



The “Self” in Self-Organization

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DR HOGO LETICHE*
Professor

JOACHIM MAIER**
Research Associate

** University for Humanist Studies – P.O Box 797 3500 AT Utrecht – Netherlands
Tel + 31 30 239 0137 – Fax + 31 30 234 0738 – h.letiche@uvh.nl

**Imagination Lab Foundation - Rue Marterey 5 - 1005 Lausanne - Switzerland
Tel +41 21 321 55 44 - Fax +41 21 321 55 45 - www.imagilab.org

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Abstract

What is the role of 'self' in self-organization? From Ilya Prigogine has come the assertion of spontaneous self-organization occurring in far from equilibrium circumstances wherein the role of individual behavior or of specific circumstance can play an important role. (Prigogine & Stengers, 1984). From Stuart Kauffman has come 'order for free' or the hypothesis of self-organization wherein if there is sufficient complexity, life is a to be an expected emergent property of matter and energy. (Kauffman, 1995) From Niklas Luhmann (Luhmann, 1997) comes the claim that social systems are alive and are able to reproduce themselves out of their own products. All three theoreticians assert that 'life' could be an emergent property of natural complexity and that the 'living' --- and thereby what evolution has produced --- could be a product of emerging natural phenomena. Thus 'life' and human existence, have evolved without a metaphysical first cause or a telos external to nature. At once, this is a radically humanist assertion --- life is its own first cause, and a radically naturalist one --- there is nothing outside of the existent. In this paper we examine the significance for organization of 'self-organization'. If social systems are self-reflexive, what role does 'consciousness' play in their self-constitution? If social order is self-organizing, if human material systems create themselves, if collective action constitutes itself; what role is left for the individual 'self'? The case material used to explore this theme is the film 'the matrix'.

Introduction

Why is the matrix an interesting starting point to explore self-organization? In contradiction to beginning with a theoretical analysis, for instance of Luhmann's sociology or Kaufmann's complexity theory, the matrix illustrates what happens when one assumes the primacy of a self-organizing social universe, and tries to illustrate it on the level of interaction. 'The matrix' examines a fantasized self-organizing society wherein individual consciousness is totally subsumed to social structure. A group of 'dissidents' seems to (re-)assert individual 'self' in opposition to social structure. The rebels synchronize with the *zeitgeist* of contemporary management phantasms --- manifestos for corporate revolution are en vogue. Seemingly, businesses really need rebels to irritate existing structures --- to create large amounts of new wealth¹. Our assertion is that in the film the rebellion really fails; though the filmmakers do everything they can to try and maintain the opposite. We propose the case is interesting, because once the filmmakers had accepted the logic of an all encompassing self-organizing social structure, they were unable to escape it, even when they wanted to. In 'the matrix' there is no way to re-introduce 'self', if one has first accepted the logic of 'self-organization'. But outside the matrix we see other possibilities wherein complexification leads to self-organizing with the re-entry of 'self'.

Self-organizing as an epistemological or sociological theoretical assumption, can be quite different from self-organization as concrete social circumstance. We are interested in the actualization, in lived-experience. What is it like, being in a self-organizing social universe? That our illustration is drawn from a successful exemplar of popular culture, is in some ways an advantage. It must be, intuitively, an acceptable construct to the large numbers of people who have seen and valued it. Thus, what are the assumptions of the matrix; what makes it self-organizing; and what are the finer consequences of these themes?

¹ Hamel, 2001.

Producing the system 'the matrix'²

The matrix is supposedly an all-inclusive form of organizing. Operational closure is achieved through digital codification. The system runs a simulation of humanity 'at the peak of its civilization'³. Outside of the matrix there appears to be the 'desert of the real' or unmarked, insignificant emptiness. In the film, the 'rebels' (Morpheus, Neo, the Oracle, Trinity, etc.) try to hack into the system --- claiming to want to free humanity from its digital bondage. These 'revolutionaries' appear to defy the matrix and to oppose it. But the social system of the matrix, controlled by corporate looking agents, triumphs and the assertion of individual will fails. In 'the matrix' social reality is dominated by an AI system --- creating a computer simulated social system. The film appears to portray anti-humanism, in the form of technological repression via VR. But the film's heroes are portrayed as computer game⁴ figures, hereby reasserting the primacy of the technological logic. 'The matrix', probably against its makers' own will, demonstrates the primacy of the systemic. 'The matrix' produces the matrix and nothing else.

System logics --- Becoming a rebel

Early on in the film, the polarity of being inside or outside the matrix, is set-up in terms of the 'blue pill' and the 'red pill'. Neo is asked to choose (to consume) the one or the other.⁵ If he takes the

² Morpheus: The Matrix is a system, Neo. That system is our enemy. But when you're inside, you look around. What do you see? Businessmen, teachers, lawyers, carpenters. The very minds of the people we are trying to save. But until we do, these people are still a part of that system, and that makes them our enemy. You have to understand, most of these people are not ready to be unplugged. And many of them are so inert, so hopelessly dependent on the system that they will fight to protect it.

³ (Office)

Agent Smith: Have you ever stood and stared at it, marveled at it's beauty, it's genius? Billions of people just living out their lives, oblivious. Did you know that the first Matrix was designed to be a perfect human world. Where none suffered. Where everyone would be happy. It was a disaster. No one would accept the program. Entire crops were lost. Some believed that we lacked the programming language to describe your perfect world. But I believe that as a species, human beings define their reality through misery and suffering. The perfect world would dream that your primitive cerebrum kept trying to wake up from. Which is why the Matrix was redesigned to this, the peak of your civilization.

⁴ 'Ego shooters' is the game genre equivalent to the quality of the matrix game. Running, shooting, hiding and destroying are the primary kind of moves of the corporate rebels.

⁵ Morpheus: ... Unfortunately, no one can be told what the Matrix is. You have to see it for yourself. This is your last chance. After this there is no turning back. You take the blue pill, the story ends, you wake up in your bed and believe whatever you want to believe. You take the red pill, you stay in Wonderland, and I show you how deep the rabbit hole goes ...

blue pill, he will wake up in his bed and remember nothing about having had to make an existential choice. But if he takes the red pill, he will be liberated and see reality as it 'really is'. Normal existence maybe an illusion; but most people choose for the blue pill, and to continue to buy into the simulation(s). Being on 'the blue pill' entails the immobile enclosure of the body in a cocoon --- with masses of hoses taking care of bodily functions and with the mind plugged into a virtual reality simulation. The 'blue pill' is a consumerist paradise (modeled on the United States 1999) --- a prosperous designer world of stable and fairly predictable relationships. The 'red pill' reveals power, conflict, danger and 'the horror' of meaninglessness. On the surface level, the 'blue world' is small-town, everyday existence; and the 'red world' is a decimated desert. When Neo takes the red pill and starts out in pursuit of individual consciousness, he goes to the rebels' 'boot camp' to undergo computer simulations that supposedly prepare him for the real world of the matrix. He is turned into a 'cyborg' --- the human-like-machine.⁶

Failing⁷ is an integral part of his training process. Negative feedback 'what you must learn ...' is the first pedagogical principle. Social, physical and time pressures --- the main drivers of reality as a computer game --- are constant. In the logic of the matrix, one does not make an effort to learn, understand or master anything. After the inevitable boot camp failure of jumping from the one skyscraper to the other, the neophyte's inner-resistance is broken. He becomes computer playable. Neo becomes a simulation of the 'real' within the virtual reality --- reality being a simulation running on Neo's operating system. The matrix, in effect, organizes Neo's resistance; he is projected into the logic of computer-gaming, VR and simulation. The virtual technologies self-organize his world; this is the 'meaning' structure within which 'the matrix' exists. Becoming 'real' or 'human', in the (anti-)matrix-training program, is just another position in the matrix. Neo has become a two-dimension cartoon figure in an action movie; what difference does the labeling make? Neo's initiation is framed in a universe of cool music, big city life and the (computer

⁶ Neo: Jujitsu? I'm going to learn Jujitsu?... Holy shit.

Tank: Hey Mikey, I think he likes it. How about some more?

Neo: Hell yes. Hell yeah.

Morpheus: How is he?

Tank: Ten hours straight. He's a machine.

⁷ Apoc: No one's ever made the first jump.

Mouse: I know, I know. But what if he does?

Apoc: He won't.

simulated) beautiful girl in the red-dress. All of which teach him one thing --- where others have failed, he will succeed⁸. He will self-organize as VR --- he will become the hyper-reality of the matrix. Supposedly, nobody has successfully chosen to become a computer game figure and then has won the game. He is 'human' because he chooses; and 'supra-human', because he will win. But Neo will 'win', only if he believes in himself. Self-belief makes Neo more 'agent than agent', more 'matrix than matrix'. Self-belief delivers him to his own hyper-reality and that reality is a computer game. During the first sequence of the movie, Neo undergoes his socialization and with him the audience. Neo gains the identity of a game character; the cinema audience enters the universe of gaming.

The self-organization of communication

Morpheus (the 'father' figure) brings Neo (the 'son') to see the Oracle (the 'mothers' role). With the addition of Trinity (the 'daughter' / sister / sex figure) all the oedipal positions are filled in. The interactions self-organize along the lines of these basic psychological structures. Though Trinity's position is ambiguous, varying between sister and lover, daughter and hero (i.e. the masculine). In the visit to the Oracle, the principle is made very explicit that communication (interaction) exists before it is enacted. The 'simple guiding principles' of the matrix channels identity down pre-set paths:

Oracle: I know you're Neo. Be right with you.

Neo: You're the Oracle?

Oracle: Bingo. Not quite what you were expecting, right? Almost done. Smell good, don't they?

Neo: Yeah.

Oracle: I'd ask you to sit down, but your not going to anyway. And don't worry

⁸ Morpheus: ... If you are not one of us, you are one of them ... We are survived by hiding from them, by running from them. But they are the gatekeepers. They are guarding all the doors. They are holding all the keys, which means that sooner or later, someone is going to have to fight them ... I won't lie to you, Neo. Every single man or woman who has stood their ground, everyone who has fought an agent has died. But where they have failed, you will succeed.

about the vase.
Neo: What vase?
{Neo brushes the vase on the small table that falls and breaks}
Oracle: That vase.
Neo: I'm sorry.
Oracle: I said don't worry about it. I'll get one of my kids to fix it.
Neo: How did you know?
Oracle: What's really going to bake your noodle later on is, would you still have broken it if I hadn't said anything. You're cuter than I expected. No wonder she likes you.

The Oracle can anticipate the virtual reality. Instead of the VR playing with her, she can (evidently) play with it. The Oracle, as in the joke about the vase, can create matrix mimicking, simulations. Could she be just another manifestation of the matrix? As long as communication (interaction) occurs, how important is it if it is technologically enhanced? Is 'real' communication, any less self-organizing or more 'subject centred', than in the matrix? Is the technophobia of the matrix a crucial issue, or only a distraction from the general insight into how communication self-organizes?

Neo has to 'plug-into' the matrix to meet the Oracle and the Oracle-intervention works --- behaviour gets programmed. Individual, pre-adaptive selection is achieved. In matrix-ation, knowing and imagining are done beforehand. Thereby things actually get done. Education and socialization are portrayed as taking place in a closed system. Evidently, every character in the game has had to run through the same training program. Perhaps one undergoes the matrix only after having chosen for the 'red pill', or after paying for a cinema ticket. But there is one reality, just two relations to it. The 'blue world' is 'thrown' into the matrix without knowing it; the 'red world' supposedly tries to 'throw' itself out of the matrix. Severance is the principle that 'forces one to know'. But real severance ends the communication and observing from the outside commences. Severance in the matrix, has to do with 'belief' and not communication. The rebels are defined in

terms of their relationship to the matrix, and the film records their actions in relationship to it. The rebels have lost their 'belief' in the matrix --- in its 'validity' 'value' and 'goodness', but are organized throughout the film by it. There is no severance, no end of communication in the film, and thus no 'outside'.

The matrix can be compared to the Lacanian 'mirror phase'; from the inside there is no individuality or identity, and from the outside there is division incompleteness and separation. From the inside, you cannot know yourself; and from the outside, you can only long for the lost completeness of not knowing yourself. No option is 'complete' --- no humanist 'fullness of identity', is possible. There is no escape from the falsity of identity --- either the 'I' 'does not know the (real) 'self', or the (real) 'I' yearns for the impossibility of a 'self'. The matrix, as the non-being of 'self', prevails. Neo is never reflexive or introspective --- he only exists in the second half of the film as a game-figure. He is the 'One' (the hero, the survivor, the human subject) because he does not seem to exist to himself, but is entirely externalized as his role, identity and 'self'. He achieves 'self' via the total flight from 'self' --- by becoming what key others (Morpheus, Oracle, Trinity, perhaps the agents) think he should be. He has become the idea that the others had of what he should be, and that defines his 'real self' versus the 'virtual self'.

Self-organizing, beliefs, trusts and reality

The matrix deals with values and beliefs on the individual level. These 'values' are not shared pre-structures to existence, but merely collections of individual assumptions, decisions, heuristics or points of reference. People have beliefs, but they do not use their beliefs to question the assumed pre-structure(s) of social reality. It is crucial for the 'good' characters to believe in their beliefs. If they doubt⁹ them, their identities crumbled. The key prerequisite to a radical analysis of the matrix is the ability to break the patterns of communication and to become an outside observer. This is denied to the characters in the film¹⁰. But an observer can only problematize

⁹ (Construct)

Morpheus: What are you waiting for? You're faster than this. Don't think you are, know you are.... Come on. Stop trying to hit me and hit me.

¹⁰ There is one scene where 'Agent Smith' acts as an 'observer', wherein it is ambiguous if he is an 'observer' or is just 'playing' being human and thus capable of observation.

regimes of communication that are sufficiently substantial and where there is enough energy being (self-)organized. Analysis of existence as a closed structure, wherein human reality is determined, is a far more mechanistic task. Practices of self-organizing are hard enough to analyze, but is the basic logic of self-organization too analyzable? Only via existential doubt, can the principle of self-organization be deconstructed; a level of awareness that is structurally blocked in the matrix.

In the matrix it is only by believing in oneself, that one is able to be 'good'. Neo is not the One, until he believes in his own destiny. Morpheus knows that he will find the One, but can only realize his identity by actually doing so. Trinity believes she will fall in love with a (dead) man and that the man who she falls in love with will be the One. Identity cannot be achieved via the predestined path. Identity operates as so many simple guiding principles. Every time a character could be unsure of the next action, the simple guiding principle is brought into play and that resolves the matter. Only by believing in, and acting on, these individual 'truths'; do the 'good' characters gain their identities. But none of these identities are in the least self-created. The characters possess no inward ability to co-determine their actions, fates or circumstances. Identity is not a dialogue between the self and other, person and world, history and future. The self, in the self-organizing of identity, is negated. 'Truth' exists, and thus 'identity', in so far as one believes in the predestined order --- the matrix is another term for being pre-determined. Sense making occurs in the light of the guiding principles assigned by the Oracle. An external Other makes sense of the 'I' --- but the 'I' cannot do this for its self. For consciousness, in 'the matrix', there is 'no-place' outside of the system. The matrix functions as a social psychological pre-structure and as the pre-consciousness of identity --- nothing logically precedes it.

All cognition and communication require pre-structures or pre-conscious assumptions to function. The workings of hermeneutic circle can be (re-)interpreted to be forms of self-organizing. It is only when the heuristics seem to 'go their own way' and to be 'out of control', that they become threatening. In the matrix, the heuristics of the technological society, of informatics and of globalization, have 'declared war' on the 'liberal humanist subject'. Perception always depends on heuristic assumptions to make perception possible. The reality of organizations, of society and of

other systems, is maintained by shared pre-consciousness. From the individual's perspective, beliefs are points of reference that act as 'simple guiding principles. They are assumptions making perception possible. For both the 'free' players and the agents, the value system of the matrix makes reality construction possible. This reality construction is defined in terms of: simulation and projection, psychic needs and the exertion of will. It is individually centered. The person counts on his / her individual 'will'. There is little collective will or shared experience; rampant individualism is assumed. The individual has to fall back on him-herself. Under matrix conditions, reality is experienced as information that is not self-confirmatory. Reality is communicated, but not shared on an embodied or tactile level. At best, in a crisis situation, one's allies 'root for one'; but they cannot do much of anything to help you. The rebels only help one another, by providing reality-escape holes from the matrix. It is as if the only thing people have to offer one another is escapism and (computer) gaming. Powerful emotions like love, only exist as nostalgia. Love as shared existence, as immediate mutual emotion, is not (in the matrix) an option. For instance Trinity cannot experience community or *mitsein* --- 'love' is only a label that she can make use of after the fact.

Static and dynamic

While all the bits and pieces of the matrix (the system) exist in relationship to one another, they do not dynamically define one another. Recursive operations within the system may be able to transform or eliminate system components, but do not seem to have the ability to undermine the code itself. The system's components, and the range their possible moves, are evidently pre-defined, pre-determined and pre-structured. The computer simulation of the matrix, seems to be based on tight-coupling. The rebels (the principle of freedom and individuality) cannot escape the agents (the principle of control, discipline and order). There is no escape from the binary code --- rebel and agent do not surpass themselves to become something new or 'more'. This is self-organizing, without transcendence. The matrix can be ironic and paradoxical; things can slide from position to position. The boundary between rebel and agent is porous. Along the membrane

there is room for all sorts of alteration. But the dyad --- the basic structure of self-organizing --- is unperturbable.

Therein, the matrix displays a key problem with system(s) thinking. For instance, in the ontology of Stuart Kauffman's complexity theory, quite similar issues are visible. (Kauffman, 1995) Kauffman portrays reality as a closed system that develops towards complex(-er) order. Individuals have to adapt to exist and / or, to survive. The logic of reality may be unpredictable, untouchable and unstoppable, but particularities -- whether people, circumstances or organizations, can only undergo logic. Kauffman conceptualizes¹¹ human interactions as self-organizing and complexifying. But human awareness is cast as an element within the system that does not know where the system is going. Humanity is depicted as an experimentation in complexification. The experiment might be leading down a blind alley. The logic of emergence will proceed further, whatever that may mean for humanity. As in the matrix, fate is not in the hands of persons or events, but in the hands of the system logic. And in that logic, the only alternative to the matrix is just another version of the matrix.

What does 'reality' have to offer? Complex relations which change the rules and structures of communication? Twists and turns of identity, and circumstance wherein new emotions, other solutions and different politics, emerge? No. In the matrix the alternative 'real world' is just as robbed of complexity, as is the matrix. In fact, within the film the 'real world' is only defined in relationship to its not being the world of the matrix. Self-organization, if taken to the extreme, leads us into a trap, wherein there is only the 'system' and 'nothingness'. One has to 'choose' for the 'suffocating falseness of being' or the 'emptiness of creating something in the nothing'. But surely this dualism misses the point. Self-organizing is interesting as a social process, as practices of communication and as event. Its value is not just to set up another dualist antimony. Self-organizing, as a process concept (ontic), has much more to offer than self-organizing as an ontology. In the lived world of self-organizing, there are relationships and activity, communication and production, identity and conflict. The ironic, self-depreciating relationship between Neo and Agent Smith, is by far the most existentially interesting relation in the film. At the boundary of the

¹¹ The experiments are organized in the form of computer code and observed from the outside.

systems --- or on the membrane between inside and outside; all sorts of things can happen. The problem is, that once one reifies organizational identity --- for instance into 'rebels individual freedom' versus 'agents systemic control' self-organization loses its dynamic and creative dimension. Self-organizing is a rich and valuable insight, when one takes the hyper-complexity of the (social) structures that confront one another in society into account. The complexity of the vectors to self-organizing are tremendous. Different sub-systems, various organizational possibilities, tug at every bit of 'reality'. Concrete descriptions of self-organizing are needed. Wherein the complexity of structuration comes to the fore.

The social field of the matrix, is totally de-complexified. Self-organization is made into a caricature of itself. Without the complexity of multiple referents, self-organization can look like a simple dualist system. But the key quality to self-organization, is the complexity and divergence of the patterns, forces and attractors involved. Self-organization has been studied, to date, too much as social structure and too little as phenomenological process. Self-organization is interesting, not as an invitation to reify organization, but as a possibility to complexify what is known about organizational processes.

In the 'real' world of the matrix, nothing gets made or created. There is no sense of the 'new' or of the 'generative' The matrix's alternative 'world', is just another loop leading away from the matrix and then back into it. There is no emergence --- nothing 'new' or different can occur. The agents do not change their identities, the computer game violence of the dissidents, prevails. Self-observation is not possible. Existence is constantly re-invented as structurally predetermined operations, that are blind to themselves, and to the Other. The matrix is an endless feedback loop of illusion, escape and re-entry. There is nowhere to go. At the end Neo merely re-enters the matrix. The logic rotates around a hyper-real assertion of illusion and identity --- where one leads to the other. The two exist in a tightly-coupled relationship. Rebellion leads to playing the game all the more powerfully. And that re-integrates one into the game. The players are caught in the endless loop of 'the matrix'.

Observing the matrix

Morpheus --- the resistance leader in the movie --- is, in ancient Greek-mythology, the gatekeeper between awaked-ness and dreaming. If the film is a dream illusion, what is awaked-ness like? What happens if we try to perceive the matrix from the inside out? Seen from behind the screen, the matrix observes us. And how can we know, if we are (or are not) a dream-image? Could we be the matrix, that the dissidents within the film are trying to awake from?

If reality is defined in terms of mind, how can we distinguish between, the real and unreal? If the eye (or 'I') is identified with the 'stream of consciousness', the movie projects; then the matrix would determine the viewer's perception. The gaze is the gaze of the person watching the film. And the person watching the film, is enclosed in a machine directed cocoon --- submersed in a dark synthetic environment, within which no one actually does anything (a movie theater). Thus, the matrix has the observer --- who is experiencing the matrix --- in a matrix, before the film ever starts.

The meaning of 'matrix' in Latin is uterus --- a dark and humid place out of which the 'I' / eye upon the world, potentially emerges. The movie performs a reversal on the ancient connotations. Thanks to Brecht, the possibility of using theater to propel the viewer outwards, into social action, is always present as a possibility. The matrix is a reversal; it uses viewing as a mechanism of self-reference that encloses the viewer in the reification-mechanisms of the film. The matrix gives birth to itself.

The process of seeing and looking, can be problemized in film. But this does not happen in the matrix. Seeing, directing and filming are not thematized. Reflection as self-reflexivity is not on the agenda. Film can show the director's gaze, in how the camera is used. Within the matrix the viewer is imprisoned in simulation. The matrix is (a) 'uniform' --- as Kafka called the movies. The only way to exit, is to leave the cinema. The observers are fixed in their place (in the cinema seats), while the matrix plays with their imagination. The audience is sentenced to (passively) follow the projected messages --- until the end. There is no escape from the screen. The matrix is explicit about structuration. The first message that Morpheus (the game facilitator) displays on

Neo's computer screen, is 'the matrix has got you'. Instructions to watch and to play along, are obvious.¹²

The matrix permits no taking of distance from the action --- an escape from the stream of events is impossible. Restricting the observers' thoughts and reflective ability are a source of power for the movie. Arsenals of digital effects were developed to mesmerize (and tighten) the viewers into the matrix. The matrix's constructors remain anonymous hidden and unseen. Often movie directors find ways to comment on, and add their signature to their work. There is humorist self-referentiality, as in "Rollerball", "American Psycho" or "Death Race 2000"; or the possibility of introducing a narrator, as in the early versions of "Blade Runner" and "The Big Lebowski". Nothing like this happens in the matrix --- the movie is an absolute virtual reality, even from a gaming point of view. There are good and bad characters; the goal of their game is supposedly to make the "world a better place". The matrix is absolutely serious about itself: once you are dead in the game, you supposedly die in the real world. If the game terminates in an unforeseen way, the players involved fade away for real. The directors' point of view is hidden. The directors are an unseen all-powerful force --- acting as an extension of the matrix. There is no gaze, no way of looking, which is subjective or personal. This is a positivist world --- the power conflicts, and force fields, just 'are'. The matrix is a hypnotizing experience of visual stimulation. Who sees the matrix and how it is seen, is irrelevant to the matrix. It just 'is'. There is no separate 'act of seeing'. It is enough that the matrix sees you and writes its message onto your face, in the movie theatre.

Re-entering Lacan

The matrix functions by displaying what it is not. Desire is directed to the missing, unknown and unfulfilled. One cannot desire what one already has. What is missing, lacking and the *manque*, that generates the fundamental desire driving the film?

First of all, sex is lacking in the matrix. There appears only to be abstinence (Morpheus), frustration (Cypher) and/or masturbation¹³ (the designer of the woman in the red dress). The

¹² Follow the white rabbit ... It is either through this window or into their custody ... it is our way or the highway ... trust me Neo ...

forms of sexual expression are restricted. How people are 'grown' (conceived in the matrix) is hidden --- it is a key un-discussed theme. The 'woman in red' is supposedly a 'sex object', but she was designed by a man, as a male fantasy. The repression of sexuality seems logically to be linked to the use of violence (aggression) as the dominant form of body language. Weapons as phallus, are a very obvious displacement in the film. From Marcuse to Zizek, critical psychoanalysis has stressed how sexual repression (inactivity) translates into political violence. (Marcuse, 1998; Zizek, 2001) The examples are commonly drawn from the third reich, the goulag and Hitchcock's obsession for clean toilets. In the balance between existence as in-determinant and immediate embodiment, and existence as 'truth' 'law' and destiny; the matrix sides entirely for the latter. In this sense, the matrix is a political regime or an abstracted general social order. The characters in the matrix are obviously cardboard cut-outs --- they exist to illustrate the dominant political logic of self-organization. The total primacy of the structure of the matrix, devalues intimacy, tenderness and love. Sexuality is marginalized. The phallic visual representation of Trinity (the 'woman'), contributes to the sexual confusion. She has weapons as a phallus, just as Neo does. The form of sexuality that they share is very ambiguous --- in some ways, more homo-erotic than heterosexual. Desire as 'romantic love', is important to the film's ability to escape its own logic and to provide (an unconvincing) happy ending. The logic of consumerism, overpowers all comers.

Simulacra of 'order restored' and human-normalcy-triumphant is provided (it is Hollywood). But, just because they are so obviously a consumerist simulacra, they are 'inauthentic' and flimsy. Since physical sexual activity is present (almost) only as absent; the film is very limited in what it can show of relationship. Sexuality can be defined the as the over-riding angst of the matrix, and as part and parcel of its fundamental fear of the other. Embodiments, as a precondition of sexual fulfillment, is just as taboo in the matrix as in the Western. The (Agent) who represents the matrix, voices his disgust of human odors and of human physicality. The matrix deals with humanity only as mind and makes body irrelevant. Death is even defined as 'mind killed in VR'. The matrix

¹³ Mouse: The woman in the red dress? I designed her. She, um...well she doesn't talk very much, but...but if you'd like to meet her, I can arrange a much more personalized meeting. Switch: Digital pimp, hard at work. Mouse: Pay no attention to these hypocrites, Neo. To deny our own impulses is to deny the very thing that makes us human.

represents bodiless human identity wherein the mind is the only thing that counts. It is not the mind of consciousness --- of awareness or knowledge, but a mind of virtual fantasy and violence. The same critique applies to the cyborg idealism in the 90s, when it was claimed that avatars were liberating, because an avatar's gender, race and physical appearance could be transformed at will. The cost of is self-alienation from embodied existence is a self-identity based only on information / communication / mediated-ness. The Cyborg idealists may not have inhabited the matrix, but what they thought was a matrix.

The matrix denies McLuhan's assumption that under digital conditions humanity would be united, celebratory and responsive. (McLuhan, 1992) In the matrix longing for a tribal *jouissance*, only exists as not existent. The sexless cowboy hero --- who is so 'clean' that sex is an impossibility for him --- has been projected into a new cosmology. The accoutrements of the Wild West have been replaced by those of information technology. In the Western the hero turns disorder and chaos, into order and justice thanks to the power of individuality. In the matrix the individual can at best, avoid the totalitarian order --- but evidently, cannot really change it. Playing in the matrix, only reproduces the system. In the Western, repressive exploitative and individual avarice, loose out to justice and goodness. In the Western's simulacra of the pre-industrial age, oppression is left to play itself out on an intimate scale of local events, in the realm of a few players. But in the simulacra of the postmodern consumer society existence is characterized by connectionism. Everything is linked to everything else, there is no local, only a regime of the global. The specific that is isolated from the global, is denied as a possibility. Even a dozen 'humans' (or rebels) have to be hunted down by sentinels (Squiddies) and pursued by the agents. The Western is situated within specific physical (which are linked to temporal) boundaries --- that is the small town, the prairie, farms, the terrain traveled through. The matrix is a post-industrial world with a dream reality. Its order is technically institutionalized and virtually embodied in simulation. Individuals may be able to temporarily escape the technology, but they cannot change its identity, which determines their desire.

The matrix is Descartes, with dramatic reversals. Physical action is identified with mind. This is of course, in terms of Descartes, is a contradiction. The matrix takes the 'I think therefore I am', and

perverts it into 'I run shoot and win therefore I am'. The matrix assumes the primacy of action, not of reflection; 'I run, shoot and conquer', precedes everything else. Instead of proving, the necessary primacy of consciousness ('I think'), the non-reflective 'throwness' of the computer game is the begin point. For an action figure in a computer game fast reflexes are what count. In the computer game, 'I play and therefore the matrix is enacted'. Mind is blind to itself; it is defined as the ability to be totally lost in the world of gaming. Mind in the matrix is a simulation running on automatic pilot. The matrix displays images to connected observers. Hyper reality can be thought of as everything, the key to human existence --- the big Other, the grand signifier, because all VR is mind. It has no other 'substance'. But hyper-reality is also nothing, a purely virtual deception where a bodiless body is plugged into the game ports. The players enjoy the game the hyper-reality is the symbolic Other of the postmodern society. It is an Other defined in terms of consumerism, VR detached narcissism, life-style choices, (isolated) individualism, violence and social disengagement. All of these are characteristics of the matrix. The matrix is the social Other of a society governed by simulacra.

Self-Organization

Popular business literature has touted 'self-organization', but books like Kelly & Allison's *The Complexity Advantage* (1999) do not take the self-organization that they seemingly champion, all that seriously. In self-organizing systems, the system self-structures. Kelly and Allison assume that traditional individual human agency remains paramount, also in self-organization. For them, self-organization is all about open systems, feedback loops and co-evolution leading to competitive advantage. Diversity and leadership, purpose and trust, emergence and a strong sense of reason, supposedly lead to open evolving systems. Webbed networked organization may strengthen communication and give support to creativity, but these are not key dimensions to self-organization. In self-organization the social / economic system would logically seem to be self-defining. The system would not be defined by leaders or by intentional human activity, but by the dynamics of its own social system. But in an organizational theory, grounded in the assumption of the 'human liberal subject', leadership and creativity, intentions and purposes,

consciousness and decisions, are paramount. (Hayles, 1999) Surely in self-organization, the key assumption is that the organization is the actor and that the organized 'falls into place'.

Imagine a flock of birds

Self-organization implies the primacy of organizational structure, wherein organization defines its own boundaries structures and gestalt. If something else acts as 'first cause', then the organization is the dependent factor. Self-organization creates a radically self-reflexive logic, one wherein organization determines organization. Up to now, most management interpretations of self-organization have failed to grasp the real radical-ness of the concept.

The flocking behavior of birds, has served as a popular metaphor for 'self-organization'. (Roos & Lissack, 1999) On one level, flocking behavior is characterized by choice --- a bird (any bird) takes the initiative and the flock redefines its direction, but the same pattern(s) or formation always reassert themselves in relationship to the direction taken. It is the formation in which the birds fly, which is structurally given. In the choice of the direction there is indeterminacy, but in the social structure of action --- that is the collective behavior (configuration) of the flock --- there is predetermined 'social structure'. There is a balance between self-organization and 'choice'. In flocking, it is the flying formation of the birds that self-organizes. Thus, by analogy what does it mean for organization to self-organize – what are the limits, blind-spots, inbuilt destructive forces and characteristics of self-organizing?

Organization as Social System

Use of Luhmann's sociology of social systems clarifies the implications of self-organization (Luhmann, 1984 in German, 1995 trans.). It is not our goal to 'do justice to' Luhmann's text – that is, to do text exegesis. Via insight into 'self-organization' and the logic of 'social structure', an alternative theorization of organization is possible. The radical significance of self-organizing has been ignored in organizational studies.

Self-organizing, wherein organization organizes organization, has been neglected for an approach to organization wherein the (individual or collective) subject is determinant. All forms of

managerialism approach organization from the subject's or the manager's, perspective. A lot of 'critical management' approaches organizing from a neo-labor process position; that is from the positions of the workers or consumers, the exploited or disenfranchised. Thus, again from the point of view of a subject, just a different one. In this paper, we want to explore what 'self-organization' implies, if the assumption that the system structures itself is taken seriously. To examine self-organization, we make use of Luhmann's social systems theory. The emphasis will be on Luhmann's analysis of structure and the discussion of change and evolution figure strongly in the closing discussion. Luhmann tries to think through system causality, without assuming the 'liberal humanist subject'. This means undertaking social analysis, without the assumption of the psychological 'self' as first cause. Luhmann defines an organization as a system that produces itself as an organization. What remains to be done is to observe characterize and describe the: *how* this self-production takes place. Luhmann does not see constitutive individual human (or group, or cultural) intentionality, or any other 'essential' (such as efficiency, fairness, innovativeness), as the primary determinant of organization. The functioning system of social interaction is the key aggregation level for analysis. The organizational system functions as long as it can "produce further operations out of the present state of being, into which it has put itself". (Luhmann, 2000)

The 'liberal humanist subject' is, in self-organization, transformed into a *quantité négligeable*. In analysis assuming the 'liberal humanist subject', it is taken for granted that the biological level of existence can be ignored. The human subject, who supposedly decides and is responsible, makes things happen, and experiences the effects of events. The subject who perceives and orders existence, does not have to take breathing, eating, defecation or sex into account. The subject sees what has to happen, hears what is relevant and points to future goals. It is a subject, that does not need to take vision, hearing or physical movements into account. Perception and bodily coordination do not have to be accounted for or understood. They can just be assumed. If bodily existence can function as a mere assumption to 'individual purposeful action', why could not individual consciousness function as an assumption to collective or social action? There is no *a priori* reason why the one level can be shifted into the abject and not the other. Thus organizing

could be described without reckoning with individual consciousness, by analyzing it 'on its own terms'. The ability to self-referentially distinguish oneself from one's environment, and from other organizations, is crucial. The organization has to maintain its own boundaries in relation to its environment. In the foreground / background relationship of the organization to its environment, the background that defines the foreground is always hidden. What organization 'is' is always backed-up by what it 'is-not'--- and the 'is not', remains implicit, hidden and assumed. In self-organization, the system can "solely operate in the context of its own operations while it is at the same time dependent on the very structure that is created by its operations." (Luhmann, 2000) What happens if one assumes that the social is operationally self-referential, and self-organizing? What if systems seriously follow their own laws, exist within their own self-contained and self-produced logic(s)? This is what the challenge of self-organization really entails.

Self-observing systems

But if a system is really self-organizing, how can its organizational dynamics be known? If one takes self-referentiality to the extreme, then only the organization could 'know' 'decide' and 'communicate' about its own organizing. The crisis in the observer's position is certainly a reason to resist self-organization. The observer has to describe the organization in terms of differences that are produced by the system itself. It is as if one observed a self-organizing social system from within, and then stepped outside in order to experience the system's 'laws' 'mechanisms' or 'logic'. It is not possible at the same time to be inter-acting within and to be outside, observing. Naturally the contemporary society is characterized by a great multiplicity of systems. Single enclosure --- an absolute commitment to one social system --- is impossible. One has professional, familial, consumerist, free time, etc. involvements. Thus, even if the various systems were self-organizing, the person would still have some ability for comparative analysis --- there would be poly-contextual options opening possibilities for description. But the relationship between the 'inside' and the 'outside' of the system, is tendentious. A system exists, in so far as it is inclusive; if the system is really 'open', then it belongs to some other system or isn't a system at all. A system is a social order that possesses a significant degree of closure. If there is no

closure, there is no system. If a loose network of elements, is characterized by an on-going flow of different components that are organized in a variety of changing manners, there is no structure. Loose aggregations are not structures. Thus self-organization is not a procession of loose aggregations, all driven by subjective volunteerism. In self-organization there is flow and motion, but also enough order for the structure to remain recognizable. Structures have to be “taken for granted in terms of their functionality, contingency and possibility to be different as well”. (Luhmann, 2000) But because the analysis of organization does not take individual awareness as its privileged point of departure, the issue of the observer persists. The structure is defined from within --- self-organizing exists, in so far as it holds the elements involved, together. Every action is dependent on structure reproducing structure, which is what counter-acts the disintegration of the system. Structure is not what an observer sees from the outside of the structure; it is what the organization brings together, orders and produces. Organization, seen as an object of perception from a distance, can never encompass the activity of self-organizing. The self-organizing process is an activity --- an operation or movement, a ‘verb’; the external perspective objectifies (or reifies) the structure sees self-organizing as a ‘noun’. This displacement makes self-organizing --- as activity --- inaccessible from the observer’s (outsider’s) position. Thus to study self-organizing, one has to abandon the detached observer’s position, which can merely experience the system as just another environment and not as a system. Scholars of self-organization need find ways to enter into the self-observation of the system’s operations. What are the self-organizing activities of the system and how can they be described? What self-descriptions do the systems use to make sense of themselves? How are these self-descriptions produced, communicated, remembered, and how do they fall into oblivion?

Double contingency

Social systems are communicative systems. What happens in an organization but communication? An organization is a movement of materials and techniques; it is the passage of ideas and decisions. Accounts --- stories and strategies, money and sales --- all move through organizations. (Munro, 1996) And these ‘accounts’ are all communication. Communication

(re)produces the distinction between the system and its environment. Within the system, there is nothing without communication. Social Systems organize themselves in the form of communication. They are processes, actualizations and unfolding patterns of communication. But what then holds the structure together; why doesn't the communication lead to the destruction of the organization? Asymmetrical interaction acts as a constant irritant --- the communication could breakdown and the system disintegrate. The self-determined cohesion of the system is fragile. Communication can lead to the end-of interaction.

The maintenance of meaning, depends on the operation(s) of 'double contingency'. Self-organizing is a complex recursive process of experience and action, observation and being observed, of exclusion and inclusion. The dynamic unfolding of organizing, cannot be understood on the basis of a model of two persons understanding one another. In communication studies, one often sees that an Alter and Ego are identified as a set of (one Alter and one Ego) individuals, that perform different roles in communication. In such a dyad, Alter and Ego supposedly reach a consensus, and the social order is based on resulting mutual understanding¹⁴. But such a 'society', is not characterized by the multiplicity, diversity and complexity of our world. A dyadic model of human consensus, is more stable, rational and homeostatic than is our self-organizing world. Much organizational (Weick) and social (Habermas) theory has attempted analysis on the basis of the dyadic relationship. (Weick, 1979, 1995, 2000; Habermas, 1971, 1975, 1979) In self-organization, the system is identified with the communication that takes place within its own system. The recursive process of communication -- - Alter responds to Ego and Ego responds to Alter --- follows neither logical nor rational rules. But the system disintegrates, if communication stops. Alter and Ego are structurally coupled and function as conditions of organizing. They are always simultaneously present --- Alter anticipates Ego's response, while Ego anticipates Alter's response. In order, not to get lost in infinite regress or endless mirroring of expectations, double contingency has to be asymmetrical. And what makes 'double contingency' asymmetrical, is time. Alter and Ego are events, interactions and

¹⁴ Consensus and shared understanding is 'symmetrizing' communication --- with implications for the availability of truth, normative rightness of activities, authenticity of subjects and the usefulness of coherence and understanding.

circumstances. They occur and move on. Communication slides from the one meeting to the next, from the one interchange to the other. The constantly dynamic events of communication, create sufficient levels of misunderstanding (i.e. complexity) to cause continual *glissements* into other communications. Alter confronts a hyper-complex environment of constantly shifting expectations and demands. Alter has to communicate somehow, through a maze of (counter-) possibilities. 'Alter' is not, in organizing, a human subject; alter is a 'move', an action or an event. Alter is a strategy, business practice, form of operations that evokes other strategies, practices or operations. The organization of 'next moves' is, in its most general form, organized as 'meaning'. For social systems, 'meaning' is available in the specific forms of language, money, love, art, laws, property, power, etc. Negotiated processes of interaction --- of statement and response, action and reply, move and countermove --- are continuous and ongoing. Different social (sub-)systems operate based on different distinctions, and assume a variety of communication forms. Organizations are systems of communication --- ways of proposing actions and receiving responses. They generate coordinating activity and juxtapose the one (person, interest, product, group, etc.) to the other. Thus, organizations create the mechanisms of interaction. Wherein the *One* and the *Other* become *An(O)ther* characterized by the complex coordinates of linked action.

A political note

In a continuing process of social structuration, there is no place for romantic individualism, either of consultants, researchers or general managers. Self organization debunks the voices from outside of the system asserting what ought to happen. Only when the organization self-organizes, is it itself. If the observer, in order to assert the primacy of his or her point of view, stops the organization from self-organizing; the organization as a living communication system, collapses. This is exactly what happens in much consulting. The consultant refuses to be on the inside of the organizational activity. Consultants often think that their value is to organize organizational truth, from the outside. If the organization succeeds in self-organizing, despite the consultants' interventions, their work was valueless. And if the consultants stop the organization from self-organizing, the organization collapses. Acting from within the organization's self-organizing,

means becoming part of the ongoing moves and accounts, of self-organization. How organizational studies can be practically effective, intellectually productive, and operate within conditions of self-organization; is a theme we will return to in the conclusion. There is no antithesis to self-organizing, other than self-organization that fails to fall into place. Self-organization is digital --- it either is 'on' or 'off'. There exists no graduality. One can be inside or outside self-organizing. The antithesis assumes the possibility of a counter logic, an anti-system that can replace the system. If the system stops to exist, it merely stops to exist. If organizations are processes of social co-ordination, within which social exchange of all types are ordered; then the subject is structurally coupled to systems of meaning, language, exchange and production. These structures organize the organizational field within which society occurs. Human existence takes place inside organizing, with myriads of structures that form, at any one moment, the ongoing communication of our social environment. How social action is structured, is a very relevant question. If social structures are self-organizing, can they be tweaked by individuals? Do they run afoul of irritants --- unexpected results, the paradox of the risk society? But if social structures are self-organizing, they cannot be reconstructed via planned change, business strategies or political volunteerism. Is organization potentially an object of subjective will? Many on the left, wish to deal with the 'double contingency' question in a way that preserves room for their (individual) assertions of justice, freedom and liberty. Ultimately their political positions and the perspective of self-organization cannot be combined. Some may claim to be (social) structuralists, and to demand leftist ('critical') political engagement. They claim, in effect, to be an observer outside of the self-organizing who is in possession of 'ethical' truth. But if double contingency is crucial to self-organizing, then the communication of organizing cannot be willed to stop, turn-around or do what we want. The self-organizing systems of money and banking, industrial manufacture, technological development, intellectual and cultural production, all have their own communication and momentum. Most of the time, persons find themselves organized into these (and other) systems. The world into which the person is 'thrown', is already self-organizing, before s/he comes to it. The 'meaning' of organizing is pre-structured and on-going. But does the momentum of self-organizing only follow some 'pre-destined' route? If time is really

crucial, if self-organization is really episodic, what are the degrees of freedom inherent to the process? And can these degrees of freedom be influenced? We return to these issues in the conclusion. If organizing is to receive the conceptual attention that it socially warrants, then (1) the organizing that is self-organizing, and (2) how organizing self-organizes itself need to be described, observed and taken seriously. The halfhearted tradition of studying organizing, but really assuming the priority the 'liberal humanist subject', just is not enough. Self-organizing is a far too radical principle, for such compromises.

Opening --- escaping the matrix?

Can one deal with organization in terms of a simple dualist universe of individualism vs. conformity, reality vs. hyper-real, freedom vs. repression, or does one have to face up to the problems of polycentrism? If contrasting versions of realities (*significances*) are legitimate, how does organizing proceed? It is one thing for literary criticism to admit that differing interpretations of a text can be legitimate, but it is quite another to acknowledge the same point, when in the middle of decision-making. Of course, current organizational practice is very ambiguous. Often it maintains the official fiction of a unitary organizational strategy or identity and allows all sorts of sub-truths to exist, in so-called 'informal organization'. The formal organization frequently is hyper-real; its members cannot identify with it or to be committed to it. And the ability of the informal organization to contribute to decision-making, is jeopardized by the disruption of communication born of the hyper-real excess. The matrix dramatically displays what goes wrong when self-organization is hyper-real. Its simple guiding principles are too simple and excessively 'dirigist'. The bands are too tight, communication too structured and unified. Corporate / technological / scientific organizing leave in the matrix too little room for speculation, diversity and individual consciousness. Of course organizations can only accept a certain degree of difference and diversity, before they disintegrate. But without enough requisite diversity there will be little or no dynamism or force to the organizing. Without access to the imaginary organizational 'group think', will lead to stagnation. The matrix's closed structure and extreme formalism, define a totalitarian episteme, wherein difference is (next to) powerless. The matrix is, in effect, a

panopticon in reverse. Rather than watching behavior, it supplies the behavior that is to be seen. Total influence over consciousness is, of course, much more effective than trying to watch and control everything and everyone. Control over the mind is much more powerful, than any attempted disciplining of behavior. Total control of communication and information, has always been the ambition of the totalitarian organization. The matrix achieves it. Many organizations claim that they 'want all the noses in the same direction' but have not thought about the totalitarian implications of such an ambition. The matrix achieves such total control. The excuse is given, in the film, for the creation of the matrix, is thermodynamic. Human energy was needed to keep information exchange going. The theme of energy levels --- 'real' or metaphysical --- is crucial to self-organizing. A thermodynamic analysis of reality is a key assumption of the matrix. The most fundamental relationships are understood in terms of energy and entropy. Prigogine clarifies the limited validity of any such analysis, based on the second law of thermodynamics. The human world is an open system that receives energy from the sun. With the disappearance of the sun, the assumption of the matrix is, there would be a closed system.

The second principle of thermodynamics contains a fear of depletion --- insufficient energy leading to generalized paralysis. Systems cut off from the world, that is in a universe without evolution and innovation, just run down. If the closed system model of the second law of thermodynamics, is replaced with an open self-organizing, model very different outcomes result. Complexification and self-organizing organizations evolving to higher energy levels become conceivable. Events are not foreseeable; behavior is often maintained far from equilibrium. "Spontaneous self-organization, ruptures of symmetry, evolutions toward a growing complexity and diversity" are discovered. (Stengers, 1997: 37) The matrix is 'in denial' --- it does not face up to the instability of, the trajectories and bifurcations, with which we are confronted. If a man-made disaster would block out the sun, the human world of 1999 (the assumption of the matrix's VR) would be irrevocably lost. Why pretend otherwise?

In complexity theory, systemic momentum can lead to a bifurcation, wherein radical change is possible. In this article the emphasis has been on self-organization and its logic. There were no bifurcation points. In the film the proposed bifurcation point --- the supremacy of 'the One' (that is

of Neo as absolute subject) collapses under the weight of the system. Neo is just a computer game figure, another manifestation of the matrix's self-organizing. In 'the matrix' the only meaning that exists --- fighting, gaming, and surviving --- is self-organizing. The matrix is a system of hyper-realism wherein appearances are all that counts, and internality (self-reflection, consciousness, learning) is irrelevant. The matrix perpetuates itself across all plays and players. Organization is stymied without difference --- if anything threatens to happen in the matrix, the action is stopped and restarted¹⁵. The pattern of organizing overpowers all historicity. 'The matrix' is a saga of self-repeating pattern(s).

But organizational existence is not as simple, as such a self-repetitive closed system. The operation of difference and duration makes for a dynamic complex universe. 'The matrix' exists outside of time, in a permanent illusion of 1999. But social systems exist in duration. They are enacted events --- processes that occur in time. In duration, bifurcation points emerge and identity transformation occurs. But this is a radically context bound logic of change. New situations emerge, self-organization leads to unique circumstances and events. Emergence does not follow a systemic, pre-defined logic. Emergence is not defined by its past or future --- it is a quality of the present. The operation of the social system, includes bifurcation points that are not qualities of the past (of historical [materialist] determinism) or of the future (of telos or idealism). Change is radically process bound --- it occurs in temporality. When change will happen, how it will emerge, and what it will produce; are not pre-defined. The traditional (leftist) analysis, reduces change to historical and/or ethical necessity --- making it into a logic of the past and / or of the future; but not of the present. Complexity theory asserts that radical change is possible in self-organizing, but that change (emergence) is circumstantial particular and dependent on specific circumstances. Change is not predictable --- it really is emergent. Change is derived from the unexpected effects of complexity. It is not the logic (or antithesis) of structure; change is a product of the radical shifts that occur when the logic(s) of 'double contingency' breakdown and / or shift.

¹⁵ Morpheus: ... Were you listening to me Neo, or were you looking at the woman in the red dress?

Neo: I was...

Morpheus: Look again. Freeze it.

Neo: This...this isn't the Matrix?

Morpheus: No. It's another training program designed to teach you one thing. If you are not one of us, you are one of them.

At such moments, individual (or group) commitment and purposiveness can influence action. These statements must lead to (some form of) 'social complexity theory' and take distance from more deterministic uses of systems theory. In this article, we have tried to clarify what it means to describe and to take the logic of self-organizing, seriously. Via complexity theory, it is possible to honor the aggregation level of the organization, but also to take the other levels into account. The aggregation levels of i.) consciousness ii.) organization and iii.) social structure retain their ontological individuality and legitimacy in concrete organizational occurrence. But to explore these issues, one has to escape 'the matrix' and to analyze complexity as an open, unpredictable and dynamic process. Far from becoming ever more simple, our awareness of organizations and organizing needs to become more complex. The matrix attempts to deny complexification. It pretends that society operates on simple (restrictive) guiding principles.

Our analysis has inherited one of the crucial dilemmas of Luhmann's theory of self-organization. In the confrontation between Luhmann by Habermas, Habermas demanded to know how self-organization can lead at once to a reduction in complexity and to an increase in complexity? (Blom, 1997) Self-organization has value as a theory of organization, because it clarifies aspects of how organizing occurs. Realizing that organizing is not just a product of agency, and understanding how organizing produces its self, makes it much more clear how organization operates as something separate from the entrepreneur, consultant, workers, suppliers, customers, etc.. Attending to self-organizing --- the ordering of 'double contingency' in interaction --- makes it possible to see how 'organization-ness' develops and occurs. These insights, make organizing less complex --- that is easier to see more possible to understand and additionally accessible to description. But the analyzing of self-organization also increases complexification. Via self-organizing, as an analytic tool (de-complexification), one arrives at the complexity (complexification) of the organization's relationship to its members, its immediate surroundings and to the Other (the observer, the outside of organization). Self-organizing is a way of seeing the complexity of the communication or patterns of interaction, that constitute organization. It is just this complexity, that the human agent cannot master and which can only emerge via self-organizing. Organizations have to organize themselves --- persons could never keep so many

factors under control. But persons can, at any moment, have a decisive influence on how complexity does or does not coalesce into a pattern. Self-organizing highlights the exceptional moments when human agency really counts. The matrix only tells us half the story. It dramatically reveals the power of systemic logic --- the organizing side of self-organizing. In the matrix, there is no self in self-organizing. But this is what does not ring true in the film. Self-organizing moves freely between aggregation levels; between the I / me; self / other; organization / environment. On all these levels, epistemes of communication are known and are valuable research tools. The moves between the levels, generate the forms of complexity that are little accessible to our research methods. Having divided research into the psychic (psychology), social (sociology) and cultural (anthropology), we find it very difficult to work with the complexification created by the spaces between these research paradigms. Self-organization is what happens in-between the aggregation levels, as communication shifts from the one sub-system to the other. The study of the in-between, is what attention to self-organization can open up.

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