

Comment: Calculi or Diagrams?

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1

Do theories of the social require a non-Aristotelian point of departure? Dirk Baecker pleads in favour of replacing the Aristotelian theory of forms. He would replace a logic founded on identity, contradiction and the excluded middle with a conceptual texture of difference, ambivalence and control. He enlists Spencer Brown's calculus to describe determinacy as factual negation, social dissent and temporal difference.² Baecker's thesis is that determinacy can only be achieved if it is—as a meaning—first postulated as indeterminate.

While I subscribe to this approach in principle, I would like to propose a semiotic modification. This modification is aimed at a process theory of form that speaks of diagrams rather than calculi. Compared to calculi, diagrams provide a more forceful accentuation of the materiality of the form of differentiation. Diagrams can be used to observe specific transformations of determinations without treating these as logical orderings right from the start. Which type of sign one calls upon to characterize differences makes a difference. These differences have far-reaching consequences, not only for differentiations between perception and communication as simultaneous forms of form but for a theory of culture as well. Accordingly, rather than speak of logic, I speak of contrasts and diagrammatic performances instead. In what follows I shall largely bracket the conceptual historical background involved, regardless of its systematic significance, in favour of a sharpening of my argument that takes the form of theses.

2

Forms are distinctions. This fact links an Aristotelian logic with a Spencer Brown logic, with a semiotics based on Peirce and Cassirer, or with a sociology of calculus. Distinctions demarcate differences. Differences organize boundaries in fields of the distinguishable. They generate determinacy in the horizon of indeterminacy. Indeterminacy is, as the condition of possibility of the form of the determination, in a determinate way indeterminate. Let us call it *meaning* or *world*. The question of form has elaborated the problem of determination ever since the era of classical Greek philosophy. Aristotle's question of what it is to be something opens up world as a horizon of the things that require determination, the things capable of determination,

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2. See D. Baecker in this issue.

and the things that are ordered—from sensual perception to thought to speaking with others and the political order of the polis. By becoming referents of statements, forms demarcate the general via changing particulars. The general “is” more enduring than the changing, it “is” the communicatively compatible, and it “is” that which can—even in terms of its properties—be distinguished from instantiations of otherness. It is also always what it is by virtue of its reference to what it is not. In its capacity of being what it is, it remains open to question. Yet the logic of identity, the excluded middle and contradiction elevates the determinate indeterminacy of the question of *what* to a logic that is close to linguistic grammar, a logic that dims the process of ascertainment in favour of a logic of form that arrays differences hierarchically. Processes of ascertainment then appear as classifications the organizing principle of which is bivalence. This is a point of departure for critics of binary logic.

3

Forms realize performative processes of distinction. This is why forms are not entities. Processes such as these remain impregnated by the type of the symbols with which the processes are carried out. If not for symbols, there would be no distinctions between sensory perception, thought and thing. Symbols come about as the unity of the difference between perception, thought and thing, determinate and indeterminate, alter and ego. Forms gain incisiveness in the process of determining still-indeterminate sensibility, of abstract definitions, or of circulating discourse by speakers referring to the same thing.

Form thus reveals itself to be a process of distinguishing, a process that operatively joins general and particular to constitute the determinate. The general orders the particular, which itself is in turn particular only in relation to the general and fixes the general to a particular instantiation of the general. Symbols permit repetitions of an operation of distinguishing. Repetitions lead to generalities. These produce similarity in the operation of indication, yet without transforming the Same that is generated in the process into an Identical. The more general the form, the more indeterminate and generalized its field of distinction becomes. The general—the repeated—is an ascertainment that is at once factual and social, but if we consider the significance of the form of the sign, it is also an aesthetic-material, form-matter and temporal determination as well. Forms thus generate indeterminacy in the same operation with which they determine. The general, which as maximal reality would be emptiness itself, gains footing not least in that the restlessness of questioning controls itself by means of the expectations of those who question and speak—by means of difference. Based on certain experiences and expectations, with a view to others and with a certain and certainty-generating perspective, someone asks about something. This is why forms exist as relevances. Relevances describe perspectives of expectation and profiles of experience. To this extent, the resulting orderings of distinction adhere to a dramaturgical logic. This character of relevance is pivotal to the field of social phenomena. A glance at Aristotle’s *Poetics* and *Rhetoric* make this clear

as well. Yet Aristotle proceeds from a condition that does not apply to a logic of calculus: determinacy and indeterminacy unfold into processes of form because the space of the distinguishable is a semantic one.

4

There are three advantages to be gained by considering forms as semiotic functions that make distinctions and differences operatively interchangeable in contextures of things that someone considers distinguishable with regard to others. First, perception and communication can be treated as simultaneous states of form. Here, perception is not identical to consciousness, as communication is not identical to speaking. Second, we can describe the connection between the formation of sense through differentiation, on the one hand, and semantically bolstered semiotic forms on the other, as a relation that generates sense. For each distinctly indeterminate phenomenon, semantics of differentiation forms symbolic orderings through linkages. Different signs generate non-homologous references the dissonant relations of which contribute to the augmentation of non-linear formations of sense. In this sense, the humans on whose perception, thought, speech and action Aristotle bases his reflections are diagrammatic orderings par excellence: Condemned to sense, by nature they operate simultaneously with multiple symbolic forms. Third, we can describe the culture of modern society as a diagrammatic structure of order the stability of which is the result of heightened difference, on the one hand, and typifying simplification on the other (Rustemeyer, 2012). For us, the cosmos that Aristotle presupposes has become a multiple and dynamic ordering of sense. From a sociological point of view it is now conspicuous that the general—form—can become all the more stable as the level of difference in its simultaneous possibilities of differentiation across diverging expectations grows.

5

Aristotle's enquiry concerns a thing's capacity of being what it is, a quality that in this conceptual texture can be understood as an operative boundary of oscillating distinctions. Boundaries are points of references of horizons of the past and future, of specifically defined sequences of signs, of expectations on the part of social actors, and of registers of whatever is even distinguishable to begin with. Forms order probabilities of expectation and attention, temporal series or sequences, practices of naming, counting, writing or indicating, and registers of the comparable and the compossible. Boundaries are operations of simultaneous "accordings" of distinctions: stable, dynamic determinacies.

Against this backdrop, what is it that makes it appealing to talk about calculi? As modern societies have developed, an increase in organized communication has wrought changes in the couplings of perception and communication. As a consequence, a distinction can be made between two complementarily positioned

styles of reflection, styles irreducible to one another. The first stems from an antique and Christian notion of reason, while the second reacts to a creation of organization for which it seeks a concept of rationality. A sociology of calculus takes the second of these styles of reflection as its point of departure and treats it as dominant. Yet both styles of reflection—or form processes—are of fundamental importance in modern culture.

6

Antique ideas of the work of logos, and of the form of theory as a practice that permits us to assume a clever attitude towards life, are constructed in a manner that maintains close associations with perception and is sensitive to symbols. Perception, thought, language and communication have natural interconnections. Theory gains its quality when it is understood as an activity that develops its object allegorically. What this involves is a reflected rendering-similar of the decidedly non-similar in the simultaneity of non-homologous distinctions. Plato provided a paradigmatic version of this model of theory. If not for perception, if not for symbols and speech, no forms will emerge with the aid of which the world will be revealed or become distinguishable in the image of its presentation as world. The point of departure for this notion of rationality is the human individual as a being that naturally makes use of symbols.

Since the beginnings of our era, few features have been as thoroughly characteristic of modern societies as a progressive process of the formation of organizations. Processes of organization have grave consequences for the theory of forms: They have a tendency to decouple communication from perception. Organizations take aspects of the semiotic function that are largely fused in perception, pulling these aspects apart and submitting their combination for decision. This introduces a new type of reflexivity to fields of distinction. Organized reflexivity favours a mono-symbolic practice of differentiation by combining a high probability of connection with a high speed of connection. Aided by the development of modern mathematical processes of calculation operating in tandem with new possibilities for the notation of symbols, in organizations the number emerges as the dominant symbolic form. Numbers render different things equal and operatively interchangeable. They facilitate modelling of time and difference and make it possible to operate in real terms with the merely possible. Compared with the fuzzy semantics of other symbols, mathematics augurs clarity. Public administration, the economy and science all make use of the number. Because numbers establish non-semantic orderings of distinction, they now appear to have an advantage over the determined indeterminacy of semantic fields of distinction. A mathematics of form can now claim pre-eminence over a conceptual logos of form. Plato had refused to accord this status to mathematics because mathematical forms, for all their maximum incisiveness and complexity, remain asemantic and, as a result, unsuited to the task of establishing orderings of distinction on the basis of which we can gain a concrete relationship to

society. To overstate the matter somewhat: From the point of view of the first style of reflection, a mathematical logic of form is inadequate for sociological purposes in particular.

Things would appear to be different for modern societies, where organized communication has managed to develop styles of rationality of its own. From a social-historical perspective, organizations generate a new and extremely dynamic form of second-order observation: markets. Markets come into being if an unlimited number of observers are in a position to orient their own distinctions around the distinctions made by other observers. Fields of communication in politics, the economy, science, news or art represent further refinements along these same lines. Markets generate publics by introducing a generalized middle. It is difficult to model this middle value as symbol-based communication between ego and alter. For this reason, it is formalized. Particularly in the wake of the introduction of digital computing processes and the Internet, decision-based communication in organizations increasingly hews to the specific logic of calculation. The resulting social order that emerges is reality *sui generis*: a new type of social fact.³ As a model of the social, this logic of calculus-based reflection constitutes the complement to the classical notion of perception-based reflection.

Indeed, modern culture is shaped by both styles of reflection. Together, they form a cultural diagram that enables different forms of typification and communicative dynamics at the same time. The second style of reflection can no more replace the first than the first can replace the second. To take diagrams and not calculi as a point of departure for the conception of a theory of differentiation is to accord greater weight to the simultaneity of the qualitatively different for the task of ordering the distinguishable. A diagrammatics of form aims to arrive at a theory of contrast, and less—or rather in borderline cases—at a calculus. Calculi constitute a special case of diagrammatic orderings.

7

In this connection, by way of example I would like to refer to the logic of Alfred N. Whitehead. It may prove helpful to contrast it with a dialectical logic and a calculus logic. The thrust of Hegel's logic of negation draws together what Spencer Brown's calculus of form addresses as the differentiation and operation of an observer. Unlike Hegel's philosopher, the mathematician is not a spectator of the movement of forms. Hegel's dialectic of the limit knows no unmarked space but rather contradictions within the same. This makes *totality* a logically, temporally and objectively complete form. Calculi, on the other hand, avoid confusions of form with the movement of the thing itself. Still, like Hegel's logic, the calculus form creates its world, which it ascertains as it computes, as the unity of the difference between form and unmarked space. The calculus of form and dialectics postulate themselves as the forms of form

3. This is why Dirk Baccker (2007) speaks of the *next society*.

itself. Because initially their form knows nothing other than itself, they tend towards a tautologism of the world. Logics like these have difficulty distinguishing among the new. What the particular is, and how it is ascertained each time—and each time anew—and what chains of subsequent distinctions it gives rise to, can be ascertained through the materiality of the act of differentiation. A note must be made of what it is that is to be distinguished. If there is one asset that distinguishes the Aristotelian theory of form, it is its sensitivity for the empirical. Notation is an operation different from computation: a symbolic ordering of material differences.

As a theorist of evolution, Whitehead cautioned against laying out the theory of form as a logic. This is because *something* is a potential of its further determination and transformation. Forms are like vectors in fields of distinction. They are not the product of a logic of logic. Operations of ascertainment make use of limits and designs that derive from the horizons of differentiation of a particular world. Their relations are a function of contrasts. Contrasts are qualitative values. This is why they can generate sense. They have the effect of assessments. One cannot count on contrasts. Relations logicize contrasts but remain abstract with respect to them.

The contrast between blue and red cannot be repeated as *that* contrast between any other pair of colors, or any pair of sounds, or between a color and a sound. It is just the contrast between blue and red, *that* and nothing else. Certain abstractions from that contrast, certain values inherent in it, can also be got from other contrasts. But they are *other* contrasts, and not *that* contrast; and the abstractions are not “contrasts” of the same categorial type. (Whitehead, 1969, p. 267; italics in original)

Processes of form are realized as observer-relative areas of vagueness of contrasts and relations in the context of a particular world as the field of that which is symbolically ascertainable for someone now. They are largely determinative of the social world and modern culture. What Whitehead criticizes about term logic is the subordination of experience to schematisms of thought. Consequently, the things that take on form in the course of experience are always already logicized (Whitehead, 1969, p. 134). A similar criticism could be levelled against a logic of calculus.

8

If we consider forms as diagrams, we remain in the specific and the particular, in the processes in which the general is at work. We heed material differences among symbolic distinctions because these differences are the sense-generating source of the factors that shape a thing’s “being what it is.” In the case of non-homologous orderings of distinction—such as speaking, indicating or counting—observers remain sensitive, as symbolic dissonance generates sense. As a boundary, it escapes linear descriptions. To begin with, differentiating means marking and noting differences, not necessarily calculating them. Not least: A style of reflection that maintains close associations with perception, and a style that maintains close associations with organization are comparable where phenomena of modern society are concerned.

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