

The Status of Objects in the Space of Flows*

Felix Stalder, Ph.D.

Research Fellow, McLuhan Program in Culture and Technology

University of Toronto

<felix@openflows.org>

* An earlier version of this paper was presented as "Space of Flows: Characteristics and Strategies" at the Doors of Perception conference, Amsterdam, November 14-16, 2002

The social reality of the space of flows is neither immaterial nor self-contained. Rather it deeply affects the material world from which it is inseparable. This text addresses three interrelated questions in order to investigate the status of material objects within the space of flows and to consider some ramifications for their creation within this new environment.

- What is (a working definition of) the space of flows?
- How is this space different from the space of places?
- What does this mean for material objects which are always physically located?

What is the space of flows? The recognition of the importance of flows goes back to the Greek philosopher Heraclitus (c.540 - c.480) who famously summed it up as: *panta rei*, everything flows. He was referring to a general condition of nature. Everything is in a constant process of transformation. It is impossible to step twice into the same river. Even the most solid elements in nature are not entirely static. As we know today, Mount Everest, too, continues to grow at a rate of about 3-5 millimeters each year. In a strict sense, it's not even possible to climb twice the same mountain.

The contemporary concept of the space of flows, however, is quite different from this. Following Manuel Castells (1996), who introduced the term, it refers to a specific social condition, rather than nature in general. The space of flows has emerged into centrality for contemporary life only quite recently, arguably in the mid 1970s (Harvey 1989). The space of flows - as a working definition - is that stage of human action whose dimensions are created by dynamic movement, rather than by static location.

The operative words here are movement and human action. Without movement, this space would cease to exist and we would fall back into the space of places, defined by mountains, buildings and borders. Equally important, the movement takes place through human action and it creates the specific social conditions for our everyday lives. In this sense, the drifting tectonic plates, even though they move too, are not part of the space of flows. They drift no matter what we do, causing much headache and the occasional humbling experience to Californians.

The space of flows has become the predominant stage on which our world is shaped only recently; most visible in the increasing importance of the global financial markets and the very expanding network of air travel. But, of course, there have always been social spaces that were created by human movement. In many places, for example old port cities like Amsterdam, an earlier version of the space of flows, the maritime world of long distance trading, is still very present.

The space of flows - now and then - consists of three elements:

- the medium through which things flows,
- the things that flow, and
- the nodes among which the flows circulate.

In regard to Dutch long distance trading, the medium was the ocean. This medium was characterized by a specific density of water, currents, storms and many other conditions that favoured kinds of flows over others. Oceans and sailing ships were unsuitable for carrying fresh fruits, but highly capable of transporting dried spices. This point can be generalized. There is always a close relationship between the medium of the flows and their contents. One of the first messages that came through the transatlantic telegraph cable when it opened in the mid 19th century was: The Queen has a cold. This factoid became newsworthy only under the conditions of instantaneous transmission (Winston 1998).

The third element in the space of flows are the nodes, the harbours and trading posts that the Dutch established around the world. Flows always go from one node to an other. In a world with only a single harbour, ships are mere entertainment. Nodes focus movement into flows. Nodes, like the harbour where goods are loaded into ships, are membranes that connect various flows to one another and flows with places: a node is a kind of interface, and like all interfaces, they shape profoundly what they interface to.

Flows are created by a subtle interplay of similarity and difference among nodes (Stalder 2001). People who do not speak the same language have a very hard time

communicating. People who know the exact same stories have nothing to tell to one another. We have all seen old couples who sit silently next to one another. They know each other so well that they have nothing to exchange anymore.

Despite similarities, maritime flows are also every different from today's information flows. Since ports, the distance between them and the currents of the sea are relatively stable, the dimensions of the maritime space of flows is fixed in ways our electronically-mediated space of flows is not. Rather, now the space has a whole can contract and expand.

The quintessential node in our contemporary space of flows is the office, the command and control centers for the flows of goods, people and information. In pre-industrial manufacturing, the function of the work bench and of the office were barely separated. Rather, they were one and the same. This was efficient as long as the flows were small and slow. As volume and speed of production increased, this model came into a crisis. As a direct response to the growth of the factory output over the previous 100 years, the office emerged into centrality in the second half of the 19th century.

Flows and nodes began to differentiate. The office and its information processing technologies represent the attempt to better manage the flows of goods pouring out of the factories (Beniger 1986). These flows are constantly threatening to run out of control, through over-production or runaway costs. The world of the office introduced a central theme of the culture of flows: the paradox that the practice of "hyper control" coexists with the condition of "out of control". They do not simply coexist at the same time, but more worryingly, because of one another. The two conditions are not contradictions, but actually two sides of the same medal (Mulgan, 1991).

In the process of differentiation of flows and nodes, the office moved away from the workbench. First into a separate room within the factory, then into a separate building within the centralized factory complex. This approach to managing flows was epitomized in Henry Ford's famous Rouge Plant in Dearborn, Michigan. Here raw iron ore entered on one side and finished cars left on the other. This is a node in the word

were information flows in the office circulate through the medium of paper.

Now that information circulates through digital media, nodes and flows are differentiating even further. As volume and speed increase, both are growing to the extent that producing something supposedly simple such as sneaker has become an incredibly complex process involving research labs, marketing firms and production facilities linked to one another around the world.

The important point here is: as volume and pace of the flows increases, nodes and flows are becoming more and more different logically, while functionally are being integrated ever more tightly. The worlds of the glittering NIKE head offices and the pretty bleak conditions under which its sneakers are produced are much more separated than what differentiated Henry Ford from his workers, they both worked and lived in more or less the same place (Klein, 2000). At the same time, the production cycle is becoming shorter and shorter to the degree that you can have a personalized NIKE shoe, just for you. The cycle has shrunk to a single point of real time interaction.

By now we are already deep into the second question: what are the differences between the space of flows and space as we know it?

The space of flows made up of movement that brings distant elements - things and people - into an interrelationship that is characterized today by being continuous and in real time (Castells 1996). Historically speaking, this is new. There have always been cultures that were built across large distances. But now, their interaction is in real time. Being entirely digital, one of its consequences is that space can expand and contract very quickly. The volatility of the stock market, for example, has a lot to do with the volume and speed of trading (Soros, 1998).

What is perhaps more important is that such changes are not only quantitative - changes in size - but also qualitative - changes in kind. As flows change their volume and direction, nodes change their characteristics. This is perhaps the most central difference between the space of places and the space of flows. In the latter, the

characteristics of each element are less dependent on their internal quality than on their relationship to others. These relationships, of course, are created by flows.

In other words, function, value and meaning in the space of flows are relational and not absolute. Whether a node "works" or not, then, is not only determined within the node, but emerges from the network of which the node is only a part (Callon & Law, 1997). As the network changes, as old connections die and new ones are established, as the flows are reorganized through other nodes, meaning, functionality, values change too.

How does this affect physical objects? The immediate question is: What is an "object"? If we take it seriously that things - and people - are less defined by their intrinsic qualities but more by their relational position to one another, then the unit of analysis - and action - can no longer be the single element, an individual person, a product or a company (Latour 1993, 1999).

We have to shift our attention away from the "within" on to the "in-between". Rather than asking what is made out of, we have to ask, what does it interface to?

In a similar shift of focus, Scott Lash (2002) recently introduced the term "technological forms of life". By this he does not mean anything like cyborgian man-machine connections or even artificial life, but something more simple and profound. If two people are engaged in a conversation and develop a new idea, the idea does not stem from one or the other, but from the association - or the form of life - that they created. What is "in-between" people, is "within" a "form of life", in the sense of Wittgenstein's original use of the term.

By adding the modifier technological to the concept of the "form of life" Lash puts the emphasis on the fact that these associations are increasingly made possible, and influenced, by technology, particularly information technology. It provides the medium through which information can flow among the participants. Again, we have the three elements to create a system of flows:

- the medium - digital communication technology
- the flows - information, and
- the nodes - hybrids of people and machinery.

The characteristics of any technological form of life are not simply the sum of their individual qualities, but they emerge from their interaction. Importantly, as life becomes technological, technology, and to a lesser extent most objects, become life-like. Again, this means that we are becoming Terminator-like cyborgs or technology will be able to reproduce itself autonomously. Rather, the two stand increasingly in a dynamic ecological relationship to one another. Technology - continuously and in real time - adapts to people who seek out the possibilities of new technologies. Their relationship evolves through constant feedback - flows circulating among nodes - rather than as cause and effect.

From the point of view of design of objects this creates a problem. It is very difficult to design technological forms of life since they are emergent. What can be done, though, is to design some of its elements, particularly the objects. These elements, however, are complemented by elements outside of our immediate control. This brings us back to the theme of the co-existence of "hyper control" and "out of control". We can micro-manage ever more precisely over ever greater distances. At the same time, we become ever more affected by, and dependent on, things are outside of our individual reach. The emergent effects, that which gives ultimately meaning and value to the individual elements that we design are even harder to steer.

This does not lessen the importance of design, or other forms of planning, but changes their characteristics. As meaning and functionality move from the material object of design into relationships created by flows, the object in itself becomes incomplete. One cannot know what the full shape of an object is before one tries it out by inserting it into a specific intersection of flows. There it takes on a kind of life of its own.

Material objects, then, need to be generic so that they become specific under the condition that we cannot fully predict. This is not because we do not know enough. On

the contrary in a highly integrated environment, in the medium of instantaneous digital data flows, our interventions to manage, or design, one little instance within the large space of flows is part what creates uncontrollability of the overall environment. Unintended consequences, filtered through the entire space, will sooner or later come back and surprise us by reconfiguring the conditions for the object that has just been so consciously put together.

References:

- Beniger, James R. (1986). *The Control Revolution: Technological and Economic Origins of the Information Society*. Cambridge, MA: Harvard University Press
- Callon, Michel; Law, John (1997). After the Individual in Society: Lessons on Collectivity from Science, Technology and Society. *Canadian Journal of Sociology* Vol.22, No.2 pp. 165-182
- Castells, Manuel (1996). *The Rise of the Network Society, The Information Age: Economy, Society and Culture, Vol. I*. Cambridge, MA; Oxford, UK: Blackwell
- Harvey, David (1989). *The Condition of Postmodernity: An Inquiry into the Origins of Cultural Change*. Oxford, UK: Blackwell Publishers
- Klein, Naomi (2000). *No Logo: Taking Aim At The Brand Bullies*. Toronto: Knopf Canada
- Lash, Scott (2002). *Critique of Information*. London: Sage
- Latour, Bruno (1993). *We Have Never Been Modern* (translated by Catherine Porter). New York, London: Harvester Wheatsheaf
- (1999). *Pandora's Hope. Essays on the Reality of Science Studies*. Cambridge, MA, London, UK: Harvard University Press
- Mulgan, Geoff (1991). *Communication and Control, Networks and the New Economies of Communication*. New York, London: Guilford Press
- Soros, George (1998). *The Crisis of Global Capitalism: Open Society Endangered*. New York: Public Affairs
- Stalder, Felix (2001). Flows and Nodes: The Financial Markets as New Media Environment. *The Convergence: Journal for Research into New Media Technologies* (Autumn) Vol.7, No.3 pp. 10-17
- Winston, Brian (1998). *Media Technology and Society: A History from the Telegraph to the Internet*. London: Routledge