

Discuss open and closed systems in relation to hardware, software, and/or interfaces with concrete examples. Emphasize code as 'critical element'.

Introduction

Starting with Kittler's observation about Intel chip technology, a distinction between open and closed systems is drawn in relation to security mechanisms. While those mechanisms serve as a means of maintenance of a power relationship between the user and the manufacturer, an analysis of power in relation to social systems and politics is made in regard to the motivations that were involved in the specific composition of chip technology, like the technical distinction between 'Real' and 'Protected Mode'. Since this form of machine design depends with a closure of knowledge, the element of transformation of code towards cryptography signifies an imposture of a strategy, which can be perceived as a specific mode of a power relationship.

Furthermore, since power relationships in the sphere of the social and political seem to inherit an antagonism, a closer examination of different theories concerning this matter, multilateral as well as unilateral, is required. Those insights meet in an analysis of the nature of warfare and its relation to the structuring of space as a particular strategic element.

Finally, the question of the absolute legitimacy and authority of warfare in regard to the structure of all things is addressed in relation to game theory and the theory of modern liberal economy. It turns out that cooperation instead of conflict seems to ensure long-term interactions between individual agents and thus, Kittler's proposal to analyse social systems from the chip structure onwards is made allowance for.

The structure of power in the microscopic sphere

In his essay 'Protected Mode' Kittler draws the distinction between open and closed systems by analysing the difference in chip architecture that was introduced by Intel's 32-bit CPU, the 80386, in the beginning of the 1990s. This was the first chip that drew a line between the former open system approach, at least within the possibilities and the architecture of the specific chip, to a closed system approach, which distinguishes between the so-called 'Real Mode' that was exclusively for the designers and engineers of the technology and the 'Protected Mode' which denied access to basic chip functions at the user's side.

"In the good old days when microprocessor pins were still big enough for soldering irons, even literary critics could do whatever they wished with Intel's 8086 Processor. Even standard chips (...) could be raised to the processing speed of primitive signal processors through a variety of strategies: no differentiations between RAM and ROM misusing both of the stack registers as universal registers, avoiding any interrupts, employing the wait-state for other than intended purpose, and so on. The silicon chip, which was as stupid as the hobbyist and user, could accommodate all of this because the Von Neumann architecture recognizes no difference between commands and data." (Kittler 1997, pp. 156)

By having the effect on the user that he or she can no longer recognise all the mathematical operations that are going on in the chip, a system of closure is introduced that is easy to reconstruct from the engineer's side on, but almost impossible to comprehend for the user. This relation resembles the mathematical operation that is known in cryptography as a one-way function or trapdoor one-way functions. Those functions are used in most cryptosystems that rely on a public-key system and are widely in commercial use nowadays (RSA Laboratories 2004).

But what is more significant about this relation between the hardware, the interface and the user is a notion of power or strategy (Kittler 1997, p. 158) that is inflicted upon the

user and is bound to economic interests by large corporations, since there is no actual need in terms of technology or mathematical theory to apply the 'Protected Mode' to a CPU.

By the distinction between software and hardware that is drawn by the industry, a strategy of the closure of knowledge becomes differentiated. As soon as a closed system like that is introduced into the hardware, that is, the silicon and the wires, all software architecture has to apply to this initial topology of the chip. Therefore, the cryptographic mode of a one-way function, whose mode of conduct serves the closure of information, gains momentum from the material component of computers on and gains exponential growth in the field of virtual computer components, that is, software. As soon as this strategic function is introduced into the virtual, there are hardly any limits of constructing and developing systems of closure that mount themselves on other closure systems and therefore tighten the restrictions of information access to the user.

“For software, this cryptographic effect offers a convenient way to bypass the fact that by virtue of Turing’s proof the concept of mental property as applied to algorithms has become meaningless. Precisely because software does not exist as a machine-independent faculty, software as a commercial or American medium insists on its status as property all the more. Every license, every dongle, every trademark (...) proves the functionality of one-way functions.” (Kittler 1997, p. 151)

Although this development is rather disturbing in relation to economical politics, it is not an unusual tendency that occurs with the notion of power and conduct by themselves and it has to be mentioned that initially, the procedure of hiding internal operations in hard- and software was introduced to facilitate the usage of computer interfaces. In terms of code, all operations and commands of a computable system are formal in a mathematical sense. In a traditional definition of language, those formal processes are different from the procedures of everyday languages, as a programmer of the early days of computing had to translate basic commands that humans refer to in words into binary digits. Thus, it seems

comprehensible from the viewpoint of chip engineering to facilitate this 'translation' process by hardwiring basic codes and programmes into the chip in order to increase the convenience of usage. But since this process is also influenced by economical interests and concerns of mental property, a system of closure is introduced and a relation of power emerges.

"(...) information science appears to be confronted with internal information obstacles. Information sciences must refer to the actual domain of code, even if the theory could generate completely different models (and should). And despite all the will and belief of the code's developers, decodings are just as possible as they are rare." (Kittler 1997, p.165)

The power relationship thus becomes clear when one takes into account the relation of natural and computable languages towards cryptography, which means a closure or a monopolization of information and therefore knowledge. In his analysis on power relationships, Foucault tries to outline three procedures that influence and overlap each other within a structure of power: work and the transformation of the real, the production of meaning and finally the action of men upon other men, or more precisely, the action upon actions (Dreyfus and Rabinow 1983, p.218). If this characterization is applied to the problem of the 'Protected Mode', it is not hard to perceive that by procedures of encoding information in a specific way, a power relationship is exercised.

"Relationships of communications imply finalized activities (even if only the correct putting into operation of elements of meaning) and, by virtue of the modifying the field of information between partners, produce effects of power." (Dreyfus and Rabinow, p. 218)

Interestingly, in the case of a message written in machine code, it is not so much the meaning that is produced which establishes a power relationship, but more the effort that is involved in its production and that saves the receiver from reiterating all necessary operations that were necessary to construct this message (Kittler 1997, p.153) and it is just

the recursive relation between the virtual and the material that this form of measurement can be harvested in terms of power.

“The statement is not at all defined by what it designates or signifies. It seems to us that what we must understand is this: *a statement is the curve joining individual points*: that is, the thing that brings about or actualizes relations between forces, such as they exist in French between the letters and the figures, depending on the degree of frequency and proximity. (...) The statement-curve integrates into language the intensity of the affects, the differential relations between forces, the particular features of power (potentialities).” (Deleuze 1988, p. 79)

If software by itself is neither thinkable nor applicable without a material environment, that is, hardware, then it can be applied to a law of the material and to questions of ownership and property. It is due to these circumstances that the ‘Protected Mode’ of Intel’s 80386 chip is introduced in order to prevent ‘non-trustworthy’ (Kittler 1997, p.160) programs and their users from operating on technology that is under a restriction of a copyright law. Thus, in order to consolidate a power relationship, security mechanisms are established from the hardware to the software and also the wetware (Computer Dictionary Online, 1996) that prevent other individuals from unauthorized access to what is considered legal property of the developer or manufacturer.

Foucault notes that power can only be exercised over free subjects (Dreyfus and Rabinow 1983, p. 221) and therefore this relation of power towards individuals leaves space for a tendency of struggle against the imposition of power and it is not only in the history of computers by which this form of resistance is well known and documented. Piracy of intellectual property, the fabrication of unauthorized copies and the circumvention of security barriers in hard- and software are actions of struggle against power relationships and turn curious users into criminals, more commonly known by the term ‘hackers’. A continuative problem emerges out of the fact that in those terms, power cannot be

absolutely protected and furthermore, renders itself useless when the effort and the imposition of security mechanisms surpass the ability of power to take out actions upon other actions.

“It would not be possible for power relations to exist without points of insubordination, which, by definition, are means of escape. Accordingly, every intensification, every extension of power relations to make the insubordinate submit can only result in the limits of power. The latter reaches its final term either in a type of action which reduces to other to total impotence (...) or by a confrontation with those whom one governs and their transformation into adversaries.” (Dreyfus and Rabinow, p. 225)

The latter case Foucault describes finds its realisation in the computer industry when corporations offer to hire hackers that managed to circumvent their security mechanisms, be it in terms of hardware or by breaking into protected mainframes that have access to the internet. Nevertheless, the relation between user-friendly interfaces and their protection against intrusion create the condition of what Kittler calls “a classic power dilemma” (Kittler, 1997, p.163). In order to fully understand the scope of power relationships and how and why modes of strategy are incorporated in machines and codes which converge towards universality, it is necessary to examine the complex of power, information and strategy also outside the formal matrix of a machine grid, last but not least because the modern computer has emerged out of a struggle that involved a conflict of extreme power relationships as well as the usage of cryptography as a strategic means.

“In effect, between a relationship of power and a strategy of struggle there is a reciprocal appeal, a perpetual linking and a perpetual reversal. At every moment the relationship of power may become a confrontation between two adversaries. Equally, the relationship between adversaries in societies may, at every moment, give place to the putting into operation of mechanisms of power.” (Dreyfus and Rabinow 1983, p. 226)

This multilateral view of social systems by Foucault is opposed to traditional approaches that, in contrast to analyzing power relationships, emphasize the moment of struggle in order to define the structure of a social ensemble which takes the form of the state as the

sovereign in conducting and deciding over power relationships. With this observation, Carl Schmitt links the concept of state, politics and sovereignty in order to develop his concept of the political. In this concept the mode of struggle also plays a role, but it is not so much the struggle of adversaries of power against the means of its imposition, but more the struggle between adversaries due to the reciprocal nature of power mechanisms as described above. Schmitt finds fault in the possibility of depoliticalization in a theory of a pluralist state and therefore emphasizes an antagonism which defines the very nature of the political, the distinction between friend and enemy (Schmitt 1996, p.26).

“The political is the most intense and extreme antagonism, and every concrete antagonism becomes that much more political the closer it approaches the extreme point, that of the friend–enemy grouping. In its entirety the state as an organized political entity decides for itself the friend–enemy distinction.” (Schmitt, pp.29)

Within this differentiation, Schmitt sees the potential for power relationships to take place within the political sphere and for decision–making processes to take place. Therefore, all efforts of political force are directed towards a specific conflict and take the form of the friend–enemy grouping, which is war. Without an enemy, there can be no political entity (Schmitt, p.35). It has to be mentioned that the political is not concerned immediately with warfare, it is just that it takes into account the possibility of waging war as a factor for its legitimacy and follows the code of behaviour that is connected to it. (Schmitt, p.37). In this approach, power takes on a specific form that can be conducted and imposed on other individuals by a moment of antagonism, whereas in Foucault’s view, power “passes not so much through forms as through particular *points*” (Deleuze 1988, p. 73) which serve as a reference for the imposition of power. Foucault discards the idea of a ‘localization’ of power–relations as in the concept of sovereignty, for example (Deleuze, p.73), in his view, they are more influenced by random movements that are hard to define and to predict and

they are only perceivable when certain lines of power relations join together and constitute an action, thus, power can only be exist *in actu* (Dreyfus and Rabinow 1983, p. 219).

It appears that Foucault and Schmitt have a different understanding of the notion of space in relation to power. The concept of sovereignty prohibits the idea of a dynamic and diffuse space of power relations, it seeks to specifically locate places of power and to maintain them. In a distinction between 'politics' and 'political', politics can be defined as the places and the locations of the common and the consensus, whereas political means the differentiation of the consensus, the deterritorialization of the 'commonplace' of politics (Vogl 2002, p. 158), as it competes about decisions, power-relationships and modes of conduct. Since the state is the institution that incorporated mechanisms of power and imposes it on its individuals, it seems necessary to examine how the state relates to processes of de- and reterritorialization, which obviously seem to take place in the political sphere and how those procedures are related to power and conflicts. In their 'treatise on Nomadology' Deleuze and Guattari describe the state apparatus as a form of interiority (Deleuze and Guattari, 1987, p.354) which can be perceived as a closed system that bears the sovereignty of power and therefore organizes the space it occupies in a homogenous fashion, what Deleuze and Guattari describe as 'striated space' (Deleuze and Guattari, p.361). Opposed to that, what they describe as the 'war machine' or the 'nomadic culture' appears to be exterior and the organization of space is done in a different manner, namely as 'smooth space'. The concept of smooth space is not so much concerned with fixed points that serve as a means of orientation, like in cities, for example, it relies more on the movement itself to constitute a perception of space and can therefore be described as an open system, because it relies on exteriority and flows of intensities rather than specifically

localizable or quantifiable entities. The difference between those two concepts can be best described with an analogy of a comparison between chess and Go.

“Chess is indeed a war, but an institutionalized, regulated, coded war with a front, a rear, battles. But what is proper to Go is war without battle lines, with neither confrontation nor retreat, without battles even: pure strategy, whereas Chess is a semiology. Finally, the space is not at all the same: in chess, it is a question of arranging a closed space for oneself(...). In Go, it is a question of arraying oneself in an open space, of holding space, of maintaining the possibility of springing up at any point: the movement is not from one point to another, but becomes perpetual, without aim or destination, without departure or arrival. The “smooth” space of Go as against the “striated” space of chess. The *nomos* of Go against the State of chess, *nomos* against *polis*. The difference is that chess codes and decodes space, whereas Go proceeds altogether differently, territorializing or deterritorializing it.” (Deleuze and Guattari, p. 353)

It is this process of deterritorialization of the war machine which is concerned with strategy that opposes the territorial process of the state, which rather tries to derivate constants out of variables (Lindemann 2002, p.219) in order to maintain its sovereignty. For Schmitt, every basic order is constituted out of a *nomos* (Schmitt 1954, p.71). He defines the term by three distinct features, which are the taking of land and later also the sea, the distribution of the thing taken and finally its utilisation. He points out that every basic order relates to an occupation of space and to procedures of demarcation and confinement. From a military point of view, a demarcation of the sea is harder to accomplish than the occupation and utilization of the land, due to their different properties. Whereas the land can be identified as a striated space with distinct features, the sea is almost the perfect smooth space because it lacks features of differentiation. In Schmitt's brief treatise of world history, he develops the notion of a 'revolution of space' (Schmitt, p.55) that emerges when new forces or developments enter the general human consciousness and therefore change the spaces of historical existence. By this process, a shift in the pre-established form of the *nomos* occurs which can be called a revolutionary development. Crucial for this development seems to be

the historical relation between land and sea. Historical expansions of specific cultures into unknown territories occurred on land in the beginning of human history, but as soon as the expansion to the sea took place, the motivation for the development of new methods of orientation and navigation was given. Inventions like the compass, the sextant and the telescope are significant for a new perception of space and the development of a new basic order of occupation, distribution and utilization. It remains evident that all those developments were accompanied by a large number of conflicts over territory and therefore, new strategies had to be developed in order to maintain or develop power relationships in terms of 'geopolitical' interest.

Deleuze and Guattari argue that the predominance of the so-called 'western' culture can be seen in relation to a combination of knowledge out of Europe's specific history of conflicts and empires (Deleuze and Guattari 1987, p. 387). Due to the technical developments that took place during those conflicts, it was possible for Western state apparatuses to occupy and control the Atlantic. But as opposed to governance on land, the striating of the space of the sea did not result in a territorialization, but rather a deterritorialization with perpetual motion, an 'absolute movement'. Schmitt points out that warfare on land is different from warfare in the sea, in both strategic and tactical aspects (Schmitt 1954, p.87). In terms of the war on land, European states relied on the idea that war is a relation between states and therefore, attempts have been made to clearly distinguish combatants from non-combatants, as in the treaty of Westphalia in 1648 which served as a basis for international law although it still relied on the concept of sovereignty (wikipedia 2004). Therefore, battles were fought only between the armies of participating states, whereas in sea battle, the strategy aims more at the economy of the enemy. Thus, it is not

only the army that contributes to the image of the enemy, but every citizen of the state in question. Furthermore, the war on land focuses more on open battle, whereas in sea battles, strategies of blockades and the involvement of non-military targets are pursued.

In that respect, it is comprehensible that a 'vector' of perpetual or absolute motion is applied to warfare on the sea, because the conflict does not only take military targets into account, but has in itself an absolute tendency in terms of Clausewitz concept of 'absolute war', since all state efforts are devoted to the confrontation with the enemy and therefore, the distinction between the public, the economic and even the private sphere dissolves. This strategy of operation in 'smooth' spaces was not only applied to the sea, but also to air and the desert with the beginning of the 20th century, culminating in the 'total wars' of the period of World War II. Although warfare is a confrontation between rivalling systems of power, it has not to be confused with politics as a form of a friend-enemy grouping. By the time nations engage in open warfare, the political decisions have already been made and warfare is a mere performance of that decision.

"War is neither the aim nor the purpose nor even the very content of politics. But as an ever present possibility it is the leading presupposition which determines in a characteristic way human action and thinking and thereby creates a specifically political behaviour." (Schmitt, 1996, p.34)

Equally, Foucault defines the exercise of power not as a form of violence but violence as a possible result of this exercise, whereas consensus can be regarded as an instrument of power (Dreyfus and Rabinow 1983, p. 220). And although war and violence are neither a condition of power nor of politics, the relation between warfare and politics is existent not only since Clausewitz' well-known phrase that "war is the continuation of political intercourse with a mixture of other means" (1853 cited Schmitt 1996, p.34). Schmitt's comment on Clausewitz is that war is the *ultima ratio* of the political distinction between

friend and enemy (Schmitt, p.34). Foucault on the other hand tries to interpret Clausewitz' phrase by posing the question of its origin and asking for its motivations (Foucault 1986, p. 8). He turns the phrase around by saying that politics is the continuation of war by other means and states that it was the achievement of Clausewitz to oppose this phrase by his counterstatement. The idea of war as a continuative social relation and as the basis of all power relations was motivated by the centralization of state power within the 17th and 18th century. While the state achieved more and more means of sovereignty towards organized violence, that is, war, a process comes into being that Foucault describes as the nationalization of warfare (Foucault, pp.8). Within this process, the institutionalization of the army and the military apparatus begins and therefore, the idea of perceiving the total of society as a binary distinction between the self and the other seemed to be the consequence of this process. It is a discourse which is focused on an asymmetrical law that is bound to balances of power which uses truth as a weapon (Foucault, p.16). In the 19th and 20th century, those ideas were ascribed to nationalist and even racist discourses as the notion of permanent warfare moved from the initial relation between states to warfare between ethnical groups within one state. In other words, this kind of discourse moved from a global strategy of global conservatisms to a form of state racism that uses society against itself (Foucault, p.27). By explaining the relationship between war and civil war, Schmitt also exemplifies this distinction in regard to open and closed systems.

“The intensification of internal antagonisms has the effect of weakening the common identity vis-à-vis another state. If domestic conflicts among political parties have become the sole political difference, the most extreme degree of internal political tension is thereby reached; i.e., the domestic, not the foreign friend-and-enemy groupings are decisive for armed conflict. (...) War is armed combat between organized political identities; civil war is armed combat within an organized unit.” (Schmitt, 1996, p.32)

Furthermore, the notions of power and politics can be defined even before the formation of a state, since “the concept of the state presupposes the concept of the political” (Schmitt, p.19) whereas Foucault describes the exercise of power as a guidance in the possibility of conduct and the influence of the outcome. He introduces the notion of government in a sense that it not only refers to the “management of states” (Dreyfus and Rabinow 1988, p.221) but also to individual subjects and groups of people.

“The relationship proper to power would not therefore be sought on the side of violence or struggle (...), but rather in the area of a singular mode of action, neither warlike or juridical, which is government.” (Dreyfus and Rabinow, p.221)

And although the state already contains an underlying concept of the political, Schmitt points out that “all political concepts, images and terms have a polemical meaning” (Schmitt 1996, p.30), it is the very notion of the polemical or *polemos* which remains problematic.

In the fragments of Heraclitus, several references to the term can be found that mostly translate *polemos* with war. Again, there seems to be an intrinsic relationship between the political conception of Schmitt and warfare.

“War is the father of all and king of all: and so some he renders gods, others men, some he makes slaves, others free” (Guerrière 1980, p.90)

The question seems to emerge whether or not there is an alternative to warfare in respect to power and politics. While Heidegger wanted to develop a phenomenology that is inspired by Greek thought and refers to a mode of ‘pre-metaphysical’ thinking, that is, before Aristotle formulated his metaphysics, he draws on Heraclitus on several occasions in his work and translates particular fragments differently.

“Contention is indeed the begetter (who lets emerge) of all (that comes to presence), but (also) the dominant preserver of all. For it lets some appear as gods, others as humans; it sets some forth as servants, others as free.” (Maly and Emad 1986, p.41)

Furthermore, Heidegger states that contention can be perceived as “the movement in which and for which gods and humans (...) emerge into the shining of what they essentially are” (1982, cited Maly and Emad, p.41). To that respect, it is the movement that is responsible for the emergence of all things, of gods and humans, whereas emergence has to be understood as a faculty of being. In other words, this contention describes a union of existence. Thus, it neither seems desirable nor possible for human beings to escape the tension of contention or ‘battle’, because it is the unity of tension that describes the struggle of gods and that allows human beings to experience our existence.

“Here we find the philosophical language in its true character, the play of words that precedes thinking – a thinking in which the unity of opposites is directly articulated, in which [unity] alone it is granted to us to be in the world, granted to us to live and to die too old and too young, all at the same time, but living our death and dying our lives in accord with the law is set by the God of struggle and harmony, and whose further (fourth) name is (...): time.” (Beaufret 1986, p.72)

About time, Heidegger translates fragment 52 by Heraclitus in the ‘Principle of Reason’ as follows:

“What grants Being is a child, playing the board game; to a child belongs the kingship– i.e. (...) the grounding which establishes and rules, the Being for beings.” (Salis and Maly, 1980, p.11)

It is worth mentioning that *aion*, time, is translated as the thing ‘that grants being’. Time serves here as a condition of order for human beings to experience the harmony from which their existence originates. The ordering of game pieces on a board relates to the notion of the “interplay of all things in succession” which “is not a chaos but an order” (Guerrière 1980, p.93) and the playing appears as intrinsic to a child as the successive order to time.

In here, the notion of warfare is elevated to a new category. It is not so much the annihilation of the enemy which is crucial for the existence of all things, but it is by an opposition of

forces that all things emanate and furthermore, an order of all things emerges out of a notion of playfulness.

Conclusion

If now this alternative evaluation of the term 'war' is applied to the complex of power and politics, it is not so much a hegemony that politics and power should attain, but more an exchange of conduct between equal members. A moderation of the radical concept of the friend-enemy-grouping can be found in the field of economy, where the different participants take the position of competitors rather than adversaries.

“Under no circumstances can anyone demand that any member of an economically determined society, whose order in the economic domain is based upon rational procedures, sacrifice his life in the interest of rational operations. To justify such a demand on the basis of economic expediency would contradict the individualistic principles of a liberal economic order and could never be justified by the norms or ideals of an economy autonomously conceived.” (Schmitt, 1996, p.48)

On the other hand, this model of thought may be applied to abstract idealized economies but the history of modern economy is closely linked to the developments of the military complex in the 19th century as the military industrial complex grew to an extent at which it reached the legitimacy to become an 'institutional entrepreneur'.

“The military stress on strict accountability and hierarchical operation procedures, the division of labour between staff and line managers, and the experience of projecting control over networks at scales unknown even to the largest private entrepreneurs of the time, profoundly affected the evolution of the American business company in the nineteenth century.” (de Landa 1991, p.111)

In its recent history, the military complex was not only concerned with the execution of strategies. From the 19th century on, there have been increased attempts to predict an outcome of a battle by establishing a simulation of the conflict, so called war games (de

Landa, p.2). During the period of the Cold War, these simulations became more complex and dealt with the possible outcome of a nuclear engagement between the superpowers of the US and the Soviet Union. By that time, strategic analysts were concerned with game theory in order to analyse the problems at hand. One of the paradigms that were applied to the current situation was the so-called Prisoner's Dilemma developed by the RAND corporation in the 1950s (de Landa, p.84). Two individuals were accused of having jointly committed a crime. The options for both of them are either to testify against each other or claiming to be innocent. The problem they were confronted with was a closure of information, namely, that they didn't know which option the other one chose. In this scenario, the options of a possible outcome are designed as a 'zero-sum game'. The possible loss of one of the individuals was automatically the gain of the other. For this situation, the best solution was a 'mini-max algorithm' (de Landa, p.97) which emphasized the maximisation of the smallest gain that was possible. In more complex and non-zero environments, where conduct and exchange of information had to be repeated, it soon became clear that the best strategy was to maximize the collective good instead of unilateral gains.

"Many different programs were submitted and then pitted against one another. A majority of programs simulated "traders" who were out to exploit other traders (reflecting the traditional pro-conflict bias) while other programs simulated traders who were willing to cooperate. Surprisingly, the "winners" of those competitions were programs that emphasized cooperation. "Winning" was not defined as defeating rivals in single encounters, but in maximizing the benefits of trade. (...) In the long run the winning programs were the ones who had the following characteristics: they were not out to exploit other programs (...); they retaliated in kind after being betrayed and they willing to reestablish a relationship after retaliating." (de Landa, p.86)

In relation to Heraclitus, it is not the tension between adversary programs but the successive interplay that establishes a cooperative order between the trading parties. As soon as a long-term time axis is introduced into the simulation, the initial mode of conflict changes to

an interrelational one. It is due to this circumstance, that is might be possible to reevaluate the *nomos* of the chip which represents a revolution in space in the strictest Schmittian sense, but not in the macroscopic sphere, in which the Cold War period signified the absolute demarcation of the immediate space of living, rather in the microscopic sphere in which information and therefore code provide an almost immediate and material paradigm for politics and power relations.

“As a result, a double shadows the analysis of power systems, that immense assignment that was Foucault’s legacy. To begin with, one should attempt to abandon the usual practice of conceiving of power as a function of so-called society, and, conversely, attempt to construct sociology from the chip’s architectures. For the present at least, it is a reasonable assumption to analyze the privilege levels of a microprocessor as the reality of precisely that bureaucracy that ordered its design and called for mass application” (Kittler 1997, p.162)

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