

Gilles Deleuze & Felix Guattari and the *Rhuthmoi* of War - Part 2

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Minor Science - Social Features

Borrowing from the French sociologist and urban studies scholar Anne Quérien (1945-), Deleuze and Guattari gave a few examples of Medieval and Modern minority groups which have elaborated “minor sciences” or techniques despite the dominating “Royal science” developed by the State and its apparatuses.

The first concerned the nomadic corps of companions and architects who built Gothic cathedrals in the Middle Ages. By contrast with Romanesque which was dominated by “the static relation, form-matter,” and which remained “partially within a striated space (in which the vault depends on the juxtaposition of parallel pillars),” Gothic favored “a dynamic relation, material-forces,” in which “the vault [was] no longer a form but the line of continuous variation of the stones” capable of “holding and coordinating forces of thrust.” It was “as if Gothic conquered a smooth space” by “appealing to the specificity of an operative, Archimedean geometry, a projective and descriptive geometry defined as a minor science, more a mathegraphy than a matheology” (p. 364).

The monk-mason Garin de Troyes, speaks of an operative logic of movement enabling the “initiate” to draw, then hew the volumes “in penetration in space,” to make it so that “the cutting line propels the equation” (“*le trait pousse le chiffre*”). One does not represent, one engenders and traverses. This science is characterized less by the absence of equations than by the very different role they play: instead of being good forms absolutely that organize matter, they are “generated” [as if they were “thrust” by the material] [*comme poussées par le matériaux*], in a qualitative calculus of the optimum. (*A Thousand Plateaus*, 1980, trans. B. Massumi, 1987, p. 364, my mod.)

After rapidly alluding to the French architect and mathematician Girard Desargues (1591-1661), one of the founder of projective geometry, who “left [only] outlines, rough drafts, and projects, all centered on problem-events” (p. 365), Deleuze and Guattari then recalled the French royal agency in charge of bridges and roadways created in the eighteenth century, the most famous *Ponts et*

Chaussées (1716). According to Quérien, this agency associated in fact two different collective bodies using two different kinds of knowledge and technique: one centralized, rationalized, intended for the construction of heavy and “striated” roads, the other freer, more experimental and used for the construction of light and “smooth” bridges.

The fact remains that in the government agency in charge of bridges and roadways, roadways were under a well-centralized administration while bridges were still the object of active, dynamic, and collective experimentation. Trudaine organized unusual, open “general assemblies” in his home. Perronet took as his inspiration a supple model originating in the Orient: The bridge should not choke or obstruct the river. To the heaviness of the bridge, to the striated space of thick and regular piles, he opposed a thinning and discontinuity of the piles, surbase, and vault, a lightness and continuous variation of the whole. (*A Thousand Plateaus*, 1980, trans. B. Massumi, 1987, p. 365)

This particular example showed that “collective bodies,” even the most centralized and hierarchical ones, could generate internal “war machines.”

Undoubtedly, the great collective bodies of a State are differentiated and hierarchical organisms that on the one hand enjoy a monopoly over a power or function and on the other hand send out local representatives. [...] Yet it seems that in many of these collective bodies there is something else at work that does not fit into this schema. It is not just their obstinate defense of their privileges. It is also their aptitude—even caricatural or seriously deformed—to constitute themselves as a war machine, following other models, another dynamism, a nomadic ambition, over against the State. (*A Thousand Plateaus*, 1980, trans. B. Massumi, 1987, p. 366)

Even though the modern State represented itself as a living organism, it did not have the unity of natural living beings. Alluding transparently to the extraordinary example of the recent Portuguese revolution of 1974 initiated by “a collective body of captains,” Deleuze and Guattari noted that any State, any Army, whatever its degree of centralization, could generate, in “a short revolutionary instant,” collective bodies “forced in spite of themselves to open onto something that exceeds them, [...], an experimental surge.”

Collective bodies always have fringes or minorities that reconstitute equivalents of the war machine—in sometimes quite unforeseen forms—in specific assemblages such as building bridges or cathedrals or rendering judgments or making music or instituting a science, a technology... A collective body of captains asserts its demands through the organization of the officers and the organism of the superior officers. There are always periods when the State as organism has problems with its own collective bodies, when these bodies, claiming certain privileges, are forced in spite of themselves to open onto something that exceeds them, a short revolutionary instant, an experimental surge. (*A Thousand Plateaus*, 1980, trans. B. Massumi, 1987, pp. 366-367)

Minor Science - Epistemological Features

After discussing the sociological relation between the development of marginal social groups and the elaboration of minor science, Deleuze and Guattari turned to its particular epistemological features. By contrast with State or Royal science which dealt with “ideal essences,” such kind of knowledge dealt with “*vague*, in other words, vagabond or nomadic, morphological essences.” The latter were not inexact nor exact but “*anexact yet rigorous*.”

Husserl speaks of a protogeometry that addresses *vague*, in other words, vagabond or nomadic, morphological essences. These essences are distinct from sensible things, as well as from ideal, royal, or imperial essences. Protogeometry, the science dealing with them, is itself vague, in the etymological sense of “vagabond”: it is neither inexact like sensible things nor exact like ideal essences, but *anexact yet rigorous* (“essentially and not accidentally inexact”). The circle is an organic, ideal, fixed essence, but roundness is a vague and fluent essence, distinct both from the circle and things that are round (a vase, a wheel, the sun). (*A Thousand Plateaus*, 1980, trans. B. Massumi, 1987, p. 367)

Edmund Husserl in *Ideas I* (1913) and *Origin of Geometry* (1936 – a short text translated into French and commented by Jacques Derrida in 1961), Gaston Bachelard in his *Essai sur la connaissance approchée* (1927) and Michel Serres in *Birth of Physics* (1977) had variously elaborated the idea of “anexactness,” that is to say of a kind of knowledge aiming no longer at “thinghood,” i.e. at beings observed as sheer singularized objects, but at “*corporeality*,” i.e. at beings observed as complex bodies.

It could be said that vague essences extract from things a determination that is more than thinghood (*choséité*), which is that of *corporeality* (*corporéité*), and which perhaps even implies an esprit de corps. (*A Thousand Plateaus*, 1980, trans. B. Massumi, 1987, p. 367)

Yet there was no strict opposition between “ideal” and “vague essences,” Deleuze and Guattari contended, and no progress necessarily developed either from the latter to the former, as Husserl believed. Just like State and War Machine were in constant interaction, “royal science” and “vague or nomad science” were only “two formally different conceptions of science” included in “a single field of interaction” and which constantly contested and stimulated each other.

What we have, rather, are two formally different conceptions of science, and, ontologically, a single field of interaction in which royal science continually appropriates the contents of vague or nomad science while nomad science continually cuts the contents of royal science loose. At the limit, all that counts is the constantly shifting borderline. (*A Thousand Plateaus*, 1980, trans. B. Massumi, 1987, p. 367)

Another characteristics of Royal or State science was its general use of the Aristotelian hylomorphic model to describe the relation between form and matter. Not only this model was directly related

with the social model opposing “governors and governed”—Gilbert Simondon (1924-1989) was cited in a footnote in support of this assertion—but it also collapsed simplistically “content” and “matter” as well as “expression” and “form.”

Instead, nomad science was more “in tune with the connection between content and expression in themselves.” It also considered matter as “essentially laden with singularities,” and expression as “inseparable from pertinent traits.” In other words, nomad science was characterized by an attention to the specificities of the content, which was not reducible to “homogeneous matter,” as well as to those of the expression, which could not be reduced to “pure form.” It sketched out a model which was much more adequate to a reality that was itself dynamic and plural. It was a *rhuthmic* epistemological counterpart of the *rhuthmic* ontology Deleuze and Guattari had developed from the beginning of the book.

Royal science is inseparable from a “hylomorphic” model implying both a form that organizes matter and a matter prepared for the form; it has often been shown that this schema derives less from technology or life than from a society divided into governors and governed, and later, intellectuals and manual laborers. What characterizes it is that all matter is assigned to content, while all form passes into expression. It seems that nomad science is more immediately in tune with the connection between content and expression in themselves, each of these two terms encompassing both form and matter. Thus matter, in nomad science, is never prepared and therefore homogenized matter, but is essentially laden with singularities (which constitute a form of content). And neither is expression formal; it is inseparable from pertinent traits (which constitute a matter of expression). (*A Thousand Plateaus*, 1980, trans. B. Massumi, 1987, p. 369)

Deleuze and Guattari called “compar” and “dispar” the two models of science which they had just differentiated. The former was “legalist” and looked for “constants” and “laws” enabling scientists to give “an invariable form [to] variables.” The latter was, on the contrary, interested in “placing the variables themselves in a state of continuous variation.” It could accommodate mathematical equations but only “differential equations irreducible to the algebraic form and inseparable from a sensible intuition of variation.” Its aim was to “seize or determine singularities in the matter, instead of constituting a general form” and finally reach “vague essences” which were “nothing other than haecceities.”

It is instructive to contrast two models of science [...] One could be called *Compar* and the other *Dispar*. The *compar* is the legal or legalist model employed by royal science. The search for laws consists in extracting constants, even if those constants are only relations between variables (equations). An invariable form for variables, a variable matter of the invariant: such is the foundation of the hylomorphic schema. But for the *dispar* as an element of nomad science the relevant distinction is material-forces rather than matter-form. Here, it is not exactly a question of extracting constants from variables but of placing the variables themselves in a state of continuous variation. If there are still equations, they are adequations, inequations, differential equations irreducible to the algebraic form and inseparable from a sensible intuition of variation. They seize or determine singularities in the matter, instead of constituting a general form. They effect individuations through events or haecceities, not through the “object” as a compound of matter and form; vague essences are nothing other than haecceities. (*A Thousand Plateaus*, 1980, trans. B. Massumi, 1987, p. 369)

"The compars" presupposed an "homogeneous space" which was not smooth but "striated" by the model of "the fall of bodies" and "gravity" (p. 370). By contrast, the "dispars" implied a "smooth space" populated, like the sea, by heterogeneous entities, "except between infinitely proximate points" which were associated by "tactile actions of contact" rather than by "vision." Here they cited again with high praise Michel Serres' *Birth of Physics*. Note, in passing, that the French term *le flot* used by Serres in its singular form meant actually *flow* in English and not "wave," as Brian Massumi had it, which in French would have been expressed by *les flots* in plural form [1].

Smooth space is precisely the space of the smallest deviation [the clinamen]: therefore it has no homogeneity, except between infinitely proximate points, and the linking of proximities is effected independently of any determined path. It is a space of contact, of small tactile or manual actions of contact, rather than a visual space like Euclid's striated space. Smooth space is a field without conduits or channels. [...] The best formulation, that of Michel Serres, is indeed couched in terms of an alternative, whatever mixes or compositions there may be: "Physics is reducible to two sciences, a general theory of routes and paths, and a global theory of [flow] [*théorie globale du flot*]" (p. 65). (*A Thousand Plateaus*, 1980, trans. B. Massumi, 1987, pp. 371-372, my mod.)

Consequently, thanks to its dynamic ontology, its alternative epistemology, and the smooth physical space it presupposed, minor science could access to "nonmetric, acentered, rhizomatic multiplicities that occupy space without 'counting' it." Instead of observing them "from a point in space external to them," i.e. as "things," it would explore them "by legwork" or, closer to the French, by "hiking on them," i.e. as complex "bodies" like "system of sounds, or even of colors."

A field, a heterogeneous smooth space, is wedded to a very particular type of multiplicity: nonmetric, acentered, rhizomatic multiplicities that occupy space without "counting" it and can "be explored only by legwork [*qu'en cheminant sur elle*]." They do not meet the visual condition of being observable from a point in space external to them; an example of this is the system of sounds, or even of colors, as opposed to Euclidean space. (*A Thousand Plateaus*, 1980, trans. B. Massumi, 1987, p. 371)

Deleuze and Guattari finally elaborated further the opposition between, on the one hand, "reproduction," "deduction" and "induction," which in "royal science" were independent of the context, and on the other hand, "following-up" of multiplicities, singularities and events, provoked by exterior "vortical flows" and unexpected "clinamens."

A distinction must be made between two types of science, or scientific procedures: one consists in "reproducing," the other in "following." The first involves reproduction, iteration and reiteration; the other, involving itineration, is the sum of the itinerant, ambulant sciences. [...] The ideal of reproduction, deduction, or induction is part of royal science, at all times and in all places, and treats differences of time and place as so many variables, the constant form of which is extracted precisely by the law [...] But following is something different from the ideal of reproduction. Not better, just different. One is obliged to follow when one is in search of the "singularities" of a matter, or rather of a material, and not out to discover a form; when one escapes the force of gravity to enter a field of celerity; when one ceases to contemplate the course of a laminar flow in

a determinate direction, to be carried away by a vortical flow; when one engages in a continuous variation of variables, instead of extracting constants from them, etc. [...] *There are itinerant, ambulant sciences that consist in following a flow* [suivre un flux] *in a vectorial field across which singularities are scattered like so many “accidents”* (problems). (*A Thousand Plateaus*, 1980, trans. B. Massumi, 1987, p. 372)

In a way, this opposition was reminiscent of that between objective and determinist natural sciences and subjective and non-determinist historical sciences, which had been discussed in Germany since the end of the 19th century, in particular by Wilhelm Dilthey (1833-1911) and more recently by Jürgen Habermas (1929-) in *On the Logic of Social Sciences* (1967). Everything happened as if Deleuze and Guattari would introduce into natural science and ontology, the viewpoint of historical sciences but they did not mention any of these previous discussions. They concentrated their effort, just like Serres and Morin as a matter of fact, on challenging the dominant model of natural science mainly from an ontological viewpoint devoid of historical concern.

However, as usual, they eventually reversed their own distinction and ended the section with a praise of the interplay between the two forms of science: in fact, both were equally useful, just as, for Bergson, intuition and intelligence were complementary.

In the field of interaction of the two sciences, the ambulant sciences confine themselves to *inventing problems* whose solution is tied to a whole set of collective, nonscientific activities but whose *scientific solution* depends, on the contrary, on royal science and the way it has transformed the problem by introducing it into its theorematic apparatus and its organization of work. This is somewhat like intuition and intelligence in Bergson, where only intelligence has the scientific means to solve formally the problems posed by intuition, problems that intuition would be content to entrust to the qualitative activities of a humanity engaged in *following matter*. (*A Thousand Plateaus*, 1980, trans. B. Massumi, 1987, p. 374)

Minor Science - Antinoological Features

After this sociological and epistemological descriptions of minor science and technique, Deleuze and Guattari broadened their perspective and turned it into a general theory of thought, which, paradoxically, would not propose a universal *organon* but would outline a kind of counter- or antinoology.

With a few exceptions, they argued, Western philosophy has, from its earliest origins, conformed to a model borrowed from the State apparatus. Its vortical ways of flowing has most of the time been channeled and submitted to rigorous linear methods.

Thought as such is already in conformity with a model that it borrows from the State apparatus, and which defines for it goals and paths, conduits, channels, organs, an entire *organon*. There is thus an image of thought covering all of thought; it is the special object of “noology” and is like the State-form developed in thought. (*A Thousand Plateaus*, 1980, trans. B. Massumi, 1987, p.

Method has given philosophy a certain “gravity” or respectability. But conversely, the State has benefited from philosophy which has contributed to the construction of a social consensus favorable to its domination.

It is easy to see what thought gains from this: a gravity it would never have on its own, a center that makes everything, including the State, appear to exist by its own efficacy or on its own sanction. But the State gains just as much. Indeed, by developing in thought in this way the State-form gains something essential: a whole consensus. Only thought is capable of inventing the fiction of a State that is universal by right, of elevating the State to the level of *de jure* universality. (*A Thousand Plateaus*, 1980, trans. B. Massumi, 1987, p. 375)

Descartes, Kant and Hegel have been three of the most influential modern philosophers. All three of them have traced their “doctrine of faculties onto the organs of State power” and given “the established powers [their] blessing.” In this sense, the concepts of “cogito,” as well as those of “pure reason” or “absolute spirit” have only been State power and State consensus “raised to the absolute.” Thus, quite logically, since the end of the 18th century, philosophers have become “public professors or State functionaries.”

Ever since philosophy assigned itself the role of ground it has been giving the established powers its blessing, and tracing its doctrine of faculties onto the organs of State power. Common sense, the unity of all the faculties at the center constituted by the Cogito, is the State consensus raised to the absolute. This was most notably the great operation of the Kantian “critique,” renewed and developed by Hegelianism. Kant was constantly criticizing bad usages, the better to consecrate the function. It is not at all surprising that the philosopher has become a public professor or State functionary. It was all over the moment the State-form inspired an image of thought. (*A Thousand Plateaus*, 1980, trans. B. Massumi, 1987, p. 376)

In the 20th century, this function of consensus maker for the benefit of the State has been endorsed by sociologists such as “Durkheim and his disciples,” who wanted “to give the [French] Republic a secular model of thought” and more recently by “psychoanalysis,” which was a transparent allusion to Lacan and his own disciples, who claimed for it “the role of *Cogitatio universalis* as the thought of the Law.”

In modern States, the sociologist succeeded in replacing the philosopher (as, for example, when Durkheim and his disciples set out to give the republic a secular model of thought). Even today, psychoanalysis lays claim to the role of *Cogitatio universalis* as the thought of the Law, in a magical return. And there are quite a few other competitors and pretenders. (*A Thousand Plateaus*, 1980, trans. B. Massumi, 1987, p. 376)

However, there were some “private thinkers” such as Kierkegaard, Nietzsche, or Shestov, or even some writers such as Artaud or Kleist (p. 378), who produced mobile, violent and discontinuous “counterthoughts.” These thinkers and writers placed thought “in an immediate relation with the forces of the outside” and transformed it into “a war machine” (pp. 376-377).

But noology is confronted by counterthoughts, which are violent in their acts and discontinuous in their appearances, and whose existence is mobile in history. These are the acts of a “private thinker,” as opposed to the public professor: Kierkegaard, Nietzsche, or even Shestov. Wherever they dwell, it is the steppe or the desert. They destroy images. (*A Thousand Plateaus*, 1980, trans. B. Massumi, 1987, p. 376)

In a sense, this behavior plunged them into “absolute solitude” but their attempts were in fact preparing for the coming of “a new people,” which Deleuze and Guattari characterized as a “tribe,” that is to say a social group free from any subordination to the State.

Although it is true that this counterthought attests to an absolute solitude, it is an extremely populous solitude, like the desert itself, a solitude already intertwined with a people to come, one that invokes and awaits that people, existing only through it, though it is not yet here. [...] Every thought is already a tribe, the opposite of a State. (*A Thousand Plateaus*, 1980, trans. B. Massumi, 1987, p. 377)

While logic and method drew mandatory paths for the *cogitatio*, this kind of “counterthoughts” or “minor thoughts” reintroduced into philosophy vortical and flowing ways of discussion and reasoning.

A “method” is the striated space of the *cogitatio universalis* and draws a path that must be followed from one point to another. But the form of exteriority situates thought in a smooth space that it must occupy without counting, and for which there is no possible method, no conceivable reproduction, but only relays, intermezzos, resurgences. (*A Thousand Plateaus*, 1980, trans. B. Massumi, 1987, p. 377)

Minor thoughts particularly rejected two fundamental presuppositions, two opposite “universals” supporting “the classical image of thought, and the striating of mental space it effect[ed]”: an ontological premise, “the Whole” as “all-encompassing horizon” of being, and an anthropological premise, “the Subject” as “the principle that converts being into being-for-us.” Instead it promoted respectively “a horizontless milieu,” or a smooth mental space, and “a singular race” or better yet, a “tribe.”

The classical image of thought, and the striating of mental space it effects, aspires to universality. It in effect operates with two “universals,” the Whole as the final ground of being or all-encompassing horizon, and the Subject as the principle that converts being into being-for-us. [...] It is now easy for us to characterize the nomad thought that rejects this image and does things

differently. It does not ally itself with a universal thinking subject but, on the contrary, with a singular race; and it does not ground itself in an all-encompassing totality but is on the contrary deployed in a horizonless milieu that is a smooth space, steppe, desert, or sea. An entirely different type of adequation is established here, between the race defined as “tribe” and smooth space defined as “milieu.” A tribe in the desert instead of a universal subject within the horizon of all-encompassing Being. (*A Thousand Plateaus*, 1980, trans. B. Massumi, 1987, p. 379)

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Footnotes

[1] As a matter of fact, Serres pursued the opposition as follows: “A topology of interlacings; a hydrology of what flows through the network” (1977, p. 65).