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From the Invited Panel “Culture and its Intersections”:

**Cultural Sociological Intersections and Informings: Art, Literature, Philosophy**

Robin Wagner-Pacifici, The New School

I start, as so much of sociology does, with a puzzle. What are events? How do they take shape? Why are they so riveting and repulsive at the same time (drawing our fascinated attention and making us queasy)? Events highlight the age-old existential and sociological issue of the relationship between continuity and change, but they seem to do so in specific ways. Having a puzzle I had to figure out how to investigate it, how to trace the phenomenon.

Everything is or can be data in this endeavor and myriad ways exist to interrogate them. Actor-Network theorist Michel Callon calls the process of locating and following “data” translation or free association; Bruno Latour terms it a relay race; but I think of it more as tracking — following sociological intuitions and electrical charges as events move through one informing after another. Which brings me to a large disciplinary question: how can sociologists best investigate things like events, things that both take shape and move?

One approach is to think about the nature of eventful infusions, the way that events move through many forms on their aspirational ways to coherence or sedimentation. This shares much with a processual approach, but with a difference. Process and structure are both in the picture. This is where art, literature, and philosophy (among other media and modalities of communication and expression) come in — each deals with form and flow in its own ways. Sociologists, especially sociologists of culture, can make their business to know these forms and their capacities — can try to know them from the inside.

**Semiosis Beyond Culture: An Ecological Approach**

Fernando Dominguez Rubio, UC San Diego

For this year’s ASA conference, we were invited to participate in the panel “Culture and its Intersections” with the specific remit of reflecting on the future of the discipline through its intersection with other fields of inquiry. What follows is a version of the paper I presented at the conference, which revolved around the idea that, if cultural sociology is to maintain its relevance today, it needs to move beyond the idea of “culture”. Admittedly, this may sound a little bit outlandish, to say the least. For, what is cultural sociology if it is not the study of culture? My answer to this question is that cultural sociology should be understood, instead, as the study of what we could call, following Charles Peirce (1955: 282–5), “semiosis”, that is, the study of the generation of meaning.

What I want to argue in this brief note is that the study of semiosis — i.e. the study of how meaning is generated — has been unduly constrained by what I would like to call the “cultural view”. By this I mean that view according to which beliefs, values, norms, etc., are linked to one another constituting a more or less coherent and autonomous system, called “culture”, which is said to live in people’s minds and bodies in the form of, among other things, mental schemata, linguistic systems, or bodily dispositions. Following this view, the mission of cultural sociology has been understood to be that of providing a causal explanation accounting for how “culture”, thus understood, shapes how we act, how we think, and how we communicate.

The problem with this cultural view, I want to argue, is that it provides us with a very
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as well as the outside, that is, can know how those who study such things as art, literature, and philosophy have developed their own analytic approaches.

Here, I want to highlight two things I learned about events by approaching them through art, literature, and philosophy.

I call the first revelation “The Pause.”

I began to recognize the importance of the pause for events when, in writing about the French Revolution, I contemplated Jacques-Louis David’s painting, *The Intervention of the Sabine Women*.

The painting highlights an encounter occurring several years after the Romans had abduced the women of the neighboring Sabines (alleged to have taken place during Rome’s early history in the 8th century B.C.E.), when the Sabines are about to plunge into battle to reclaim their women. This painting features a woman at its literal and narrative center. She is Hersilia, the daughter of Titus Tatius, leader of the Sabines, and now wife of the founder and leader of Rome, Romulus. Hersilia positions herself (and her several children by Romulus) between the warring forces. Her arms are raised and outstretched toward the two leaders who are about to raise their swords against each other. Multiple women join Hersilia in the painting’s center, their heads up, their gazes seeking the eyes of the imminently attacking battle antagonists. In the midst of the chaos of soldiers, swords, lances, horses, women and babies, Hersilia stops the violent encounter. And she does so through a revelation that simultaneously indexes and performs a transformation. The revelation is that the existence of the offspring remakes the identities of the enemies – they are now all members of one family. Genealogical recognition clarifies and reroutes this event – it is the event. Hersilia’s contrastive indexing of the past, (the ‘then’ of enmity) and the

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restricted understanding of semiosis, one in which action, language, and cognition are taken to be the main—and very often the only—relevant loci to understand the generation and negotiation of meaning. Thus, according to the proponents of this cultural view, if we are to understand how meaning is generated and negotiated, our attention should be placed on things such as “symbolic patterns” (Douglas 1966:3), “cognitive schemata” (DiMaggio 1997; Patterson 2014), “toolkits” and “strategies of action” (Swidler 1986), “performances” and “rituals” (Alexander et al., 2006), “motivations and mechanisms” (Reed 2011; Vaisey 2009), “symbolic boundaries” (Lamont and Fournier, 1992), or on how people “interact with one another” (Khan 2015)

What I want to claim is that, although this cultural view has played an extremely important role in legitimating the study of meaning as a proper field of sociological enquiry, and although it has proven to be useful to analyze certain registers of semiosis (especially the discursive and the interactional), it is ultimately unsatisfactory since it fails to recognize several other important registers of semiosis. And as I hope to show in what follows, many of these unexplored registers of semiosis are crucial to understand how meaning is produced and maintained in contemporary societies.

So to put it in a nutshell, the argument that I want to make is that we need to study semiosis beyond the straightjacket of “culture”. More specifically, I want to argue that we need to widen our exploration of semiosis by moving towards an “ecological” view which does not take cognition, action, or language to be the only relevant loci in the study of semiosis.

At the ASA meeting, I exemplified this ecological approach exploring three underexplored registers of semiosis: things, built environments, and technological infrastructures. I will explore briefly the first two, and will dwell in a little bit more detail on the third one, since I think these technologies and infrastructures have become extremely important to understanding how meaning is being generated today, but have been so far sorely neglected by American cultural sociologists.

THINGS AND THE CORROSION OF MEANING

My argument here is simple: things are important to understand the temporality and fragility of the semiotic systems we analyze. To illustrate

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this, let me focus on a phenomenon that, for all its insidious ubiquity, has hardly been discussed by cultural sociologists (for some exceptions, see Benzecri, 2015; Domínguez Rubio, 2014; McDonnell, 2010; Zubrzycki, 2013). And this is the fact that the things through which we build meaning into the world are always falling apart, wearing down, and malfunctioning and, as a result, they have to be constantly mended, repaired, retrofitted or repurposed. Examples abound.

Think, for example, about how those seemingly timeless monuments through which collective narratives are built slowly crumble away; or how those artworks and cultural products through which we weave our symbolic universes wane and perish, sometimes without leaving a single trace behind them; or, more simply, think about the wear and tear of all the mundane physical paraphernalia through which we build the symbolic boundaries that make possible our cultural identities on a daily basis. What these examples reveal is something that is as evident as it is easily dismissed, and that is that “culture” corrodes.

More specifically, they show that processes like corrosion or physical degradation cannot be simply seen as “natural” processes taking place somewhere outside “culture,” but must be seen instead as some of the very processes through which semiosis takes place. This relentless process of physical change is, among other things, partly responsible for the fact that meaning is never given once and for all, but is always precariously achieved and has to be continually maintained over time — something which, as it turns out, requires a massive and ongoing work of maintenance and repair.

Interestingly, this kind of cultural work of repair and maintenance has remained largely ignored by cultural sociologists. Indeed, while we have paid plenty of attention to how we produce cultural objects (e.g. “cultural production paradigm”) or how we interpret and consume them (e.g. “reception studies”), we have not paid much attention at all to the work devoted to maintaining and repairing them. Something that, when you come to think about it, is actually quite strange, since a great deal of our daily toil — and budgets! — consists, precisely, in trying to keep things legible as effective and meaningful cultural objects. This is why we are constantly maintaining, mending and repairing stuff, and in so doing, why we are constantly engaged in the process of tweaking, changing, or stabilizing the physical fabric of meaning.

So what I want to argue is that there cannot be a full sociological understanding of semiosis without paying attention to the ongoing and never-ending process of maintenance and repair that make it possible to keep our symbolic systems up and running. What this means is that, if we are to have a full account of semiosis, we cannot simply focus on production and consumption practices, but we also need to pay attention to the largely invisible and ungrateful cultural work produced by other cultural actors who, despite their importance, do not tend to feature much into our accounts. Think, for example, about gardeners, cleaners, plumbers, technicians, mechanics, or conservators, and how they are constantly performing those largely invisible adjustments on the backstage of our lives through which different semiotic systems and boundaries are constantly negotiated, on a daily basis. As we all know, were it not for this ongoing cultural work of maintenance and repair of these actors, the meaningful objects that furnish our lives, as well the systems of meanings and value that are generated through them, would simply collapse in front of our eyes.

The second semiotic register I would like to explore is what I call “the built environments of meaning”. Here, my aim is to draw attention to the fact that, exceptions aside (e.g. Chandra Mukerji, Harvey Molotch, Thomas Gieryn, or Virág Molnár), the analyses of cultural
sociologists have tended to be largely “aspatial”. For the most part, the built environment has played a very modest support role in the accounts of cultural sociologists, either playing the rather dull role of the “external physical background” providing “inputs” to be processed by the “internal” cultural software installed in our bodies and minds, meanings produced elsewhere, but are, in fact, one of the sites in which meanings are actually generated and negotiated. Hence, I argued the need to see semiosis as a three-dimensional process, if we are to understand how those seemingly banal elements that make up the environments in which we operate — like walls, stairs, bridges, windows — are now capable of accumulating amounts of data that traditional cultural repositories, like the library or the museum, could never have dreamt of. Just as an example, hosting the server capacity of a company like Facebook would require more than 30,000 Libraries of Congress. Now, what is interesting about these digital infrastructures is that they are much more than simple silos of cultural content. They are, first and foremost, powerful semiotic machines with the capacity to reshape the internal grammar of different cultural practices and categories.

Let’s take, for example, the case of taste — an all-time favorite object of study for cultural sociologists. Following the traditional cultural view, the idea has been that, if we are to explain taste, we have to look at things such as the categories and hierarchies produced by relevant social groups and actors, their practices of consumption, as well as their economic and cultural capitals. Needless to say, all of these variables should be included in any sensible attempt to account for contemporary processes of taste-formation. And yet, albeit necessary, they are no longer sufficient to provide a full understanding of how taste works today. Indeed, any...

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account of the contemporary process of taste-formation is bound to be incomplete if it does not include the kind of cultural work performed by the algorithms processing, categorizing, clustering, and hierarchizing the vast oceans of data stored in data centers like the ones pictured above.

The importance of these algorithms for taste-formation is manifold. For one, these algorithms have made possible a new register of semiosis that operates beyond the traditional scale of human action. For example, the work of categorization generated by a service like Netflix operates at a speed of more than 10 million transactions per second, crawling over the data and metadata generated by more than 65 million users distributed around 40 countries. In addition to this temporal and spatial dislocation of semiosis, these algorithms require a very different set of logics and infrastructures to transform data into meaning.

Interestingly, these algorithms do not simply reproduce existing categories and relationships, but are capable of producing new ones, thanks to their capacity to learn from the data environments in which they operate. Good examples are the kinds of personalized categories produced by sites like Netflix, or the categories emerging from the “matching” and “playlist shuffle” algorithms operating in music sites like Pandora, Last.Fm or Spotify, which are resulting in new practices of consumption and taste-formation.

So, as we see, these algorithms are currently performing an important kind of cultural work by making possible new processes of categorization and hierarchization that are resulting in new regimes of worth. Yet, although important and interesting, the capacity of these digital technologies to participate in the cultural work of hierarchization and classification is perhaps not the most important one. What is arguably much more important is that these digital technologies are also becoming increasingly integrated in the process of abduction itself — the process which has long been considered by philosophers and social scientists as the most fundamental operation in the process of semiosis.

At its simplest, abduction can be defined as what we do when try to make sense of what other people do. A more elaborate definition could be that abduction is the operation whereby we render observed behaviors as “meaningful actions” by imputing intentions, reasons, or motivations to those behaviors. Although this may sound a bit cryptic, there is actually nothing strange way and we start wondering why she did it by imputing plausible reasons for that behavior: “Was it because she is mad at me? Perhaps because of something that I said? Is she trying to tell me something? Or was it just that she had something in the eye?” It is through this abductive work that we weave the endless network of interpretations (and misinterpretations!) that constitute the rather imperfect choreography of our daily lives.

Now, what is interesting about our current predicament is that we are no longer the only ones doing this kind of abductive work. Algorithms are now also active — and increasingly powerful — participants in the business of abduction. Thanks to the increasing ubiquity of digital technologies in our lives, these algorithms have the capacity to register our behaviors and create algorithmically-generated inferences and interpretations that try to make sense of our actions and to anticipate our future course of action. Although this may sound esoteric, we are by now extremely familiar with the products of this abductive work in the form of, among other
things, endless “personalized” suggestions about what we may want to watch (e.g. Netflix), buy (e.g. Amazon), listen to (Spotify), or where we may want to work (LinkedIn), whom we may want to date (Tinder) or befriend (Facebook), or how much we should exercise and eat (Fitbit). These algorithms operate today as powerful cultural engines populating our worlds with interpretations (and misinterpretations) about ourselves. Interestingly, some companies, like Affectiva or BeyondVerbal are taking this abductive work a step further by moving it beyond the conscious level, and locating it at the unconscious level of facial gestures or voice intonation through what they call “emotions analytics”.

All this leads to an interesting question for cultural sociologists, since it seems that the old traditional Geertzian idea according to which “man [sic] is an animal suspended in webs of significance he himself has spun” (1973: 5) is perhaps not the best framework to make sense of how meaning is produced and how we organize our actions in our daily lives. The reason for this is that we now operate in environments in which we are not merely confronted with the interpretations and expectation made by our fellow citizens, but we are also confronted with algorithmically-generated interpretations and expectations about our future behaviors, preferences, and choices — interpretations that are now part and parcel of our decision-making processes. Thus, it seems reasonable to say that at least some of our choices and behaviors cannot be simply understood as the results of underlying “cultural schemas,” “individual motivations,” “personal beliefs,” “habitus,” or the “interaction between people”, since they are the effects of more-or-less-fortuitous encounters with algorithmically generated options. I don’t know about you, but my life has certainly become filled with a lot of “algorithmic serendipity”!

One of the places in which the effects of this new semiotic machinery are becoming more palpable is in the context of urban environments. Over the last few years, cities across the world have begun a massive process to harness the abductive capacity of these digital infrastructures. One of the best examples of this process is precisely the city where we had our last ASA meeting, Chicago, which is spearheading the project of incorporating the abductive capacity of these digital technologies into some of the core services of the city. The city has begun building a permanent infrastructure designed to collect data through environmental sensors and cellphone signals. One of the pilot projects, called

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**Fig. 5 Abduction in the algorithmic age**
the “Array of things” is already collecting 7 million rows of data a day. The project, which is set to be the first open-source, predictive analytics, urban platform, is designed to aggregate and analyze data in an attempt to help make “faster decisions and prevent problems before they develop” in areas such as traffic management, pest control, child obesity, and — perhaps more worryingly — public safety and policing. As part of the latter, the Chicago police department has already been using a proprietary predictive policing algorithm to classify and rank a “heat list” of the 420 people most likely to be involved in violent crime in the future.

At this point, you may be wondering — and rightly so — why cultural sociologists should care about all these developments. My response would be that cultural sociologists should deeply care about all of this for at least three reasons.

The first one is that these digital technologies are giving way to a new ecology of semiosis by creating new ways for linking behaviors, categories, meaning, and persons, as well as different logics of abduction, classification, and categorization. Moreover, these digital infrastructures are radically transforming the built environments and objects through which we think, act, and communicate. These are no longer merely passive objects and environments exerting some sort of blind force upon us: We now operate amidst objects and environments capable of registering and categorizing our actions and making sense of them — something that is only likely to increase as this new semiotic machinery becomes increasingly integrated into different aspects of our lives through, among other things, the gradual implementation of the Internet of Things.

The second reason why paying attention to these digital infrastructures is important is because they are giving way to new forms of cultural work. This semiotic infrastructure is making possible a new way of building meaning into the world, which is requiring a profound redistribution of existing roles, attributions, and capacities. One of the driving forces of this process is automation, which aspires at making it possible to perform various kinds of cultural work, such as abduction, definition, or categorization, with little (or no) human input. As a result of this, many cultural operations have already been partially delegated to this digital machinery. For example, digital technologies are already actively participating in the cultural work of defining and organizing categories such as taste, talent, creativity, or crime, and — perhaps more worryingly — they are also expected to participate in moral decision-making processes, such as in the case of the so-called lethal autonomous weapons or LAWS (oh the irony!), which hold the promise (or the threat) of making life-and-death decisions without what their proponents call the interference of “negative” human input, such as emotions, fear, stress, overreactions, or self-preservation instinct. Needless to say, the dream of automation is still that: a dream. Despite all the hype surrounding these technologies, the fact is that Google’s automated algorithm still finds it difficult to tell the difference between a dog and a horse; services like Pandora...
rely heavily on human experts to supervise algorithmic classifications, financial markets need a “human touch” to avoid algorithms from wreaking havoc every now and then; and Amazon Mechanical Turk needs to hire massive armies of people on a daily basis to repair, amend, or complete the cultural work of classification and hierarchization made by these algorithms.

Finally, the third reason why these digital infrastructures are important for the process of semiosis is because they are giving way to new forms of cultural conflict. This is particularly evident in the new “classificatory struggles” emerging where these algorithmically-based forms of abduction are participating. Famous examples are the miscalcategorization of people as criminals by policing algorithms; the “racist bias” of different classificatory algorithms, as in the case of Google’s algorithm labeling black people as gorillas; or the miscalcification of cultural contents, as in the famous case of the Amazon algorithm mislabeling all gay novels as pornography. These new types of classificatory struggles are becoming increasingly important sites where different cultural categories, like race, are being literally coded and become effective and powerful realities today.

TOWARDS AN ECOLOGICAL VIEW OF SEMIOSIS

My main argument has been that, if we are to make sense of the contemporary process of semiosis, we need to move cultural sociology beyond the “cultural view” that has dominated it so far. More specifically, my argument is that, if we want to understand how semiosis works today, we cannot do it simply do it by reference to a set of underlying cultural schemas, beliefs, or motivations, or simply by focusing on how people interact with one another. These narrow causal explanations, with their almost exclusive focus on the scale of human action and interaction, are simply unfit to explore the manifold registers and logics through which the process of semiosis is taking place today.

Now, my argument is not only that we should move beyond this “cultural view” because of its heuristic inadequacy, but also because it is politically necessary. Indeed, as a result of the restricted focus of the cultural view, we are failing to pay attention to the some of the most important transformations taking place today, which are radically transforming how meaning is built and becomes a powerful reality in our daily lives. Thus, while we continue to discuss whether meaningful actions are best understood as being “caused” or just “motivated” by internal cognitive schemas, we are failing to pay attention to or to analyze how companies like CISCO, Siemens, Google or Amazon — to name just a few — are radically re-shaping the physical and symbolic milieus in which we operate; and as we continue to discuss whether morality should be understood as a set of “implicitly learned cognitive schemas” or as the result of “institutionalized beliefs,” we are neglecting other important sites and processes where moral categories are being done and implemented in our day-to-day-realities, like algorithmic policing, nudge architectures, or lethal autonomous weapons.

If we are to make sense of these contemporary transformations, and if we are to have a voice in them, we need to abandon the restricted view of semiosis imposed by the “cultural view” and move towards a general view of semiosis, which I would call “ecological”. By this I mean an approach that moves away from the idea of “culture” as some sort of semi-autonomous system woven through people’s actions, discourses, and cognitive operations, towards a wider analysis of the different sites and materials (physical, technological, cognitive, discursive, etc.) through which different forms of meaning-making become possible in the world (for a more detailed explanation see Domínguez Rubio, Forthcoming). To do this, we will benefit immensely from joining the wider inter-disciplinary conversations that have been taking place over the last decades amongst anthropologists (such as Gabriella Coleman, Christopher Kelty, and others), cognitive scientists and philosophers (like Edwin Hutchins or Andy Clark), urban geographers (such as Stephen Graham or Adam Greenfield), media and communication scholars (like Nicole Starosielski, Jussi Parika, John Durham Peters and others), or information science and STS scholars (like Steve Jackson or Paul Dourish) from which the voices of cultural sociologists have been almost entirely absent. If we do not do this, and keep insisting on the particularly restricted genre of explanation proposed by the cultural view, we may face the ironic risk that our way to study meaning can become increasingly meaningless to understanding our contemporary social reality.

FOR REFERENCES, SEE THE FOLLOWING PAGE:
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American football would be a very different practice if the ball were a different one. So how does his explanation coordinate or articulate with organizational isomorphic explanations that might help to make sense of what is equivalent between football, basketball and baseball in the US (e.g. dependence on public subsidies, presence of luxury boxes, reliance on hordes of assistants, engagement in data analytics), despite their obvious differences?

Fernando shows how machines went from being the inscribing object of culture to producers of culture themselves. How different is this new classificatory machine from the previous Hacking-friendly “constructivist” work of evaluating people and objects, in which agents that systematically engage in the production of categories are key participants in the production of those behaviors? Is there a role for human agents? Is this the augmentation of a pre-existing logic? And how do those algorithmic suggestions map out in relationship to pre-existing consumer “preferences”?

Thanks to Genevieve for organizing the ASA panel, and to the authors for presenting such interesting papers.