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A Few Fragments on Machines

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"In the history of philosophy the problem of the machine is generally considered a secondary component of a more general question, that of the techne, the techniques. Here I would like to propose a reversal of the view in which the problem of technique is a part of a much more extensive machine issue. This 'machine' is open to the outside and its machinic environment and maintains all kinds of relationships to social components and individual subjectivities. It is hence a matter of expanding the concept of the technological machine into one of the machinic assemblage..."[1]

Félix Guattari describes here in a few words the extent of one of the main and frequently misunderstood concepts of his heterogeneous theory production. Like many terms from the Guattarian concept forge, the machine is quite intentionally far removed from everyday language. In theory reception, this practice of bending and inventing terms led to widespread, polemic attacks on Guattari and his colleague Gilles Deleuze as "hippies"[2]. Yet the reinterpretation of the machine concept is not so new and radical as to be attributed solely to the French poststructuralists. Even at the time of the final expansion of the industrial revolution throughout Europe, a clear movement in the direction of Guattari's extended machine concepts can be found in Karl Marx' *Grundrisse der Kritik der politischen Ökonomie*, drafted in 1857/58, in the "Fragment on Machines"[3].

In this section of the *Grundrisse* Marx developed his ideas on the transformation of the means of labor from a simple tool (which Guattari
later called a proto-machine) into a form corresponding to *capital fixe*, in other words into technical machines and "machinery". In addition to the central concept of the machine, to which Marx was later to devote considerably more attention in *Capital*, here a second concept is treated on the side, which had a greater impact on further post-Marxist theory currents. The concept of the General Intellect, which Marx introduced in the Fragment on Machines as a secondary concept, was the explicit starting point for the Italian (post-) Operaists' ideas on mass intellectuality and immaterial labor.[4] The mutual references between French poststructuralism and Italian post-Operaism are generally just as manifold as the ways both currents refer to Marx *and* distance themselves from him, however the concrete relation between the

two aspects of the small Marx fragment (machine – General Intellect) got lost on both sides.[5]

Marx on Machines

In general, Marx sees the machine succinctly as a "means for producing surplus-value"[6], in other words certainly not intended to reduce the labor effort of the workers, but rather to optimize their exploitation. Marx describes this function of "machinery" in Chapter 13 of *Das Kapital* with the three aspects of entending human labor power (especially women's and child labor), prolonging the working day and intensifying labor. Yet the machine also appears as an ever new effect of ever new workers' strikes and protests, as capital confronts them not only with direct repression, but especially with new machines.[7]

In the "Fragment on Machines" Marx especially addresses the negative aspects of a historical development, at the end of which the machine, unlike the tool, is not at all to be understood as a means of labor for the individual worker: instead it encloses the knowledge and skill of workers and scholars as objectified knowledge and skill, opposing the scattered workers as a dominant power. According to Marx, the division of labor is specifically the precondition for the rise of machines. It was only after human labour became increasingly mechanical, mechanized, that the condition was created for these mechanical tasks of the workers to be taken over in a further step by machines: "But, once adopted into the production process of capital, the means of labour passes through different metamorphoses, whose culmination is the *machine,* or rather, an *automatic system of machinery* (system of machinery: the *automatic* one is merely its most complete, most adequate form, and alone transforms machinery into a system), set

in motion by an automaton, a moving power that moves itself; this automaton consisting of numerous mechanical and intellectual organs, so that the workers themselves are cast merely as its conscious linkages."[8]

This passage from Marx indicates that the machine itself, in the final stage of the development of the means of labor, not only structuralizes and striates the workers as automaton, as apparatus, as structure, but it is also simultaneously permeated by mechanical and intellectual organs, through which it is successively further developed and renewed.

On the one hand Marx here formulates the workers' alienation from their means of labor, how they are (externally) determined by the machines, the domination of living labor by objectified labor, and he introduces the figure of the inverted relationship of man and machine: "The worker's activity, reduced to a mere abstraction of activity, is determined and regulated on all sides by the movement of the machinery, and not the opposite. The science which compels the inanimate limbs of the machinery, by their construction, to act purposefully, as an automaton, does not exist in the worker's consciousness, but rather acts upon him through the machine as an alien power, as the power of the machine itself."[9] The inversion of the relationship between workers and means of work in the direction of the domination of the machine over the human being is defined here not only by the hierarchy of the labor process, but is also understood as an inversion of the disposal of knowledge. Through the process of the objectification of knowledge forms in the machine, the producers of this knowledge lose undivided competence and power over the labor process. Labor itself appears as separated, scattered among many points of the mechanical system in single, living workers. "In machinery, knowledge appears as alien, external to him [the

worker]; and living labour [as] subsumed under self-activating objectified labour."[10]

Even for Marx in the Fragment on Machines, however, the huge, self-active machine is more than a technical mechanism. The machine does not appear here limited to its technical aspects, but rather as a mechanical-intellectual-social assemblage: although technology and knowledge (as machine) have a one-sided effect on the workers, the machine is not only a concatenation of technology and knowledge, of mechanical and intellectual organs, but additionally also of social organs, to the extent that it coordinates the scattered workers.

Hence the collectivity of the human intellect is ultimately also evident in the machine. Machines "are *organs of the human brain, created by the human hand;* the power of knowledge, objectified. The development of fixed capital indicates to what degree general social knowledge has become a *direct force of production,* and to what degree, hence, the conditions of the process of social life itself have come under the control of the general intellect and been transformed in accordance with it. To what degree the powers of social production have been produced, not only in the form of knowledge, but also as immediate organs of social practice, of the real life process."[11] I will come back to the significance of the General Intellect later, but at this point the aspect should be emphasized that productive force not only corresponds to new technical machines, not even only to the concatenation of "mechanical and intellectual organs", but also and especially to the relationship of the producers to one another and to the production process. Not only the inside of the technical machine is permeated by mechanical and intellectual lines, but social linkages and relationships are also evident on the outside, which become components of the machine. The Fragment on Machines not only

points to the fact that knowledge and skill are accumulated and absorbed in fixed capital as "general productive forces of the social brain"[12] and that the process of turning production into knowledge is a tendency of capital, but also indicates the inversion of this tendency: the concatenation of knowledge and technology is not exhausted in fixed capital, but also refers beyond the technical machine and the knowledge objectified in it to social cooperation and communication.

When Theater Becomes Machine …[13]

Building upon early attempts at mass staging, biomechanics and constructivist stage mechanization by Vsevolod Meyerhold, in the Moscow First Workers Theater Sergei Eisenstein and Sergei Tretyakov developed the "eccentric theater" and the "montage of attractions" between 1921 and 1924, from which separate versions of production art strategies later emerged in film, theory and operative literature. In the Soviet Union in the early 1920s the inclusion of elements from circus, revue and film still signaled an attack on the pure practice of bourgeois theater, carried out especially by means of the "attraction". The "Theater of Attractions" involved aggressive and physical moments of theater, the effects of which were intended to disrupt the mechanism of illusion and empathy. At the same time, the montage of attractions did not signify an accumulation of tricks and artifices designed for effect, but rather the further development of circus and vaudeville elements for a materialist, "natural science" theater. What the Proletkult theater took over from the circus was the approach of the artiste, but also the fragmentation of its structure of numbers, the sequencing of "individual attractions not conjoined by a subject matter"[14]: with Eisenstein and Tretyakov, this apparent deficiency of disconnectedness became a weapon against empathy.

To counter the totality of the subject matter they mounted and molecularized the piece as a piecework of single attractions. Eisenstein wrote: "I define an attraction in the formal sense as an independent and primary element of the construction of a performance – as the molecular (i.e. constitutive) unity of the impact of theater and of the theater in general."[15] The attraction is thus more than just a circus number, it is a situation that, as a molecular unit, contains conflicts. Eisenstein and Tretyakov's intention was to create a collision with the audience.

The Theater of Attractions did not conceal this assault on the audience as the "main material of the theater"[16]. Contrary to the theater illusion inviting the audience to take part in an experience in a pseudo-participatory manner, the Theater of Attractions sought to establish a process of fragmented excitement. The aspect of montage did not determine the macrostructure of the piecework here, but was instead applied to the composition of the individual attractions. "The actors, the things, the sounds are nothing other than elements, from which an attraction is constructed"[17]: an interweaving of actors, who do not portray, but work – and of things, constructive frameworks and objects that the actors work with instead of decorations and props.[18] "The illusory action of the theater is regarded as an inherently coherent manifestation; what we have here, however, is a conscious expectation of incompleteness and of major activity on the part of the viewer, who must be able to orient himself to the most diverse manifestations that are played out before him."[19]

In his writings on the Theater of Attractions Tretyakov indicates the direction that the relationship of human-machines, technical machines and social machines should take: "The work on the scenic material, the transformation of the stage into a machine that helps to develop the work of the actor as broadly and diversely as

possible, is socially justified if this machine not only moves its pistons and holds up to a certain workload, but also begins to carry out certain useful work and serve the ongoing tasks of our revolutionary era."[20] Above and beyond the aestheticizing use of technical machines and constructions as decoration, attempts were undertaken to make the stage machinery of the theater transparent as a model for technicization and to create flowing transitions between technical machines and the constructive scaffolding and stage sets. Beyond Meyerhold's biomechanics, which trained rigid self-discipline of the human body as a machine, but easily deteriorated into danced sculpture, the actors and actresses became elements of the attraction. And finally, Taylorist ideas of the scientific administration of work and the reversal of the man-machine relationship led to the development of a concatenation of technical machines (the things), the bodies of the performers and the social organization of all participants, including the audience. These ideas of the interlocking of technical and social structures in the Theater of Attractions only remain superficially bound to a "theater of the scientific age". The attempt to also "calculate" machines this complex, as proposed by Eisenstein and Tretyakov, goes beyond a relationship of the exteriority of technical machines and social collectives and beyond purely mathematical, technical considerations.

Eisenstein described the attraction as being based solely on something relative, on the reaction of the viewers. The representation of a given situation, due to the subject matter, and its development and resolution through collisions that are logically connected with this situation, subordinated to the psychologism of the subject matter, is replaced by the free montage of attractions, which are mounted to achieve a certain final effect and thus carry out a work on the audience. Eisenstein and Tretyakov wanted to

change the order of emotions, to organize them differently. The audience was to become part of the machine that they called the Theater of Attractions. Through "experimental testing" and "mathematical calculation", they wanted to produce "certain emotional shocks" among the audience[21].

The emphasis here is on *certain* emotional shocks: contrary to the total management of emotions in bourgeois theater, this meant an excitement determined by utility and precisely demarcated by exactly mounted impulses. This attempt to "exactly calculate" emotions was the attempt, contrary to the bourgeois strategy of aesthetic fiction, to steer and test the cited reality of signs, the body work of the performers and the bodies of the audience in their interplay. However, a clear distinction must be made between the means of the old theater model and that of the new. Although the theater performance was not explicitly defined as a "process of working on the audience with the means of the theater effect"[22] in bourgeois theater jargon, the intention of "aesthetic education" implicitly had a similar effect. The Theater of Attractions, however, sought to *calculate* its audience. This also meant that "the attractions are calculated *depending on the audience*"[23]. In other words, every performance required new considerations, in fact the performance found its purpose in the audience, its material in the context of the life of the audience. It is not known how far Eisenstein and Tretyakov took their calculation experiments; surveys were taken among the viewers, their reactions meticulously observed and the results carefully evaluated. The fact that their calculations had to/were intended to take a considerable goal-consequences difference into consideration, certainly a far greater uncontrollability than the performance practices of the 19th century, was due not only to the audience classes newly won for the theater, but also to the experimental format of the attraction.

The performances of Tretyakov's *Moscow, Do You Hear Me?* must have been a pinnacle in this context, resulting in partly tumultuous situations in the theater.[24] Written, organized and produced extremely quickly as a mobilization and agitation play for a possible German revolution following the Hamburg revolt in late October 1923, it premiered on the sixth anniversary of the October Revolution on 7 November 1923. From a superficial perspective Eisenstein and Tretyakov's play failed at two levels: at one level, it failed on account of the occasion, since the revolution, as we know, did not take place. At another level, its self-reflexive theme, inciting a revolution through art, also holds the entire problematic issue of overestimating artistic practice. The revolution was to be set off not solely by the representation of situations, but by converting the situation through intervention and the abrupt transformation of the bourgeois theater into a revolutionary theater. Just in the specific performance context of the socialist society in Moscow, however, this representation of revolution was to have a different impact than in a revolutionary situation. Tretyakov and Eisenstein made use of the increasingly mounted attractions with an accentuation such that more and more excitement spread through the audience: more and more frequent heckling, viewers reaching for weapons and fist fights with extras getting involved in play fights must have resulted in an impressive chaos. And the inflamed viewers were reported to have reacted heatedly not only in the theater, but also in the streets of Moscow afterward: "[...] after that they moved through the streets, wildly beating against shop windows and singing songs."[25]

The question can probably not be answered as to what extent the Theater of Attractions intended to "calculate" with the spontaneity described above outside the space of the theater as well. The *calculation* of the audience may well have gone so far as to seek to

plan for, calculate and evaluate even chaos and tumult. With their demands for exact definitions of social tasks and scientific methods, Eisenstein and Tretyakov certainly succeeded in shifting the theater machine to a terrain so unstable that no other artistic practice would soon be able to match it.

Re-Inventing the Machine

In the "Appendix" to *Anti-Oedipus* Gilles Deleuze and Félix Guattari not only develop a "Programmatic Balance for Wish Machines"[26], but also write, in contrast to Marx' ideas on machinery[27], their own machine concept. What this involves is an expansion or renewal of the concept, but not at all a metaphorizing of the machine. Deleuze and Guattari do not establish a "figurative sense" of the machine, but instead attempt to newly invent the term at a critical distance from both the everyday sense and Marxist scholars: "We do not presuppose the metaphorical use of the word machine, but rather an (indistinct) hypothesis about its origins: the way in which arbitrary elements are made to be machines *through recursion and communication*."[28]

Marx' machine theory is introduced here with the cipher "that classical schema" and only explicitly named in the third and final part of the appendix.[29] Whereas Marx, in the thirteenth chapter of *Das Kapital*, addresses the question at some length of "how the instruments of labour are converted from tools into machines, or what is the difference between a machine and the implements of a handicraft"[30], Deleuze/Guattari find particularly the linear conception of the first question insufficient in many respects. What they question here is less the immanent logic of the transformation of the machine as described by Marx, but rather the framework that Marx presupposes as the basis of this logic: a dimension of

man and nature that all social forms have in common. The linear development from tool (as an extension of the human being to relieve strain) toward an upheaval, in the course of which the machine ultimately becomes independent of the human being, so to speak, simultaneously determines the machine as one aspect in a mechanical series. This kind of schema, "stemming from the humanist spirit and abstract", especially isolates the productive forces from the social conditions of their application.

Imagined beyond this evolutive schema, the machine is no longer only a function in a series imagined as starting from the tool, which occurs at a certain point. Similar to the way the techne concept of antiquity already meant both material object and practice, the machine is also not solely an instrument of work, in which social knowledge is absorbed and enclosed. Instead it opens up in respectively different social contexts to different concatenations, connections and couplings: "There is no such thing as either man or nature now, only a process that produces the one within the other and couples the machines together."[31]

Instead of placing tool and machine in a series, Deleuze and Guattari seek a more subtle differentiation, and in this way their query corresponds to Marx' second question about the distinction between machine and tool. Indeed, this distinction could be explained in the form of a different genealogy than the one followed by Marx, such as one that refers to the pre-modern understanding of the "machina", in which the separation between the organic and the mechanical was irrelevant. In *Anti-Oedipus*, however, this difference is treated conceptually/theoretically: the machine is a communication factor, the tool – at least in its non-machinic form – is, on the other hand, a communication-less extension or prosthesis. Conversely, the concrete tool in its use for exchange/connection with the human being is always more

machine than the technical machine imagined in isolation: "Becoming a piece with something else means something fundamentally different from extending oneself, projecting oneself or being replaced."[32]

By distinguishing the machine from something that simply extends or replaces the human being Deleuze and Guattari not only refuse to affirm the conventional figure of the machine's domination over the human being. They also posit a difference from an all too simplistic and optimistic celebration of a certain form of machine, which from Futurism to cyber-fans is in danger of overlooking the social aspect in ever new combinations of "man-machine".[33] The narrative of the human being's adaptation to the machine, the replacement of the human by the machine misses the machinic, according to Deleuze/Guattari, not only in its critical, Marxist articulation, but also in its euphoric tendency. "It is no longer a matter of confronting man and machine to estimate possible or impossible correspondences, extensions and substitutions of the one or the other, but rather of conjoining the two and showing how man becomes a piece with the machine or with other things in order to constitute a machine."[34] The "other things" may be animals, tools, other people, statements, signs or wishes, but they only become machine in a process of exchange, not in the paradigm of substitution.

Consider the fable from *The Third Policeman* by Flann O'Brien, in which the Irish author presents precise calculations of the point in time when, due to the flowing of molecules, people on bicycles turn into bicycles and bicycles into people and in which percentage – with all the problems resulting from this, such as people falling over if they are not leaning against a wall and bicycles assuming human features. For an investigation of the machine here, it is specifically not a question of changing quantities of identity on

both parts (20% bicycle, 80% human or – even more alarming – 60% bicycle, 40% human), but rather of the exchange and the flux of machinic singularities and their concatenation with other social machines: "On the contrary, we think that the machine must be grasped in an immediate relation to a social body and not at all to a human biological organism. Given this, it is no longer appropriate to judge the machine as a new segment that, with its starting point in the abstract human being in keeping with this development, follows the tool. For human being and tool are already machine parts on the full body of the respective society. The machine is initially a social machine, constituted by the machine-generating instance of a full body and by human being and tools, which are, to the extent that they are distributed on this body, machinized."[35] Deleuze and Guattari thus shift the perspective from the question of the form in which the machine follows the simpler tool, how human beings and tools are machinized, to that of which social machines make the emergence of specific, technical, affective, cognitive, semiotic machines and their concatenations possible and simultaneously necessary.

The main feature of the machine is the flowing of its components: every extension or substitution would be communication-lessness, and the quality of the machine is exactly the opposite, namely that of communication, of exchange, of openness. Contrary to the structure, to the state apparatus, which tend toward closure, the machinic tends toward permanent opening. From the text "Machine and Structure", written in 1969, to "Machinic Heterogenesis", published in 1992, Guattari repeatedly pointed out the different quality of machine and structure, machine and state apparatus[36]: "The machine has something more than the structure"[37] It is not limited to managing and striating entities closed off to one another, but opens up to other machines and

moves with their machinic assemblages. It consists of machines and penetrates several structures simultaneously. It depends on external elements in order to be able to exist at all. It implies a complementarity not only with the human being that fabricates it, allows it to function or destroys it, but also by itself in a relationship of alterity with other virtual or actual machines.[38]

In addition to this theoretical approach to a simultaneously indifferent and ambivalent machine concept in *L' Anti-Oedipe* and several older and more recent texts by Guattari, however, it is important not to omit the historical context of a normative turn to the machinic. Guattari had already started to develop his machine concept in the late 1960s, specifically against the political background of leftist experiments in organizing. These endeavors were initially directed against the hard segmentarity of Real-Socialist and Euro-communist state left-wings, were further explored on the basis of the experiences of diverse subcultural and micropolitical practices, in Guattari's case especially on the basis of anti-psychiatric practice, and ultimately flowed, even after 1968, into efforts to resist and reflect on the structuralization and closure of the 1968 generation in cadres, factions and circles.

The problem that Guattari deals with in his first machine text, written briefly after the experience of 1968, is the problem of a lasting revolutionary organization: "the problem of establishing an institutional machine distinguished by a special axiomatic and a special practice; what is meant is the guarantee that it does not close itself off in the various social structures, especially not in the state structure, which seems to form the cornerstone of dominant production conditions, although it no longer corresponds to the means of production."[39] Not only the "dominant production conditions", but also the current forms of resistance have assumed machinic form; structuralization and closure as gestures of (self-)

protection bypass this fact. Machinic institutions cannot reproduce the forms of the state apparatus, those provided by the paradigm of representation, but produce new forms of "instituent practices": "The revolutionary project as the 'machine activity' of an institutional subversion would have to uncover these kinds of subjective possibilities and ensure them ahead of time in every phase of the battle against being 'structuralized'. Yet this kind of permanent check of the machine effects that affect the structures could never be satisfied with a 'theoretical practice'. It requires the development of a specific analytical practice, which immediately applies to every step of organizing the battle."[40]

General Intellect and the EuroMayday Machine

Much of what Guattari formulated in his thoughts on the machine against the background of experiences of May 1968, has been updated in recent years – perhaps even more so than during the 1960s and the 1970s – in the forms of non-representationist movements that have become active against migration and border regimes, economic globalization and the precarization of work and life.[41] The latter is the main issue especially of the EuroMayday movement[42], which started in Milan and has sought to reappropriate May 1st, in particular, in recent years. Quite similar in this respect to the theater audience revolutionized and animated by Tretyakov and Eisenstein's play *Moscow, Do You Hear Me?*", the EuroMayday activists today also move through the streets, sometimes "wildly beating against shop windows and singing songs"; specifically through the streets of meanwhile about twenty European cities, including London, Copenhagen, Maribor, Barcelona, Hamburg and Vienna.[43] Sometimes the shop windows are broken, but more often they are painted over, sprayed and covered with a layer of new signs.[44] The EuroMayday

Parades not only renew the revolutionary traditions of May 1st, but also oppose the privatization of urban public spheres with their bodies, images, signs and statements. This kind of reappropriation of the city is consistently played out without stages and podiums, in the endeavor to counter the paradigm of representation with the paradigm of the event.

Yet the EuroMayday machine has two temporalities. Not only that of the event, but also the long duration of instituent practices, in which the connection between the machine as movement against structuralization and the machine as "social productive force" becomes clear. Organizing for May 1st is not the only dimension of the Mayday activists: even though limited by the wish and time resources of the activists, throughout the year there are micro-actions and discursive events, regular communication on mailing lists and meetings in various European cities for transnational exchange. In addition, an increasingly dense network of addressing the issue of the precarization of work and life is growing, not only in Europe.

However, this formation of instituent practices is only incipiently evident. According to the post-Operaist philosopher Paolo Virno, the movement has "not yet sufficiently bundled the forms of battle that are suitable for transforming the situation of precarious, temporary and atypical work into a subversive political asset."[45] This kind of bundling starts less with the old forms of organization by "state apparatuses" than with the concatenation of machinic forms of movement and postfordist forms of work and life. In his texts on this theme, especially in the *Grammar of the Multitude*, Virno picks up directly from the Fragment on Machines and the concept, casually introduced there by Marx, of the General Intellect. Even if social knowledge was really ever fully absorbed in the technical machines in the era of industrialization, this would be

completely unthinkable in the postfordist context: "Obviously, this aspect of the 'general intellect' matters, but it is not everything. We should consider the dimension where the general intellect, instead of being incarnated (or rather, *cast in iron*) into the system of machines, exists as attribute of living labor."[46] As post-Operaist theory formulates, following Guattari, due to the logic of economic development itself, it is necessary that the machine is not understood merely as a structure that striates the workers and encloses social knowledge in itself. Going beyond Marx' idea of knowledge absorbed in fixed capital, Virno thus posits his thesis of the simultaneously pre-individual and trans-individual social quality of the intellect: "Living labor in postfordism has as raw material and means of production: thinking that is expressed through language, the ability to learn and communicate, the imagination, in other words the capacity that distinguishes human consciousness. Living labor accordingly incarnates the *General Intellect* (the 'social brain'), which Marx called the 'pillar of production and wealth'. Today the *General Intellect* is no longer absorbed in fixed capital, it no longer represents only the knowledge contained in the system of the machines, but rather the verbal cooperation of a multitude of living subjects."[47]

By taking up Marx' term Virno indicates that "intellect" is not to be understood here as the exclusive competence of an individual, but rather as a common tie and a constantly developing foundation of individuation, as a social quality of the intellect. Here *pre*-individual human "nature", which lies in speaking, thinking, communicating, is augmented by the *trans*-individual aspect of the General Intellect: it is not only the entirety of all knowledge accumulated by the human species, not only what all prior shared capability has in common, it is also the in-between of cognitive workers, the communicative interaction, abstraction and self-

reflexion of living subjects, the cooperation, the coordinated action of living labor.

Finally, on the basis of Virno's writings we are able to connect General Intellect as a collective capability and a machine concept in Guattari's sense. Knowledge as collective intellectuality is complementary to the machinic quality of production and social movement. General Intellect, or the "public intellect", as Virno further develops the concept, is another name for Guattari's expansion of the machine concept beyond the technical machine and outside its realm: "Within the contemporary labor process, constellations of concepts exist, which function as productive 'machines' themselves, without needing a mechanical body or a little electronic soul."[48]

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Bibliography

Richard Barbrook, "The Holy Fools", in: *Mute* 11, London 1998, 57-65

Gilles Deleuze, Félix Guattari, *L'Anti-Oedipe*, Paris 1972

Gilles Deleuze, Félix Guattari, *A Thousand Plateaus*, London/New York 1988

"Ein Experiment der Theaterarbeit", in: Peter Gorsen, Eberhard Knödler-Bunte, *Proletkult 2. Zur Praxis und Theorie einer*

proletarischen Kulturrevolution in Sowjetrussland 1917–1925, Stuttgart 1975, 111-116

Sergej Eisenstein, "Die Montage der Attraktionen", in: Peter Gorsen, Eberhard Knödler-Bunte, *Proletkult 2. Zur Praxis und Theorie einer proletarischen Kulturrevolution in Sowjetrussland 1917–1925*, Stuttgart 1975, 117-121

Félix Guattari, "Maschine und Struktur", in: ibid., *Psychotherapie, Politik und die Aufgaben der institutionellen Analyse*, Frankfurt/Main 1976, 127-138

Félix Guattari, "Über Maschinen", in: Henning Schmidgen (Ed.), *Ästhetik und Maschinismus. Texte zu und von Félix Guattari*, Berlin 1995, 115-132

Félix Guattari, "Machinic heterogenesis", in: ibid., *Chaosmosis. An Ethico-Aesthetic Paradigm*, Bloomington/Indianapolis 1995, 33-57

Félix Guattari, "Capital as the Integral of Power Formations", in: ibid., *Chaosophy. Soft Subversions*, New York 1996, 202-224

"Hörst du, Moskau?!", in: Peter Gorsen, Eberhard Knödler-Bunte, *Proletkult 2. Zur Praxis und Theorie einer proletarischen Kulturrevolution in Sowjetrussland 1917–1925*, Stuttgart 1975, 127-129

Karl Marx, "Fragment über Maschinen", in: *Grundrisse der Kritik der politischen Ökonomie*, MEW 42, Berlin 22005, 590-609

Karl Marx, *Das Elend der Philosophie*, MEW 4, Berlin 111990, 63-182

Karl Marx, *Das Kapital*, MEW 23, Berlin 191998

Angela Mitropoulos, "Precari-Us?", http://eipcp.net/transversal/0704/mitropoulos/en, 16.10.2006

Antonio Negri, *Marx Beyond Marx: Lessons on the Grundrisse*, New York 1991

Gerald Raunig, „La inseguridad vencerá. Antiprekaritärer Aktivismus und Mayday Parades“, http://eipcp.net/transversal/0704/raunig/en, 16.10.2006

Gerald Raunig, *Kunst und Revolution. Künstlerischer Aktivismus im langen 20. Jahrhundert*, Vienna 2005 / *Art and Revolution*, transl. Aileen Derieg, Semiotext(e): Los Angeles/New York 2007, publication pending

Sergej Tretjakov, "Das Theater der Attraktionen", in: Peter Gorsen, Eberhard Knödler-Bunte, *Proletkult 2. Zur Praxis und Theorie einer proletarischen Kulturrevolution in Sowjetrussland 1917–1925*, Stuttgart 1975, 121-127

Sergej Tretjakov, “Notizen eines Dramatikers”, in: ibid., *Gesichter der Avantgarde*, Berlin/Weimar 1985, 98-101

Paolo Virno, "Wenn die Nacht am tiefsten ... Anmerkungen zum General Intellect", in: Thomas Atzert / Jost Müller (Ed.), *Immaterielle Arbeit und imperiale Souveränität*, Münster 2004, 148-155

Paolo Virno, "Eine performative Bewegung" in: *Kulturrisse* 02/2005, 6-9

Paolo Virno, *A Grammar of the Multitude*, Los Angeles/New York 2004

Paolo Virno, "Die Engel und der *General Intellect*", in: ibid., *Grammatik der Multitude*, Vienna 2005, 165-188

[1]Guattari, "Über Maschinen", 118

[2]Cf. for instance Barbrook, "The Holy Fools", Marchart, "The Crossed Place of the Political Party "

[3]MEW 42, 590-609 [http://www.marxists.org/archive/marx/works/1857/grundrisse/ch13.htm - p690]

[4]For a brief outline of the various references from Operaist and post-Operaist generations to the machine fragment, see: Virno, "Wenn die Nacht am tiefsten ... Anmerkungen zum General Intellect"

[5]In Toni Negri's early book "Marx beyond Marx", for instance, which resulted from his Paris seminar on the *Outlines* in 1978, there is no discussion of the machine. An exception here is Maurizio Lazzarato, who continued the idea of both aspects in his work on immaterial labor on the one hand and video philosophy on the other.

[6]MEW23, 391 [http://www.marxists.org/archive/marx/works/1867-c1/ch15.htm - S1]

[7]Cf. Marx, *Das Elend der Philosophie*, MEW4, 174 [http://www.marxists.org/archive/marx/works/1847/poverty-philosophy/ch02e.htm]: "In England, strikes have regularly given rise to the invention and application of new machines. Machines were, it may be said, the weapon employed by the capitalist to quell the revolt of specialized labor. The *self-acting mule*, the greatest invention of

modern industry, put out of action the spinners who were in revolt."; Marx, *Das Kapital*, MEW23, 459 [http://www.marxists.org/archive/marx/works/1867-c1/ch15.htm - S5]: "Machinery [...]is the most powerful weapon for repressing strikes, those periodical revolts of the working-class against the autocracy of capital.."

[8]Marx, Grundrisse, MEW42, 592 [http://www.marxists.org/archive/marx/works/1857/grundrisse/ch13.htm - p692]

[9]Ibid., 593 [http://www.marxists.org/archive/marx/works/1857/grundrisse/ch13.htm - p693]

[10]Ibid., 595 [http://www.marxists.org/archive/marx/works/1857/grundrisse/ch13.htm - p694]

[11]Ibid., 602 [http://www.marxists.org/archive/marx/works/1857/grundrisse/ch14.htm - p706]

[12]Ibid., 594 [http://www.marxists.org/archive/marx/works/1857/grundrisse/ch13.htm - p694]

[13]This fragment is an abridged version of the section "Theater Machines Against Representation. Eisenstein and Tretyakov in the Gas Works" from Raunig, *Kunst und Revolution*, 134-147 / *Art and Revolution*

[14]"Ein Experiment der Theaterarbeit", 113

[15]Eisenstein, "Die Montage der Attraktionen", 118

[16]ibid.

[17]“Ein Experiment der Theaterarbeit”, 112

[18]The concatenation of events and of players, things, sounds and audience, as described here, comes surprisingly close to Guattari's machine concept. In *L'Anti-Oedipe* Deleuze and Guattari mention that in Russian Futurism and Constructivism certain production circumstances remain, despite collective appropriation, "external to the machine", yet the practice of the Theater of Attractions seems to contradict this.

[19]"Ein Experiment der Theaterarbeit", 116

[20]Tretjakov, "Theater der Attraktionen", 68

[21]cf. Eisenstein, "Die Montage der Attraktionen", 119

[22]"Ein Experiment der Theaterarbeit", 112

[23]Tretjakow, "Theater der Attraktionen", 69

[24]cf. "Hörst du, Moskau?", 128f.

[25]Tretjakov, "Notizen eines Dramatikers", 99

[26]Deleuze/Guattari, *L'Anti-Oedipe*, 463-487: The Appendix was not published in the English version of *Anti-Oedipus*

[27]In *L'Anti-Oedipe* Deleuze and Guattari seem to consistently refer to Capital; in "*Capital as the Integral of Power Formations*" (205), for instance, Guattari also refers to the machine fragment.

[28]Deleuze/Guattari, *L'Anti-Oedipe*, 464

[29]Ibid., 465 and 481ff.

[30]MEW23, 391 [http://www.marxists.org/archive/marx/works/1867-c1/ch15.htm - S1]

[31]Deleuze/Guattari, *L'Anti-Oedipe*, 8

[32]Ibid., 465

[33]At this point it should be noted that Deleuze and Guattari's use of the machine concept is consistently indifferent to ambivalent. At the same time, the dark sides of machinization come up regularly, such as in reflections on fascist and post-fascist forms of the war machine in *A Thousand Plateaus* (especially 420-421) or Guattari's concept of "machinic enslavement" in "worldwide integrated capitalism", as Guattari called the phenomenon in the early 1980s that is today framed as globalization. Unlike Marx, here "machinic enslavement" (Guattari, "Capital as the Integral of Power Formations", 219-222) does not mean the subordinated relationship of the human being to the technical machine that objectifies social knowledge, but rather a more general form of the collective management of knowledge and the necessity of permanent participation. It is the machinic quality of postfordist capitalism – here Guattari is close to the theories of neoliberal governmentality developed from Foucault – that adds a palette of control mechanisms to the traditional systems of direct repression, which requires the complicity of individuals.

[34]Deleuze/Guattari, *L'Anti-Oedipe*, 464

[35]Ibid., 516

[36]The relevant concept of the state apparatus goes far beyond conventional concepts of the state; as the opposite of machines state apparatuses are characterized by structures, striated spaces and hard segmentarity.

[37]Guattari, "Über Maschinen", 121

[38]Cf. Guattari, "Machinic Heterogenesis", 37

[39]Guattari, "Maschine und Struktur", 137f. (The original French version of this article was published in Félix Guattari, *Psychanalyse et transversalité*, Paris 1973)

[40]Ibid., 138

[41]The category of "non-representationist practice" does not include the Social Forums movement, which has not met its own claims, as defined in its statutes, of rejecting representation in form and content.

[42]On the issues addressed by this movement (especially the precarization of work and life), cf. the articles of the eipcp Web Journal transversal entitled “precariat” http://eipcp.net/transversal/0704/, particularly Mitropoulos, "Precari-Us?" on the question of terms, as well as the texts of Lorey and Tsianos/Papadopoulos in this issue “subjectivities and machines”.

[43]Cf. http://www.euromayday.org and the links on this site to the various local EuroMayday sites.

[44]On these aspects of the reappropriation of the city in the course of EuroMayday parades, cf. Raunig, "La inseguridad vencerá. Anti-Precarious Activism and Mayday Parades"

[45]Virno, "Eine performative Bewegung", 6

[46]Virno, *Grammar of the Multitude,* 65

[47]Virno, "Die Engel und der General Intellect", 174

[48]Virno, "Wenn die Nacht am tiefsten ... Anmerkungen zum General Intellect", 154