved the disruption of social life in a way similar to a sociological breaching experiment. In both cases, he noted, the aim is ‘to bring routines to a halt, to make the world and time stop.’ Now it is on precisely this point that Spiral Drawing Sunrise presents an interesting variation or elaboration on the sociological experiment: if this experiment can indeed be said to have disrupted everyday routines and settings in Amsterdam, it did so in a very different way from that described by Gouldner. Rather than bringing routines to a halt, and stopping time, Spiral Drawing Sunrise highlighted movements, of time and of the various entities passing through the square. As I put it on the project’s blog:

So, during this morning we do quite a bit of waiting, of sitting around, and as we sit watching, in a way we adopt the standpoint of this corner of the Frederiksplein. Somehow, the movement of this robot car going its snail-like way amplifies the movements in the square, the changes it is going through: trams passing, traffic picking up, and so on. It turns them into trajectories, and the square a space that unfolds through them. And perhaps these trajectories also ‘accentuate’ the solar path, becoming so many versions of it. Several of these entities go slow, but none as slow as the sun.

Noortje Marres, Spiral Drawing Sunrise Log (May 23, 2009)[[xv](#)]

In alluding to this possibility, Esther’s intervention then displayed a rather different experimental dynamic from that described by Gouldner. This experiment did not so much disrupt usual ways of doing in the sense of making them practically impossible, of arresting their movement. Rather, inserting this robot cart into the setting of the public square had the effect of rendering this routine environment as a space of activity. And perhaps we could say that Spiral Drawing Sunrise managed to render the setting as a happening because it performed geometry in/as movement. As Michael Lynch has reminded us, geo-metry can be translated as ‘space tracing’ (Lynch, 1993), and Spiral Drawing Sunrise can be seen perform geometry in this radically circumstantial - and/or perhaps indeed ‘environmental’ – way. The geometric shape of the spiral here came about through the movement of the sun shedding its light on the car’s solar panels, and the car depositing sand.[[xvi](#)] And we might then say that, in its spiralling movement, the robot car made room for the sun to exert its capacity to choreograph entities in time and space.

Spiral Drawing Sunrise could then be understood as exploring a different technique or perhaps indeed method, of enacting sustainability: by rendering things remote in time and

space in and as movement, it made them relevant to the here and now, and as such, 'the environment' here lost its more familiar passivity, its status as an 'external' blankness (Whatmore, 1999). Perhaps indeed the topic of sustainability itself was here turned into something rather more happening: not a static way of taking distant environments into account as part of everyday routines, but a technique for rendering 'the environment' as consisting of dynamic entities with trajectories particular to them.

## **Conclusion**

To the extent, then, that versions of the sustainable living experiments multiply across social life, they can be seen to enable various operations of social research. Here I have argued that what is distinctive about the living experiment as a device of social research, in this respect, is that, as it circulates, it can be said to organise actors, practices, data for social research in particular ways. Insofar as it presents a format or template for action and information that proliferates across practices, the living experiment enables the rendering accountable of everyday objects, settings and action – something that ethnomethodologists and others have identified as an important accomplishment of social research. And this has implications for how we may put this device to our own social research purposes. On the one hand, in taking up sustainable living experiments as a research device, to study for instance the 'environmentalization' of everyday life, a researcher aligns him- or herself with a arrangement in which the roles of social research are performed by a variety of agencies. That is, it would be wrong to assume that the sociologist is the sole agent of social research in this situation: the work of the collection, organisation and analysis of social data going on here can only be described as distributed labour, performed by a whole range of actors and devices.

However, it would not be quite right either to say that social actors, the journalists, mothers, engineers and policy-makers conducting these experiments, are here doing the work of social research for us: these experiments serve too many other purposes for that to be an adequate description. Indeed, insofar as living experiments are put to a multiplicity of purposes today, social research may have a critical role to play in their analysis. By adding its techniques and modes of research and analysis to those already deployed, social researchers may render or foreground different aspects of it. Thus, we can describe the multiple ontologies articulated in practices of 'living environmentally' and the alternative ways of organising 'natural political economies' these open up. But we can also show how certain concepts, such as that of accountability, may be transformed in experimental practices across

social life: as Spiral Drawing Sunrise made clear, everyday enactments of ‘the environment’ do not necessarily present it as a static fact to be taken into account, but may render it as a happening. In taking up living experiments as a research device, social research may then produce accounts diverging from those in circulation; but it does so not by opposing but by aligning itself with researching arrangements that are configuring in/as social practice.

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### **Appendix: ‘What you can do’, methods used.**

1. Manually extract pages on ‘what you can do’ from the sites in the issue network and from green living blogs.
2. Extract terms from these pages with the aid of the textual extraction and analysis application Open Calais (using only industry terms).
3. Manually categorize terms, and count mentionings per category.
4. Use a ‘Dorling Visualizer’ tool to visualize the relative sizes of categories.
5. Use the ‘Analyzer’ tool to determine unique terms per category per source set.
6. Manually mark up these unique terms using 4 values : economy, supply, usage, service.
7. Display unique terms per category per source set.

For tools see <http://www.digitalmethods.nl>

### **Bibliography**

Adkins, L. and Lury C. (2009) ‘Introduction,’ in L. Adkins and C. Lury (eds.) Special Issue on ‘What is the empirical?’, *European Journal of Social Theory*, 12: 5-20.

Aranda, B. and Lasch C. (2006) *Tooling, Pamphlet Architecture 27*. New York: Princeton Architectural Press.

Barry, A. (2001) *Political Machines: Governing a Technological Society*, London: Athlone Press.

Button, G. (1991) Introduction, in G Button (ed.) *Ethnomethodology and the Human Sciences: A Foundational Reconstruction*, Cambridge: Cambridge University Press: 1-9.

Callon, M. and Courtial J.-P., Turner W. and Bauin S. (1983) 'From translations to problematic networks: An introduction to co-word analysis,' *Social Science Information*, 22: 191-235.

Callon, M., Lascoumes P. & Y. Barthe (2001) *Agir dans un monde incertain. Essai sur la démocratie technique*, Paris: Seuil.

Carter, S. (2007) *Rise and Shine: Sunlight, Technology and Health*, Oxford: Berg Publishers.

Duhem, P. (1906 (1982)) 'Physical Theory and Experiment,' in *The Aim and Structure of Physical Theory*. Princeton, , NJ: Princeton University Press: 180-218.

Filmer, P. (2003) 'On Harold Garfinkel's Ethnomethodology,' in: M. Lynch and W. Sharrock (eds.) *Harold Garfinkel, Sage Masters in Modern Social Thought*, London: Sage.

Garfinkel, H. (1967; 2<sup>nd</sup> edn 1984) *Studies in ethnomethodology*, Oxford and Cambridge: Polity Press.

Gouldner, A. W. (1970) 'Ethnomethodology: Sociology as Happening,' in *The Coming Crises of Western Sociology*, London & New York: Basic Books.

Grosz, E. (2005) *Time Travels: Feminism, Nature, Power*, Durham, NC: Duke University Press.

Hankins, Th. and Silverman R. (1995), *Instruments and the Imagination*, Princeton, NJ: Princeton University Press.

Hawkins, G. (2006) *The Ethics of Waste: How We Relate to Rubbish*, Lanham, MD: Rowman & Littlefield Publishers.

Heyting, L. (1994) *De Wereld in een Dorp: Schilders, schrijvers en wereldverbeteraars in Laren en Blaricum 1880-1920*, Amsterdam: Meulenhoff.

Kelty, Ch. (2008) *Two Bits: The Cultural Significance of Software*, Durham NC: Duke University Press

Kirk, A. (2007) *Counterculture Green: The Whole Earth Catalog and American Environmentalism*, Lawrence: Kansas University Press.

Lash, S. and Lury, C. (2007) *Global Culture Industry: The Mediation of Things*, Oxford and Cambridge: Polity Press.

Latour, B.(1988) *The Pasteurization of France*; trans. Alan Sheridan and John Law, Cambridge, MA: Harvard University Press.

Latour, B. 'Thought Experiments in Social Science: from the Social Contract to Virtual Society,' 1st Virtual Society? Annual Public Lecture, Brunel University, 1 April 1998.

Law, J. (1993) *Organizing Modernity: Social Order and Social Theory*, London: Blackwell.

Law, J. and Urry, J. (2003) 'Enacting the Social', published by the Department of Sociology and the Centre for Science Studies, Lancaster University, at <http://www.comp.lancs.ac.uk/sociology/papers/Law-Urry-Enacting-the-Social.pdf>

Lezaun, J. (2011) 'Offshore democracy: Socio-technical designs and the voyages of M/S Balao,' *Economy and Society*, 40.

Lynch, M. (1991) 'Method: measurement – ordinary and scientific measurement as ethnomethodological phenomena,' in G. Button (ed.), *Ethnomethodology and the Human Sciences*, Cambridge: Cambridge University Press: 77- 108.

Lynch, M. (1993) *Scientific Practice and Ordinary Action: Ethnomethodology and Social Studies of Science*, New York: Cambridge University Press.

Marres, N. (2006) 'Net-Work Is Format Work: Issue Networks and the Sites of Civil Society Politics,' in J. Dean, J. Asherson and G. Lovink (eds.) *Reformatting Politics: Networked Communications and Global Civil Society*, London: Routledge: 3-18.

Marres, N. (2009) 'Testing Powers of Engagement: Green living experiments, the ontological turn and the undoability of involvement,' in L. Adkins and C. Lury 'What is the empirical?', Special Issue, *European Journal of Social Theory*, 12: 117-133.

Meadows, D., Meadows D., Randers J., and Behrens W. (1972) *Limits to Growth, A Report for the Club of Rome's Project on the Predicament of Mankind*, New York: Universe Books.

Michael, M. (2006) *Techno-Science and Everyday Life: The complex simplicities of the Mundane*, Milton Keynes: Open University Press.

Mill, J. S. (2002 (1859)) 'On Individuality, As One Of The Elements Of Wellbeing,' in *On Liberty, The Basic Writings of John Stuart Mill*, New York: The Modern Library: 57 – 76.

Mol, A. (2002) *The Body Multiple: ontology in medical practice*. Durham, NC: Duke University Press.

Muniesa, F. and Callon, M. (2007) 'Economic experiments and the construction of markets,' in D. MacKenzie, F. Muniesa and L. Siu (Eds.), *Do Economists Make Markets? On the Performativity of Economics*. Princeton, NJ: Princeton University Press: 163-189.

Murphy, M. (2006) *Building Sickness Syndrome and the Problem of Uncertainty: Environmental Politics, Technoscience and Women's Workers*, Durham, NC: Duke University Press.

Osborne, Th. and Rose, N. (1999) 'Do the social sciences create phenomena: the case of public opinion research,' *British Journal of Sociology*, 50: 367-396.

Rogers, R. (2009) *The End of the Virtual: Digital Methods*, Amsterdam: Amsterdam University Press.

Rowbotham, S. (2008) *Edward Carpenter: A life of liberty and love*, London and New York: Verso Books.

Ruppert, E. 'Identification Technologies and the Interpassive Citizen,' paper presented during CRESC workshop Science and Citizens, Open University, Milton Keynes, 1-2 April 2009.

Savage, M. and Burrows R. (2007) 'The Coming Crisis of Empirical Sociology,' *Sociology*, 41: 885-899

Shapin, S, and Schaffer S. (1989) *Leviathan and the Air-Pump: Hobbes, Boyle, and the Experimental Life*, Princeton, NJ: Princeton University Press.

Strathern, M. (2004), *Partial Connections* (Updated version). Walnut Creek: AltaMira.

Thoreau, H. (2000 (1854)) 'Walden', in *Walden and Other Writings*, New York: Modern Library Classics.

Weltevrede, E. 'Studying society, not Google. Repurposing Google for social and cultural research, Dept. of Media Studies, University of Amsterdam, ms.

Whatmore, S. (1999) *Hybrid Geographies*, London: Sage.

Whatmore, S. (2009) 'Mapping knowledge controversies: science, democracy and the redistribution of expertise,' *Progress in Human Geography* 33: 1–12.

[i] 'As it is useful that while mankind is imperfect there should be different opinions, so is it that there should be different experiments of living; that free scope should be given to varieties of character, short of injury to others; and that the worth of different modes of life

should be proved practically, when any one thinks fit to try them.’ (Mill 2002 (1859): 58)

[ii] The term equally resonates with more large-scale attempts to built environmental communities, such as the UK Garden Cities of the early 20<sup>th</sup> century where people were to reconnect with nature in buildings open to the skies and built from local materials (Carter, 2007). Perhaps most familiarly, sustainable living was a pivotal genre of American-style post-1960 counter-culture green (Kirk, 2007).

[iii] No Impact Man, ‘What you need to know,’ February 22, 2007

[http://noimpactman.typepad.com/blog/2007/02/what\\_you\\_need\\_t.html](http://noimpactman.typepad.com/blog/2007/02/what_you_need_t.html) (accessed April 30, 2010).

[iv] Green-as-a-Thistle, ‘Hopelessly fridgeless (Day 78),’ May 17th, 2007

<http://greenasathistle.com/2007/05/17/hopelessly-fridgeless-day-78/> (accessed April 30, 2010). Suitably Despairing, ‘37 Consequences of Going Green,’ Monday, November 26, 2007, <http://suitablydespairing.blogspot.com/2007/11/37-consequences-of-going-green.html> (accessed April 30, 2010).

[v] There are more similarities. Sustainable living experiments, like breaching experiments, are not so much concerned with the testing of hypotheses, but rather use experiments as aids to ‘the sluggish imagination’ (Lynch, 1993). In this respect, one could argue that sustainable living experiments ‘ethno-methodologize’ ethnomethodology itself. While ethnomethodologists tended to reserve the capacity to ‘breach’ social life for themselves, in sustainable living experiments all sorts of social actors can be said to make this type of intervention.

[vi] These arguments about the multiple purposes served by experiments, notably developed in actor-network theory (ANT), also imply a particular understanding of the experiment as a site for the re-distribution of research. In actor-network theory’s account of the experiment, it figures as a location for the re-distribution of theory formation, namely as a site where ontologies come about. Furthermore, ANT approaches the experiment as a site for building social support for science, which suggests that audiences and social actors play a more active role in the societal embedding of science than conventional theories of knowledge tend to recognize. My account of the experiment as a multifarious instrument draws on these arguments about the redistribution of the roles of research in experimental practice, even if I treat them separately in this chapter.

[vii] This is how the OED defines multifariousness: ‘what inappropriately or confusingly embraces two or more distinct matters.’ One could argue that experiments have long been ascribed this feature in the sociology and philosophy of science. Thus, the philosopher of

science Pierre Duhem (1906) has famously proposed that it is not always possible, in scientific experiments, to distinguish clearly between the empirical content of experimental hypothesis, and their theoretical framework.

[viii] Suitably Despairing, <http://suitablydespairing.blogspot.com/> (accessed April 30, 2010).

[ix] Debates are on-going about the implications of the rise of digital technologies like search engines and blogging for knowledge cultures and the politics of knowledge: who is allowed access to data, who can scrutinize which methods are deployed, who is allowed to modify those methods. However, these debates are mostly not conducted in the vocabulary of social research, but rather in the legal, moral and political languages of intellectual property rights and democracy (Kelty, 2008). The question in this regard is what social research may contribute to such debates. Here I am highlighting that it makes possible an alternative reading of the implications of digitization for research cultures: rather than saying that digitization enables *either* the privatization or the ‘democratization’ of social research – as in the slogan ‘we are all social researchers now’ – I am foregrounding the *re-distribution* of social research capacities among specific actors.

[x] This research was performed as part of the Digital Methods summer workshop in 2009, at the University of Amsterdam.

[xi] An ontology of multiplicity highlights that things are ‘more than one but less than many’, to use Mol’s (2002) phrase. It is often said that such multiple ontologies precisely do *not* display the neat divisions among separate entities which comparative analysis seems to require (Strathern, 2004). It’s one of the reasons why I characterize social research here as a way of *rendering* ontologies enacted in practice – ie to render them comparable involves an ‘arteficial’ intervention on the part of social research.

[xii] The endless but rather minimal variations on the theme of green tips on the Web is part of the reason why it can be called an ‘information format’, or, indeed, an ‘action template’ – and it seems significant the two can be conflated in this instance. One can also think here of the drive to extract information about actors’ everyday activities through the collection and analysis of transactional or registrational data (Rogers, 2009; Savage and Burrows, 2007; Ruppert, 2009), with living experiments offering a publicity genre for actors to capture and publicize such data.

[xiii] This network was located with the aid of Issue Crawler, a web-based tool for network analysis developed by the govcom.org Foundation Amsterdam. We used active, English-language green living blogs as starting points. Issue Crawler crawls hyperlinks going out from these starting points, performs co-link analysis and demarcates a network on this basis.

<http://www.issuecrawler.net>

[xiv] Frederiksplein Video, posted May 22, 2009 by Esther Polak, Spiral Drawing Sunrise, <http://spiraldrawingsunrise.wordpress.com/> (accessed April 30, 2010).

[xv] Noortje Marres, 'How long does a sunrise last', posted May 23, 2009, <http://spiraldrawingsunrise.wordpress.com/2009/05/23/noortje-marres-log-2-2-during/#more-276>. (accessed April 30, 2010).

[xvi] The spiral seems a perfectly suitable form for performing geometry as movement: 'the spiral is not so much a shape, as the evidence of a shape in formation' (Aranda & Lasch, 2009) But in contrast to Aranda and Lash's formal description of the spiral, an ethnomethodologist would emphasise the circumstantiality of method in this case too. It then becomes noteworthy that Esther would help the winding process, by moving the pole slightly, to make sure that the cart's trajectory would pass over the sheets of paper, which we had taped to the ground to record the cart's path. Such circumstantial interventions, we could argue, are here positively constitutive of the performance of method. In this regard, it should also be noted that Spiral Drawing Sunrise runs on an algorithm: one that stipulates the threshold of stored energy at which the robot cart will start to move (until its battery is empty). Spiral Drawing Sunrise then demonstrates the circumstantiality of this 'recipe for action' more specifically: it provides a indication of the range of entities that must come into play, before the algorithm can 'work,' that is, before it can assist in the rendering of a setting as a happening.