

## 14. Logic as a Tool in the Analysis of Political Cognition and Argument

### 1. Introduction

In the theatre of human cognition and verbalization logicians occupy some of the best seats, but most logicians do not seem to understand that this is so. Perhaps they do not want to understand it. The desire to flee from a hurtful and dangerous reality, the need for macho outlets, the ambition to demonstrate one's own distance from the *vulgus* — these motives together cause most students of logic to seek cover from the political reality of life in abstract mathematics and in formalisms for their own sakes. The fact that the problems of logic-relevant 'knowledge representation', and the subsequent distinction of valid from invalid inference, pertain to human cognition and communication quite generally, is thereby eclipsed. Many have in our time become so adapted to the definition of logic as pertaining to the fundamentals of mathematics, and nothing else, that they are unable to comprehend that logic and politics, logic and political science, might also be fundamentally and fruitfully combined.<sup>1</sup>

<sup>1</sup> This requires a philosophy of logic based on — among other things — very precise and realistic concepts of convention. Cf. my *Evaluaties*, Assen, 1972; E.M. Barth and E.C.W. Krabbe, *From Axiom to Dialogue*, Berlin/New York, 1982, pp. 19-24: 'Problem-solving and Social Contract: Ten theses on the philosophy of logic'. Cf. Bessonov's paper (this volume Ch. 13). — See also Note 12.

In fact, our position in the human theatre is even better than that occupied by linguists, who sometimes deign to consider human affairs. It is time that we open our eyes for the obligations that this implies.

### 2. Informally Inconsistent Dyads, Triads, etc.

Let me start with an example that can be dealt with without recourse to logical formalism, and with no opposition of logical systems, so as to emphasize that there are such cases.

It seems to me that an analytical capacity for revealing inconsistent dyads, triads, etc. would be an asset for everyone, a neglected craft with a political potential that has been seriously underestimated. Here is one inconsistent triad<sup>2</sup> with political relevance:

So far, wars have been, and are, initiated and carried out by men (males); this is our first observation. In the philosophy, science and literature of European culture one has, from the earliest times, emphasized that Man and Woman are Different. This emphasis is our second observation. There are in our century peace movements and even institutions for peace research; these world wide movements and research institutions do as a matter of fact not systematically link the problem of warfare with the alleged Difference between Man and Woman; and (hence) have entirely avoided any discussion of possible connections with machismo.<sup>3</sup> This lack of systematical polemological interest in machismo is our third observation.

So we observe the following set of commonly held beliefs or facts:<sup>4</sup>

(1) Wars always have been carried out almost exclusively by males.

<sup>2</sup> Expression coined by C. Ladd-Franklin.

<sup>3</sup> We may leave open the question of nature vs. nurture; it suffices to concentrate on behaviour.

<sup>4</sup> For safety's sake: not all mine.

(2) Men and women are, always have been, and will remain fundamentally different.

(3) There is no need to redirect polemology/peace research so as to make it gender-oriented, i.e., directed towards the said male nature, our male-dominated culture or *machismo*.

This is, I believe, a pretty inconsistent triad. Something should be done about it. One will have to drop the second premiss, or redirect peace research so as to make it theoretically either *machismo*-conscious or oriented towards biological sex difference as one of its basic variables, or else accept inconsistency. The same conclusion can be reached if (2) is replaced by (2') 'are commonly assumed to be (etc.)'.

As long as this inconsistent triad characterizes the prevailing cognitive situation there is little reason to spend one's analytical energies in the direction of peace research and peace movements in their present form. One should not invest in an inconsistent triad.

This introductory example was given without recourse to logical theory. In the following sections we shall delve into theoretical questions as well as problems concerning the present conception of logic as a science. Of paramount importance for the future success of a fusion of logic with political analysis and with political education is the task of mapping fundamental differences between the competing forms of logic in the cognitive-linguistic market.

### 3. The Political Import of a Logic That Can Handle Asymmetry

— that is to say, of knowledge-representational systems of cognition and communication that can render asymmetry without recourse to hierarchical representational forms.

Any logic — given that there are, or could be, a plurality of human logics — must be based on some system of cogni-

tive and of linguistic representation. Are such forms *sui generis* from a cultural point of view — are they given by our common biological nature? If they are, then the basic forms of cognitive representation will be demonstrably identical in all human populations. Unless 'basic' here is completely freewheeling we shall have to admit that this is not the case, so that our hypothesis must be discarded. I proceed 1° on the observation that different forms of cognitive representation and of argument are still with us today, in part embedded in so-called natural languages, and 2° on the assumption that they have come into being as solutions to logico-intellectual *problems* of a high degree of generality. In the following sections I should like to highlight some of those problems as well as the political import of some types of cognitive representation and inference that have been offered as their solution, emphasizing those that are of special importance for political cognition and communication.

Let us start with the problem of representing non-symmetrical relations between phenomenal things and of the drawing of inferences on the basis of one's attempts at solving this problem.<sup>5</sup>

In European cognition one can discern four different philosophies of movement, and of change in general, that hinge on the question of how to represent non-symmetrical relations.<sup>6</sup> Of particular importance are all those that cannot be reduced to hierarchical relations. Three of these philosophies are exemplified respectively by: Immanuel Kant;<sup>7</sup> the twentieth-

<sup>5</sup> The difference between non-symmetry and asymmetry as a special type of the former is not of great importance here (definitions are easily found in textbooks).

<sup>6</sup> The philosopher of physics J.B. Ubbink, defends the thesis that even the problem of the logic of quantum mechanics hinges on that problem, in *Plato's paradox en Bohr's idee*, Arnhem, 1962.

<sup>7</sup> The idea is suggested by Russell's 1903 discussion of Immanuel Kant, to which I have added the known 'ways out' in European thought.

century German idealist philosopher Günther Jacoby, polemical vindicator of the logic of traditional European metaphysics; Friedrich Engels, industrialist and revolutionary. The fourth is that of physical science and philosophy of science, which preceded the rejuvenation of academic logic at the end of the nineteenth century.

Kant, Engels, and Jacoby all started out from what we may call the Master Premiss in the traditional philosophy of relation, a cognitive principle and habit in European thought before the cognitive upheaval caused by the scientific revolution. This is the following cognitive principle, formulated here as an assumption about an assumption:

### **The Master Premiss:**

*The hypothesis that (what are now called) asymmetrical binary relations — social, geometrical or physical — may be real, leads to contradiction, in at least three senses:*

a. *It generates the Great-and-Small in Plato's ontology and logic.*

b. *It is in conflict with an ontology based on the categories Substance and Accident.*

c. *It leads to the acceptance of four terms (quaternio terminorum) in Aristotelian formal logic (syllogistics), which in that logic is a fallacy.*

According to most academic logic in our century this doctrine is invalid. For a long time now it has been perfectly possible to deal with asymmetrical predicates — those that express comparatives as well as those that express direction — in a systematical and logical manner.

Imagine that you have accepted this logical doctrine. It does not matter much whether or not you have reflected upon it consciously. Just imagine that you have somehow been programmed with it. Then, obviously, for you, the category Movement, and the category Change, of any kind, will — logically, from any point of view — entail contradiction, since movement presupposes direction and direction presupposes asymmetry.

There is little reason for you to feel alone. For company, here is the German idealist metaphysician Jacoby, in 1955:

'Movement contradicts itself.'

Nor are you bound to philosophically line up with the traditional metaphysicians. For Friedrich Engels said the same, in his counter-attack on Dühring:

'Movement itself is a contradiction.'<sup>8</sup>

So on the connection between Movement and Contradiction both the otherworldly metaphysician Jacoby and the political revolutionary Engels agree with you.

Now how would you personally go on from here? Jacoby, true to traditional metaphysics, continues as follows:

'There is none [i.e., no movement]. It only exists for the gnoseology of a frog perspective. For the bird perspective, in the time-world, nothing is in movement or at rest.'<sup>9</sup>

Historically this is not the only alternative. There are three possibilities on the basis of one and the same premiss, the Master Premiss. A fourth possibility is to declare any logic that assumes or entails the Master Premiss ripe for revision.

There is no denying that the outlook on movement and on change in general that characterizes the philosophy of Engels and Marx and their followers has been of considerable importance politically. It belongs to the core of cognitive principles behind an ideology that until recently was called upon in support of a great number of political regimes. It would be no less of a mistake to regard traditional metaphysics, exemplified here by Günther Jacoby, as without political import — it has had various kinds of import through the churches.

I shall expose the four arguments schematically.

<sup>8</sup> F. Engels, *Herr Eugen Dührings Umwälzung der Wissenschaft*, Leipzig, 1886 [1978], p. 110.

<sup>9</sup> G. Jacoby, *Allgemeine Ontologie der Wirklichkeit II*, 1955, p. 611.

### I. Kant 1770, 1783

(K1) The hypothesis that [what we call] asymmetric relations, whether social, geometrical or physical, are real, leads to contradiction (*The Master Premiss*)

(K2) Contradictions must be avoided (*second premiss*)

(K3) Ergo, such relations, whether social or geometrical or physical,<sup>10</sup> are not real, do not characterize the thing-in-itself (*conclusion*)

### II. Engels 1878

(E1) (*The Master Premiss*)

(E2) Movement is real [hence at least some asymmetric relations must be ontologically fundamental] (*second premiss*)

(E3) Ergo, representations of reality that do justice to it will necessarily be contradictory (*conclusion*)

### III. Traditional metaphysicians (cf. G. Jacoby 1955)

(T1) (*The Master Premiss*)

(T2) Movement and [what we call] asymmetrical relations [whether social or physical] are not real (*second premiss*)

(T3) Ergo, there is no necessity for contradictions (*conclusion*)

### IV. Modern science and logic

(M1) Movement is real, i.e. (E2) is true (*first premiss*)

(M2) The Master Premiss is false with respect to the representational forms of modern logic (*second premiss*)<sup>11</sup>

<sup>10</sup> Thus in *De Mundi Sensibilis atque Intelligibilis Forma et Principia* (1770) Kant writes that space and time are 'something subjective and ideal'. Asymmetrical relationships, which Kant was among the first to take seriously, are of course exhibited by both space and time. In *Prolegomena* Kant repeats this 'Lehre von der Idealität des Raumes und der Zeit' (1883), making 'the asymmetry of spatial relations a ground for regarding space as a mere form of intuition ... being unable ... to free from contradiction the notion of absolute space with asymmetrical relations between its points' (Bertrand Russell, *The Principles of Mathematics*, 1903, p. 227).

(M3) Ergo, (T3) is true (*first conclusion*)  
(M4) Ergo, as a principle of representation (K2) is sound (*second conclusion*)

### 4. Dichotomization as a Principle of Political Cognition and Argument

As seen by Marx and Engels, the category of Contradiction was systematically tied up with dichotomization, with restriction to binary relations, and with an interest in holistic (generic) relations rather than relations between individuals. Where did they get this aspect of their logical framework from?

Thanks to Walter J. Ong we are all well aware that Peter Ramus was an ardent dichotomizer, in methodological theory and in cognitive practice, and also that he did not have his greatest following in his own country, France, but in Germany. Leonard Nelson had already made it clear that the dichotomizing and symmetry-based Neo-Platonic system of forms was reintroduced into European logic by J. G. Fichte, i.e. in Germany. That is to say, there seems to have been a relatively strong and continuous German tradition of dichotomic thought all since the Renaissance. From Fichte the dichotomizing and symmetry-based Neo-Platonic logic was taken over by Hegel. From Hegel it was transferred to the political philosophers who insisted on the cognitive restriction to no more than two social classes. This seems enough to allow us to say that here too, in the heart of revolutionary materialism, we are up against vestiges of

<sup>11</sup> There have been one or two attempts (e.g., by R. Routley) to construct a *model* for general logic with a feature 'contradiction' built into it, but this has not caught on. Nor is it necessary here to delve into the problems of quantum mechanics. We are referring here to supra-atomic movement and to what is usually called 'modern logic'. Notice that the traditional problem concerns the representation of asymmetrical relations in general, and that it concerns movement in as much as the analysis of movement presupposes the category asymmetry.

Neo-Platonic logic in European cognition, just as in the case of what we shall call 'oligodynamic logic' (Section 6).

## 5. World's Weakest Negation

For political purposes an optimally strong negation, as well as an optimally clear and agreed theory of negation for use in political philosophy, are of supreme importance.

It is easy to show that in Hegelian philosophy, and thereby in Marxist philosophy, the *not* in sentences of the form *not F(a)*, e.g., in *a is not P*, is logically even weaker than Johansson's **minimal negation**. And minimal negation is weaker than **constructive negation**, which is weaker than **two-valued negation**.

Hegel's and his followers' *not* deserves an entry in the *Guinness Book of Records*. Used as an instrument of analysis formalized logic can help us to recognize this and to explain the point to students. For, in the natural-deduction terminology of modern textbooks, in order to define any logical particle, such as *not*, two logical rules are required, one that will explain the judgemental or textual conditions for introducing the particle in question into an argument, and then one that will explain the conditions on which it may be eliminated from an argument. Hegelian logic lacks any implicit *elimination rule* for simple negation. For whereas minimal logic (see above) holds that a contradiction at least entitles one to conclude: 'This is absurd!', which does not feature *not*, Hegelian and Marxist logic do not recognize contradictions as absurd stages of arguments. In other words, one does not know any conditions on which one could 'eliminate' *not* in an argument, in the sense of drawing a conclusion that does not contain *not* from a statement that does. The word *not* in simple statements *a is not P* is therefore underdetermined. As a consequence the *not* in complex statements *a is P and a is not P* is logically underdetermined as well.

This carries over to dialogical logic. There is a clear, algorithmically expressible correspondence between introduction and elimination rules defining a logical particle and the rules for making verbal moves in dialogical logic pertaining to the same particle.<sup>12</sup> It immediately follows that Hegelian 'dialectic' does not allow for a minimally strong logic of negation in political debate or in the kind of probing reflection that ought to precede such debate. Or, a critical thinker or debater is not in possession of any strategy for attacking statements containing *not*, which therefore must go unassailed, whatever their content.

This is a consequence of a philosophy that encourages contradictions, like that of Engels, who got it from Hegel. Hegel got it from Fichte, who got it from dormant Neo-Platonic modes of representation and argumentation. No 'relevant logic' averting disaster<sup>13</sup> was, or is, available, let alone in use.

In Section 11 below we return to the idea of a Relevant logic (logic of relevance).

## 6. An Unrecognized Brain Operating System and Some People's Alternative to Political Revolution

Or, 'Oligodynamic' logic in action (I). We are talking here of a central feature of Neo-Platonic knowledge representation and logic that we may call the Oligody-

<sup>12</sup> Discussed in E.M. Barth and E.C.W. Krabbe, *From Axiom to Dialogue*, Berlin/New York, 1982. In dialogue logic such introduction and elimination rules concern the rights and obligations of the participants. The absence of int-elim-rules means the absence of rights or obligations or both.

<sup>13</sup> As attempted by R. Routley. — Disaster is created from the assertion of contradictions both in two-valued logic and in constructive logic because both assume that from an absurdity anything at all may be taken to follow (or, given an assertion of an absurdity anything at all is defensible).

namic Principle of logic-relevant representation. This is the principle, or habit-in-potential, of assuming a one-dimensional arrangement of degrees of Quality and of Quantity, in a closed interval with pure Quality at one end and pure Quantity at the other.

This, to many of us weird cognitive arrangement is found in many corners of European thought. It can be studied in classical homoeopathy, where it is particularly clear, in the infatuation with miniature paintings in the Renaissance, but also in the early foundations of the Calculus. It is also active, it seems, in the cognition of extreme anorexics. I am referring to those young women who in their quest for a feeling of personal value — Qualitative excellence<sup>14</sup> — try to achieve weightlessness, or: the absence of Quantity.

In all seriousness I recommend that a theoretical puzzle of great but unrecognized political relevance, the problem of explaining *Anorexia nervosa*, be connected with the history of human logic as blended with the old Quantity-Quality continuum.<sup>15</sup> The clue here is precisely that the older categories Quantity and Quality were not conceived as orthogonal dimensions. Spatial orthogonality as a cognitive representation of categorial independence is an unknown idea in many logico-philosophical systems, perhaps in the earliest Disk (Drive) Operating Systems in human brains, and no other types of pictorial representation of categorial independence seem to have developed. In any case, many systems of cognition introduce the notions Quantity and Quality into individual nervous systems as the two extremes of a bounded continuum. This

<sup>14</sup> Or: in their aversion to Quantity. The result is the same.

<sup>15</sup> A fuller discussion may be found in my paper 'Instead of revolution: Human ghosts of departed quantities. Quantity, quality, and Holy Anorexia,' *History of European Ideas* 11 (1990), 289-304.

makes for an unchallenged underlying assumption, experienced as a tautology: *A high degree of Quality semantically entails a very low degree of Quantity*. In other words, to the brain in question it is a tautology — nothing to write home about, or publish in a philosophical or medical treaty — that to obtain a high degree of Quality requires the absence of anything that is conceived of in terms of the three categories Extension, Number, and Weight.

As the degree of popular acceptance of the homoeopathic doseology makes clear, this crucial aspect of an old Brain Operating System is still logically active today, in large parts of the population.<sup>16</sup> There is therefore very little reason to reject our hypothesis of a connection between the Oligodynamic Principle and the DOS, or BOS, of extreme anorexics off-hand.

## 7. Holism<sup>17</sup>

Or, 'Oligodynamic' logic in action (II). Here two different though systematically related effects of the Oligodynamic Principle should be distinguished.

(a) Political emphasis on holism is often expressed in sentences containing 'generic' terms. We advance the hypothesis that political holism is normally expressed this way, together with the companion hypothesis that, even in our time, a supranormal frequency of generic terms is positively correlated with a supranormal penchant for holism.

<sup>16</sup> So in this sense, anorexia nervosa is always 'holy'.

<sup>17</sup> If there are essential connections between the kinds of holism discussed below and that advocated by Quine, and if these concern the problems of this paper, then I fail to see them. Rather, I am in favour of certain forms of methodical holism myself, including Quine's. On the other hand, Quine never took steps of a non-adiabatic nature. In this respect the differences between his philosophy and the one outlined here are considerable, though I do not believe them to be unsurmountable.

People are then moved to action through opinions and locutions concerning entities that have been characterized as *the State*, *the People*, or as *the Negro*, *the Bantu*, *Man*, *Woman*, *the Jew*, and so on. Sometimes we find plurals without prenex quantifiers: *Negroes*, *Bantu's*, *Men*, *Women*, *Jews*; this may help somewhat to bring the existence of individuals to the fore, but as often as not such locutions are mere synonyms for generic singulars.<sup>18</sup>

The Oligodynamic Principle/habit encourages the use of generics by discouraging the utterance and study of 'quantified' locutions — as we still mistakenly call them today. By dropping the operators *all*, *some*, etc., one expressed that one did not mean to refer directly to the domain of individuals and Quantities but to the Quality or essence of each individual falling under the class name in question.

Let us call this holism by the name of Syntactic Holism.

(b) Indifference to the loss of individuals as well as an emphasis on political wholes in political strife is sometimes defended in a way that involves reference to political totalities, of one kind or another.

Let us call this Axiological Holism.

Several authors have expressed a wish to 'dismantle the legitimation structures' (O'Brien 1978, p. 12) that are used by some anti-individualists in internal and external defense of various kinds of violent activity. I have pointed out elsewhere that the situation seems to be even more complicated than O'Brien surmises. This is a case where logic and the history

<sup>18</sup> It is not possible to go deeply into this topic here. In *The Logic of the Articles in Traditional Philosophy* (1974), to which I gave the subtitle 'A Contribution to the Study of Conceptual Structures', I discussed the topic in all its complexity in so far as I could take stock of it at that time. In later publications I have offered extensive additions and methodological elaborations. Since the whole approach is still a very sensitive one I shall take the liberty of mentioning a few of these in later footnotes.

of ideas can offer substantial help, in the sense of bringing to the fore components of the situation that so far have escaped notice. Students of legitimation structures may benefit from acquaintance with deep cognitive traditions which concern our so-called 'representational forms', like the one that we have called the Oligodynamic Principle and which is at the same time a principle of (il)logical and of axiological cognition. The isolation of this principle and the description of its involvement with other fundamental categories and its embedding in large representational systems should be seen as a contribution from logic to the analysis of political catastrophes encouraged by axiological holism.<sup>19</sup>

## 8. Privileged Positions

In two impressive papers, written for a large intellectual audience, Conor Cruise O'Brien analyses the impact of J.J. Rousseau's logico-semantic categories on the French Revolution.<sup>20</sup>

Rousseau wrote for the liberator of Corsica, general Paoli, a speech that began as follows: "*Corsicans be silent: I*

<sup>19</sup> Conor Cruise O'Brien, *Herod. Reflections on Political Violence*, London, 1978. In my monograph *Perspectives on Analytic Philosophy* (*Meded. der Kon. Ned. Akad. van Wet., afd. Letterkunde, N.R. 42, No. 2*), Amsterdam/Oxford/New York, 1979, I called the objects of research 'philosophies', and before that, 'conceptual structures'. Today I much prefer the fashionable expression '(systems of) representation', more precisely: 'logic-relevant systems of interlocking categories of cognitive/ linguistic representation'.

<sup>20</sup> Conor Cruise O'Brien, 'Virtue and Terror,' *The New York Review*, Sept. 26, 1985. The topic is given a different and wider embedding in my article 'The dialogical positions in the philosophy of language', in: M. Dascal, P. Gerardus, K. Lorenz and G. Meggle (eds.), *Sprachphilosophie/Philosophy of Language. An International Handbook of Contemporary Research I*, in press.

*am going to speak in the name of all."*

Now how can anyone speak in the name of all — without first having consulted them in some detail? What kind of semiotics lies behind this declaration?

In all likelihood the author of the general's speech, like most other people, was ingrained with cognitive structures that clerical powers had made commonplace. In many cultures one finds the claim that one or more persons are to be trusted as Keepers of the Word related to a given metaphysical entity or totality, with god-given prerogatives. No dialogue of these persons with outsiders is encouraged. Attempts to enter into a critical discussion with persons who hold such semiological prerogatives, or to challenge the prerogatives themselves, are frequently countered with some form of physical violence.

In fact such situations contain two claims, a claim to a *right* to Represent<sup>21</sup> a social totality (collective) or metaphysical entity, and a claim to a *capacity* to do so. Here we are concerned especially with the semiotic belief that such Representation is possible, a claim that seems to characterize holistic positions generally. Rousseau may or may not have based the privileged semantical position he attributed to the general on a theological or 'natural right' of some kind. In either case a claim to speak 'in the name of all' presupposes a belief in ability of an individual literally to give voice to a metaphysical political entity, in this case the population as a whole, without interference from other constituents of that whole. It presupposes a one-at-a-time semiotics. Clearly such a semiotics cannot support a dialogical logic. It cannot even produce the idea of such a logic.

It seems reasonable to assume that the semiotic holism that is present in this

<sup>21</sup> In order to distinguish the social 'representation' of a whole, by one person or institution, from cognitive/knowledge or linguistic 'representation' we shall write the former with a capital 'R'.

position is cognitively related both to Syntactic Holism and to Axiological Holism. If this is called into question, one ought to encourage empirical investigations into such connections. Today Western philosophy and culture is familiar not only with the claim to Papal infallibility *ex cathedra* but with the claim to semiological rights and capacities of the Party as well, as in fascist and communist philosophies. It will not do to shun such problems as politically unbecoming.

In 1990 O'Brien analyses the impact of Rousseau's logico-semantic categories, *via* their contribution to the charter of the Rights of Man, on the development of the French revolution.<sup>22</sup>

## 9. The Private Semantics of Generic Locutions

(i) Do believers in the semiotics of a solipsist Representation of the People, such as Rousseau and Lenin,<sup>23</sup> employ generics even more frequently than arguers who pay systematic attention to what their interlocutors might wish to say? And are they even more inclined towards axiological holism in ethical questions of an empirical nature? These are empirical questions and cannot be answered without statistical research. However, certain advance observations of a general nature will not be out of place.

One of the several functions of human language is to make criticism possible. In our time it has become clear that logic is essentially concerned with systematical multiple criticism of hypotheses or standpoints; or more precisely, with the

<sup>22</sup> Conor Cruise O'Brien, 'The Decline and Fall of the French Revolution,' *The New York Review*, 15 February 1990, 46-51.

<sup>23</sup> See Ch. 2: P.A. Smit, 'The Logic of Lenin's Polemics', this volume, 'An Argumentation-Theoretical Analysis of Lenin's Political Strategies', in: F.H. van Eemeren *et al.* (eds.), *Argumentation: Analysis and Practices*, Dordrecht/Providence, 1987, pp. 317-326.

interplay of the cognitive/linguistic steps in each line of criticism and the steps of each possible form of defense. Not all types of logic-relevant cognitive representation do in fact support these activities, as we have seen in connection with certain types of negation. But then criticism is not a linguistic function that all users of language are particularly concerned with.

We assume, without much hesitation, that the 'generic' sentence form *was not originally introduced for critical purposes*, i.e., for use in discussions issuing from conflicts of opinion. Nor do we believe that generic locutions today owe their frequency to the strongest adepts of critical thought and language. Semantically they belong in logico-linguistic surroundings more or less like those in political parties with a strong internal discipline, the Vatican, and other centres of dogmatic truth, where they seem to occur with particularly high frequency.

This assertion can be tested empirically, through a study of the frequency with which generics are used in theological, philosophical and political texts, and by plotting this frequency against other parameters such as dogmatism, liberalism, and other textual features.

(ii) In the following we shall assume that the texts we are talking about have been composed with deliberation and care. Then we can say: the *type* of meaning that a given generic sentence has, if it has any reasonably clear meaning at all, cannot be determined from its sentence form alone. Under the prevailing conditions of culture and education a critical interlocutor is therefore at a loss when confronted with a suggestive collusion of X and Y in *The/An X is Y*. Here generic sentences differ in principle from quantified sentences, statistical sentences, and individuating definite sentences. I shall argue for this in several steps.

1° 'Generic' locutions are immensely much more context sensitive than quantified sentences (*all ...*, *some ...*, *most ...*, *...*). This means more than that larger parts of

the text in question must be known to the interpreter in order to make interpretation possible. In any given case the linguistic choice of a generic locution will not have been made in isolation from the other features of one's cognitive structural apparatus. Historically, generic locutions have a meaning in, and only in, a wide network of categories and principles of representation, many of which have since been discarded (the Oligodynamic principle, the restriction to symmetrical non-hierarchical relations and others).

Recent examples of interest in generic sentences show us theoreticians who invariably isolate them from all these other logical categories and principles of representation that together supplied them with their traditional meaning (though not with a meaning in critical use).

Having thus isolated them from their natural functions in dogmatic or a-critical thought and language, the same theoretician draws the false conclusion that as we see them in the 'natural' languages today, generics are themselves 'natural' (an open question), worse still, that they have some as yet unclear mission that no complete language can possibly do without. This is not only wrong, it is naive. The most advanced empirical sciences — physics, for example — have developed excellent languages that do without. Physics has learned to do without syntactic holism, and has been able to develop precisely for that reason. Linguists and mathematicians, neither of whom are steeped in the categories of the empirical sciences, and who are basically uninterested in their development and functioning, are not sufficiently aware of this.<sup>24</sup>

<sup>24</sup> A paper in the journal *Erkenntnis*, which as an advocate of analytic philosophy might be expected to be better informed, surprisingly assumes that the one and only difference between generic and universal judgements/statements is that the former are judgements or statements about universals whereas the latter are about individuals, and that generic judgements are

I have heard people who are more interested in algebra than in human cognition and logic demand a 'model for generics'. But why should one look for one? Even the possible is not always necessary. And it is not *necessary* to incorporate generics into specialized and sophisticated languages. Neither everyday political language nor the language of political science is at this moment of the highest possible degree of logical sophistication. And since it is not necessary, I see no reason to plead for a final place for these categorial fossils.<sup>25</sup>

A desire to freeze the language we employ for political purposes at its holistic stage can be maintained only in the absence of historical knowledge about the agreement, found in the writings of logicians of all centuries, on the essential irrefutability of generics by counterexample.<sup>26</sup>

*logically equivalent* to universal statements (D. Ellerman, 'Category Theory and Concrete Universals', *Erkenntnis* 28 (1988), 409-429). This is, of course, sheer nonsense, unless one restricts oneself to mathematical statements — which he does not, thereby misrepresenting the problem completely right at the outset. This use of mathematical formalisms (which he uses wrongly) has the effect of bringing about an enormous 'de-precization' of a question of enormous consequence for the logic of political communication and cognition.

<sup>25</sup> A careful study of Hempel and Oppenheim's 1936 classic *Der Typusbegriff im Lichte der neuen Logik* should suffice to persuade those in doubt of the existence of other logical categories to think and to talk in. These newer categories — such as non-hierarchical yet non-symmetrical relations between individuals — and ways of logically representing them, have been introduced into European cognition in the course of the development of the *empirical* sciences, particularly the physical sciences. Though its examples are dated I warmly recommend the book to everyone interested in improving our political cognition, language and logic.

<sup>26</sup> This is the main target of my (1974), though the sub-targets are many, owing to the complexity of the problem.

*Then what precisely is the logical meaning of a generic judgement or statement?*

This is not the place to disclose the complete set of principles of a logical<sup>27</sup> or a semantical nature that belong, semantically and logically, with the generic mode of representation, conceptualization and locution. So I shall not be able to give a complete explication of the extremely involved concept 'generic term', or 'generic judgement'. I shall only offer two crucial definitions which in their generality cover all historical occurrences whether in mathematics, in the sciences, in general philosophy (including traditional logic), in law, in political philosophy, or in political life:

*Def. (a)* A given locution *The/A/An X is Y*<sup>28</sup> is for NN a truly generic (holistic) judgement/statement **if and only if**, according to NN, it is not for all logico-linguistic purposes equivalent to one of the statements *Every X is Y, Some X is Y, Most X's are Y, The one and only individual X is Y*, or to some statistical result or assumption.

(b) A generic locution has a message meaning of the following form:

*There is some background conviction or*

<sup>27</sup> I.e., principles intended as logical.

<sup>28</sup> The situation is in fact much more involved, since historical as well as many contemporary uses of generic sentences contain — overtly or tacitly — an operator *potentially/in potency*: 'The/A/An X is potentially/in potency Y'. As I have discussed elsewhere (*Erkenntnis* 11, 1977), the notion of a physical field of force (*Potenzialfeld*) is a development of this biology-based notion of logico-ontological potency. Without a similar mathematical development of the general logico-ontological notion of potency — which is most unlikely — it can safely be said that the expression *potentially/in potency* has no critical meaning-in-use whatsoever and that the closest one can come to a definition of the message-meaning of generic statements is the one given in clause (b) of the present definition. See Note 44 on compensational uses of ancient logic-relevant phrases.

*theory, P, such that on the strength of P, every X is Y, whatever the phenomenal world indicates.*

I.e., it is a second-order statement which conveys that, whatever empirical observation may disclose, on the strength of some background conviction or theory *P* which so far goes unmentioned, the thinker/speaker assumes/holds that every individual of the *X*-class may be taken to have the property *Y* (to satisfy the condition *Yx*).<sup>29</sup>

What sort of variable is this hidden second-order existential quantifier '*P*'? What is its type, what is its range? This last question does not have one clear and definite answer. The history of logic, as supported by the history of general philosophy and of the sciences, shows that before the scientific revolution, *P* could have values taken from such diverse fields (ranges) as theology, law, mathematics, biology, and many more. That is to say, the value of *P* could be a theological dogma; a law; a *homunculus*; a (fixed) infinitesimal. In each case *P* was assumed to be some *principle*, a spiritual basis, often: with an 'infinitesimal', 'vanished Quantity' — compare Section 6.

In addition, human beings seem often to have had — perhaps to have — the habit of understanding the terms that may be instantiated from particular premisses as generic. It is reasonable to expect that such a habit is an attempt at solving certain general problems, an attempt to meet intellectual demands that are not clearly seen.<sup>30</sup> In order to understand, to evaluate, and to master the cultural and

<sup>29</sup> Notice that a model-theoretic rendering in terms of two 'possible worlds' *w*, *w*<sub>0</sub>, with a clause '*w* is a deeper reality than *w*<sub>0</sub>', is less suited to divulge the existence and nature of the logical problem.

<sup>30</sup> Here the history of logic becomes particularly fascinating. Beth wrote about it, but he used neither the word nor the full historical concept of generic terms and sentences. The present author has carried the analysis further from where he left it in (1974). Cf. Note 18.

political problem of generic statements one has to come to grips with the DOS-functions of this specific habit, if I may call them so. It is impossible to *guess* at the practical importance of these illegitimate cognitive connections; only refined empirical research, of all types, can bring about a realistic insight here.

In mathematical practice the existence of such a second-order operator is not really a problem. Though some logical analysts (Locke, Beth) have been fascinated by the logical semantics of the sentence 'The sum of the inner angles in the *Triangle* is 180°', this form, and the various theories of it held by earlier logicians, do not cause difficulties among working mathematicians. Obviously this is because in mathematics a concise and suitable value of '*P*' is often at hand and completely undisputed — in the said case it is possible to formulate an axiom system, agreed by all, that will render the universal statement as a theorem.

*In political encounters the value of "P" is almost never disclosed, nor can one easily guess at its intended value.* In order to get to know it one would have to ask the speaker. However, we have not yet learned to ask: 'Precisely what do you base your case on?' And: 'Are you prepared to demonstrate on that basis that every X is Y?' And, above all, unless the interlocutor already assumes the same basis (same value of '*P*'): 'Are you prepared to defend (the use of) that basis in the case in question?'

As long as we do not all learn to ask precisely this, and as long as society has not learned to welcome these questions as perfectly normal and legitimate, the generics we encounter have neither a semantics nor a logic in critical use. In politics these questions are as yet relatively uncommon. In many centers of power (the Vatican is one case in point<sup>31</sup>) they are not expected and are not accepted as

<sup>31</sup> I choose this example so as to avoid mention of particular parties commonly taken to be political.

legitimate and matter-of-course reactions; rather they tend to cause irritation and to raise the temperature of the political situation.

Our insight in the illogic of generics has important political applications. Race and sex discrimination are pretty unthinkable, probably literally unthinkable, without any recourse to generics (with their true companions, the sortal relations Identity and Difference<sup>32</sup>). Holistic political conceptualizations usually occur in connection with generic terms like the People, the State, and probably cannot take root without them.

A widening of the problem is therefore called for. The very absence of any *sylogistic* or other first-order logic for generics should be explained on the basis of the place occupied by generics in the total system of representation in question — the total system of logical categories (particles, operators).<sup>35</sup> Only then shall we be able to say that we have complete mastery of this cognitive form. In many systems of logical representation the categories Quantity, Quality and Infinitesimal have had central logical roles to play, certainly not limited to the sciences. This must be taken into consideration if we are to reach a full understanding of extant logico-intellectual-linguistic modes of representation, and of the forms of reasoning and arguing, if any, that go with them in practice.

Syncategoremata and other logical categories come in clusters from which sets of interlocking principles of logico-linguistic representation are devised. Older logico-linguistic representation seems to have been restricted to what we

<sup>32</sup> Some political consequences of preoccupation with the two symmetrical relations Identity and Difference are discussed in my paper 'Masculine' and 'Feminine' — An antiquated problem' (in press).

<sup>33</sup> Discussed in my paper 'On logical representation and its consequences: The (onto)logical Master Premiss,' *Communication & Cognition* 22 (1990), No. 3/4 (special issue: *Empirical Logic*), pp. 337-56.

may call *the Symmetry Set* of logical categories.<sup>34</sup> As we have said already, asymmetry was not a traditional cognitive category. Identity and Difference are symmetric relations; notice that they were formerly taken to pertain to genera or other 'wholes', rather than to individuals.

## 10. Logic, Lewin, and 'Fields of Force'

Something needs to be done about our science, Logic, so as to make it more oriented towards the intersubjective features of cognition and language. Nothing could be worse for our hopes about a *rapprochement* with the human Arena than to leave logic in its present state. So let us permit ourselves to indulge in some speculation.

Traditionally logic took its categories from biology, which was Aristotle's inspiration in logic: genera and species, similarities and differences, seed (essence), sometimes taken to be infinitely small, potency. And sometimes, generalizing upon the two sexes, dichotomization. It is hard to see why logic today should not be able to benefit from new fundamental categories taken from physics,<sup>35</sup> or from the social sciences, for my part, as well as

<sup>34</sup> 'Comparative Principles of Empirical Logic,' *Proc. Sesq. C.S. Peirce Conference, Harvard 1989* (in press); 'Systems of logical representation and inference — An empirical approach,' *Proc. Conf. of the Internat. Assoc. for Semiotics, Groningen 1990* (Walter de Gruyter, forthcoming).

<sup>35</sup> For instance, theories of public interest might be discerned from (other) political systems of morality as being built on the principles of Bose-Einstein statistics (applied to sets of human individuals rather than to 'bosons' (microstates). '[P]roblems suggested by the physical properties of bosons [ ] seem to put in question some fundamental logical and mathematical concepts regarding, for instance, the notions of *individual, identity, cardinal and ordinal number*' (Maria Luisa Dalla Chiara, 'Some Foundational Problems in Mathematics Suggested by Physics,' *Synthese* 62 (1985), 303-315; p. 307).

from biology, or as in this century, from mathematics.

In fact it did take its inspiration from physics at least once. I am referring to the vector concept, which preceded a notion which came up in generalized logic only at the end of the last century: asymmetry.<sup>36</sup>

Here is the speculative bit. Some decennia ago the psychologist Kurt Lewin attempted to exploit the physical field concept and to establish a theory of fields of force in social psychology. The idea is tempting, but his attempts to thus create a new type of psychological theory were not successful. Maybe he dealt with the wrong science? We may have a chance of establishing a 'field theory' of sorts in logic, rather than in social psychology. Some years ago I briefly sketched the idea and illustrated it by means of descriptions of two types of logical Environment, each inducing cognitive 'forces' that determine both the application of logic and the further development of logic as a science. The first type of field is defined by tenets on logic, semiotics, and related human relations, that can be found in philosophical books and papers by the mathematician L.E.J. Brouwer, the second type is defined by tenets on the same topic that are found in publications by the mathematician and philosopher E.W. Beth. Here in Holland 'fields of force' of each of these two types are quite real and easily registered.

Maybe a future generation of logicians can once do something more about it. The idea clearly has political relevance in as much as a precise theory that could describe Fields of (cognitive, logical ...)

<sup>36</sup> Cf. Ernst Nagel, 'The Formation of Modern Conceptions of Formal Logic in the Development of Geometry,' *Osiris* 7 (1939), 142-224. The whole history of vector algebra, from Caspar Wessel onwards, is relevant. The development of the concept of Enantiomorphy (as in 'enantiomorph isomers') in organic chemistry in the last century, should also be mentioned in this connection.

Force would enable us to explain and to forecast pragmatic results of an intersubjective nature. The suggestion may also be a mere fantasy. I proceed to a philosophy of logic that in my opinion has nothing of the fantastic about it.

## 11. Non-Adiabatic (Distributive) Logic<sup>37</sup>

For the purpose of a *rapprochement* between Logic and Politics, definitions of logic that keep the field theoretically within the insulated icebox of subjectivism ought to be contested. I shall borrow and use, in a somewhat metaphorical sense, an expression well-known from thermodynamics, that of an *adiabatic process*. The expression *Adiabatic logic* is to stand for the conception of logic that takes logical processes — by definition — to concern the activities of one brain at a time, and an 'insulated' brain at that, one which does not exchange 'heat' with other systems in the course of the process. We can then metaphorically say that the present conception of the science of logic is still restricted to 'adiabatically' closed intelligences. A logical process still is by definition an adiabatic process; the reasoning mind is conceived of as impenetrable by other minds while reasoning, it is shielded from the 'heat' of the battle. I repeat that this is a metaphor, though a suggestive one. Take the calorimetric definition of heat: heat is 'that which is transferred between a system and its surroundings by virtue of a temperature difference only'.<sup>38</sup> The temperature differences we are concerned with here are differences of opinion. What is transferred consists of critical 'attacks' and 'defenses' against them. Of such stuff

<sup>37</sup> The philosophy that inspired *Distributive Artificial Intelligence* (DAI) must be closely related to the Non-Adiabatic outlook on logic that is presented in this section. Hence we might also speak of Distributive Logic.

<sup>38</sup> M.W. Zemansky, *Heat and Thermodynamics*, 3rd ed., McGraw-Hill, 1951, p. 58.

is the heat of the battle — when logic, in its diathermic version, gets a political chance.

Rousseau is an excellent example of a person whose thought processes and even linguistic processes in fact did take place in adiabatic isolation. The conception of Logic in our time, particularly as worked out by intuitionists and constructivists, is one that might have taken Rousseau as its model.

For anyone who is prepared to leave the dogma of logic as adiabatic behind, it is not difficult to take yet another step, that from a purely 'robotical' philosophy of logic to one that permits the addition of the 'pathological' approach as a respected component of research.<sup>39</sup> And perhaps this new approach will turn out to be the more fruitful of the two, though it is too early to offer an opinion here. As in cognitive science the prevailing methodology in logic is very much the robotical one. This inherited outlook naturally brings one to limit one's analyses and efforts to algorithmic descriptions of *good* logic ('the one and only good logic', usually). The pathological approach on the other hand invites you to consider also the various attempts at logic construction that went wrong, their political and cultural ramifications and effects, as well as *why* these theoretical attempts went wrong.

Here are some examples of much-needed transitions from adiabatic to non-adiabatic 'diathermic' logic, and from robotical to non-robotical methods. They concern the very heart of the approach in most parts of analytic philosophy today.

<sup>39</sup> The 'robotical' philosophy is exemplified by a.o. D. Marr in *Vision* (1982). The methodological expression 'pathological' is taken from Oliver Sacks and Richard Wasserman, 'The Case of the Colorblind Painter,' *NYR* 19 November 1987. See also Robert Cuperus' unpublished Master's Thesis *Filosofische pathologie (Philosophical Pathology)*, Groningen University, 1989.

#### Ex. 1

*Main basic objects: Laws of Logic, and rules for deriving conclusions.*

*Shift to: Conflicts of opinion<sup>40</sup> and rules for resolving them.*

#### Ex. 2

*Main logical property: Valid argument.*

*Shift to: Fallacy, in practice as well as in logical theory.<sup>41</sup>*

Several among us have made this latter shift. A non-adiabatic application of these two moves is:

#### Ex. 3

*First stage of theory formation: 'Objective' fallacy.*

*Shift to: Fallacy as dialogical.<sup>42</sup>*

#### Ex. 4

*Main epistemological category: Human understanding.*

*Shift to: Misunderstanding.*

Næss may well have been the first to make precisely this step, and to make *misunderstanding* a fundamental notion.<sup>43</sup>

Whenever successful theory construction is not forthcoming in spite of great expenditure of intelligence and energy it often pays to shift to a new way of constructing the problem and to a new question. This may be done by taking inspiration from a different methodological philosophy. A hard theoretical nut to crack is this:

<sup>40</sup> Barth and Krabbe (1982). Cf. Note 12.

<sup>41</sup> Cf. Note 1.

<sup>42</sup> This shift was first recommended in 'Argumentum ad hominem: From chaos to formal dialectic. The dialogical tableau method as a tool in the theory of fallacy' by the present author and J.L. Martens, *Logique et Analyse* 20 (1977), 76-96.

<sup>43</sup> In *Communication and Argument*, Oslo: Universitetsforlaget, and London: Allen & Unwin, 1966, and several other publications.

### Ex. 5

*Initial problem: A theory of relevance (Relevant Logic).*

*Shift to: A theory of irrelevance.*

Study Irrelevance as *usaklighet* (*onzakelijkheid, Unsachlichkeit*) in debate.<sup>44</sup> Good examples of irrelevant verbal moves in a discussion are jokes pertaining to the race or sex of some of the participants. Relevance (at a given moment of time) can now be defined as a privative notion, viz. as the *absence of (revokable) agreements on irrelevance*, and not the other way round, as we are used to doing. Exactly what is to count as irrelevance is a matter of (revokable) agreement and so a function of time. This set of agreements could grow with time, as in practice it does, though slowly.

In the physical and technical sciences there are national and even international councils that *decide upon* fundamental dimensions, units of measurement and related questions.

### Ex. 6

*Basic semiotic ideas: The reasoning person, with one function: the drawing of inferences. In this setting, semantics is either one-role or objectivist.*

*Shift to: A plurality of roles, logical and semantical.*<sup>45</sup>

<sup>44</sup> In Næss' many publications relating to 'Usaklighetsanalyse' there is a lot to be found that might be taken as points of departure for such a theory of irrelevance.

<sup>45</sup> I shall not discuss here the importance of distinguishing logical roles (Barth and Krabbe, 1982) as well as semantical roles (as suggested in *Problems, Functions, and Semantic Roles* by E.M. Barth and R.T.P. Wiche, Berlin/New York, 1986). Both sets of roles clearly could acquire political implications if people would be educated so as to recognize and respect them, and so as to be able to integrate these categories into the fundamental layers of their Disk, or Brain, Operating Systems. This would be one way of implementing the hermeneutical ideals specified by G. Corradi Fiumara in *The Other Side of Language — A Philosophy of Listening*, London/New York, 1990.

## 12. Fundamentalism and the Fallacy of Non-Explicitated Operators

At this point I should like to emphasize one of the uses of formalization of inference rules in the analysis of exotic systems of logic.

The slogan 'Don't ask for the meaning, ask for the use' has evolved into a new meaning concept, the notion of an expression's meaning-in-use. A word that has no 'referential meaning' and no 'sense' (intension) either may still possess a meaning-in-use. Logical particles, or syncategoremata, may be characterized as those elements of sentences that 'do not have any meaning in isolation'. Whether they do have a meaning-in-use is a question whose answer depends on the existence of introduction and elimination rules, if any. Or: on the existence of rules for making critical and defensive verbal moves in dialogue. The rules for introduction (into a discourse) and elimination (from a discourse) that define the logical particles — words like *and, not, if-then, or, all, some* — can be transformed into dialogue rules and *vice versa*.<sup>46</sup> Either way, if one or both are missing, then this sentence forming feature, this would-be logical particle, is as good as meaningless in use, and completely meaningless in critical use. Leaving adiabatic logic completely behind we now move to a new, fundamental, notion: that of **Meaningless-in-critical-use**.

The notion Meaningless-in-critical-use has a great potential in logical studies. In fact we have already made two applications with political relevance of this analytical tool:

1. We have seen that Hegel's and Marx' negation has no elimination rule, i.e. that there is no known way of making a verbal move in criticism of (simple or complex) *not*-statements.

2. We have seen that generic operators (invisible, or a definite or indefinite article), when understood as first-order

<sup>46</sup> Cf. Section 5, and Note 12.

statements, have no elimination rule, i.e. there is no way of making a verbal move in criticism of a generic statement. Unless one is willing not only to re-write one's generic statement so as to disclose to the interlocutors the tacit presence of a second-order existential operator, but also to 'instantiate' that operator, the theory from which the corresponding universal statement is supposed to follow, with all the risks that this implies, one's generic statements leads the discussion further away from resolution. To introduce a generic statement in an ongoing discussion is to complicate the discussion, and not a contribution to the resolution of the disagreement.

If we are right in our assumption that generic statements are particularly frequent in verbal environments which are demonstrably more dogmatic than other environments, then it is unlikely in the extreme that a habit of ready disclosure of the hidden 'P' and instantiation of its value will ever come about.

Summing up: Neo-Platonic-Fichtean (NPF) negations as well as all generic statements are, *as they stand in "natural" language*, meaningless-in-critical-use.

3. Other examples of syncategoremata that yield sentences that are meaningless-in-critical use are: the traditional 'intentional' expressions *qua*, *inquantum*, and *as far as*. Like the negation of NPF-cognition and generic articles, they are examples of *operators that are destructive of criticizability*, or *criticizability-obliterating operators*.<sup>47</sup>

<sup>47</sup> There are of course connections between the lack of a logic for the use of generics and the Oligodynamic principle. Generic 'operators' (such as articles) were intended as suggestions of measures of a sort, although measures for which no scale is available. As late as in the nineteenth century ordinals were supposed logically to presume cardinals; but cardinals belonged to the domain of Quantity. Hence above the level of pure Quantity even ordinals were not available — as a matter of logical principle, or tautology. Hence degrees of purity, or of closeness to the Whole (genus), could not be attempted.

The connections with the facts and the propagation of discrimination in European culture, and the relevance of all this for the theory of discriminative cognition, should be obvious.

Study the long, involved, history of the reactions to the mystery of generic terms and judgements throughout the centuries. You will then discover that the problem of logical instantiation, and of generalization from an instance, and the problem of the absence of a clear logic for generics, — that these problems are historically connected with the notion of *fixed infinitesimals*, and with what we may call *logical fundamentalism*, the reduction of all argument to an indebatable *fundamentum*.<sup>48</sup>

In all probability, *political* fundamentalism cannot be disentangled from *cognitive* fundamentalism (Principle of the Absolute; the Oligodynamic Principle) and cannot be distinguished from *logical* fundamentalism. If the cultural and political uses of generic sentences lie in the formulation of dogmatic truth, then they are intended to be meaningless-in-critical-use. Hence their critical meaninglessness is no mere accident and, in practice, no mere sign of the linguistic casualness of the speaker. Their critical meaninglessness is a matter for 'high theory', a question of the structure of cognitive systems that are still with us.<sup>49</sup>

<sup>48</sup> Logical fundamentalism finds its expression in a cognitive principle that characterizes nearly all traditional European philosophy, Aristotle's implicit (and invalid) Principle of the Absolute (Beth). In large areas of philosophical thought we find Aristotle's Principle of the Absolute elaborated as the Oligodynamic Principle. Its frequency among the present European population has not been investigated.

<sup>49</sup> The categories/expressions we have listed as meaningless-in-critical-use did have systemic network functions in cognitive imagination. From our point of view they can be seen to function — in combination with other ancient principles — as unsuccessful attempts to compensate for the absence of more modern representational categories, and sometimes — as in the case of the notion of the 'potential

Meaninglessness-in-critical-use is the source of a separate culture-based type of fallacy. This is the fallacy of drawing a non-generic conclusion from generic premisses (without introducing a new logic-free particle like *in as much as*, *in as far as*, *as*). A generic article is a non-eliminable operator. Our type of fallacy is therefore a special case of Fallacy from Ambiguity. It may be called *the Fallacy of Ambiguity of Non-Eliminable Operators*.

Although far from immune to it, traditional thinkers and believers did not always make this fallacy *quite* as explicitly and as often as one might think today, even though they depended on generics more than we do in our century. For many of them — I am for the moment not thinking about the politicians — were primarily interested in *ascent* ('to the anhypotheton'), rather than in descension to individuals and the Quantitative. In other words, when reasoning from genera they were almost exclusively interested in conclusions about genera, about Man or about the State, and not about individual entities. This explains why many theoreticians were disposed to neglect the whole elimination problem.

Politicians of a manipulatory bent have greatly benefited from that situation, whether they have realized it or not. No theoreticians were there to instruct the educators, and no practical educators could see through the logical situation if they so wanted. It is only when one begins to take an interest in individual humans, or in individual states, for their own sake, that the non-eliminable linguistic operators one is confronted with emerge as disturbances, or worse.

genus' — as attempts to *compensate* for other categories that are felt as functional exaggerations, such as the exclusive 'Or'. In this sense a formerly common category with no meaning-in-critical-use may be said to have had an 'imaginal systemic-network meaning', more or less clearly understood, however one which they entirely lose as soon as they are used outside their proper categorial network.

From a political viewpoint the Fallacy of Non-Eliminable Operators may well be the most portentous of all, or second only to *argumentum ad hominem*.<sup>50</sup> Maybe even more portentous than the latter, since almost everyone is ignorant of its origin and of its cognitive embedding, whereas the weakness of the argument itself is often recognized nowadays.

### 13. Partial Commensurability

As political animals we must be prepared to divest the word *logic* from its usual normative connotation, so that we are able to *say*: there is *good logic* and there is *bad logic*. More pertinently, there are reasonably good logics and there are still better logics — logics better *suited* to various intellectual, communicational and critical purposes. Similarly, there are bad logics and worse logics still, and all are intended and used as logics, and so they should be understood by us as logics.<sup>51</sup>

Complete commensurability may not always be present. However, modes of cognitive and linguistic representation for logical purposes are *partly commensurable* in the light of the cognitive and verbal purposes themselves, and the comparison of extant logics and their problem-solving capacities ought to become a central part of logical investigation. For political purposes logic should adopt a working hypothesis of Partial Commensurability, i.e. the partial comparability of logic-relevant systems of representation and of their associated rules for criticizing and defending statements with a political import.

<sup>50</sup> Study the vernacular and cognitive field of self-appointed fascists and other totalitarian thinkers, and you will see for yourself.

<sup>51</sup> This is discussed in greater detail in my essay *Evaluatives*, Assen, 1972. The first part thereof defends the essential plurality of (good and bad) logics and the need for a detailed study of the 'bad' logics as well as the predecessors of (the one and only) good logic. The second part contains an example with relevance to politics.

## 14. Ethical Incompleteness

In this last section I shall introduce a second notion of incompleteness, an ethical-political incompleteness characteristic of some logic-relevant systems of representation.

Above (in Sections 5 and 9) we discussed an important kind of functional incompleteness pertaining to logical categories separately, consisting in the absence of clear 'rules of elimination'. This kind of incompleteness makes for meaningfulness-in-critical-use, and hence for meaningfulness in political use. Two examples were given: first, the category Negation in Neo-Platonic-Fichtean logic, second, the category Generics.

However, there is also another kind of politically important incompleteness which should not be confused with the former. This incompleteness is a characteristic of the system of logic-relevant categories *as a whole*. We are here interested in *systemic ethical incompleteness, as a feature of representational systems (and philosophies based on these systems) with ethical or political pretensions*.<sup>52</sup>

Or, for short, in *systemic political incompleteness*. We have seen that would-be logical principles, invalid to us but tautological to their adherents, may be suggestive of strange ethical values or of methods with strange ethical components. The oligodynamic form of mental representation is a case in point. Another danger lurks in the principle of methodical dichotomization. When such principles are not counterbalanced either by system-inherent cognitive constraints or by system-independent moral constraints they may become highly suggestive in ethical respect — as the existence of 'holy anorexics' clearly demonstrates. It seems reasonable to say that unless neutralized either by system-inherent cognitive constraints, external constraints, or the

<sup>52</sup> I.e., with intended relevance to judgements of value, or axiological relevance.

actor's personal emotions, representational systems incorporating the Oligodynamic principle will be fully compatible with anti-individualist attitudes and actions like violence, cruelty, exclusion. In the first place, such systems may well have, all by themselves, the effect of encouraging violent attitudes and actions with no prompting of internal mental opposition. Secondly they may weaken the capacity for criticism and opposition.

Ethical constraints external to the cognitive system — ethical norms, or personal emotions — fortunately prevent most individuals who have been impregnated with the oligodynamic value prescriptions from acting upon them, as well as from accepting anti-individualist attitudes and activities in other people. Christianity, humanism, judaism, liberalism and scepticism are European sources of external constraints.

Notice that *a system of logic, physics, or whatever that has no ethical or political pretensions cannot fall under this concept*. It therefore cannot be applied to genetics, for instance.<sup>53</sup> Furthermore, it is without relation to the condemnation by fascists of Einstein's physics (as was common in the 'thirties, on a quite different basis).

We may distinguish two degrees of systemic political incompleteness.<sup>54</sup>

*Def. (a) A system of representation with pretensions to axiological relevance, or a philosophical system with such pretensions, may be said to feature a fundamental systemic political incompleteness of the first degree if and only if it contains no representational forms that make it reasonable and practicable (to the mind*

<sup>53</sup> Cf. the Lysenko affair in the Soviet Union.

<sup>54</sup> It has often been said that Heidegger's philosophy cannot be refuted off-hand by a reference to his Nazi party membership. If this is to mean: 'cannot be refuted wholesale and in all respects simply by such reference' then of course I agree. But then the statement in question would be quite banal. The type of criticism I offer here is however not quite so simple.

embued with this system) to criticize violence, cruelty, exclusion or other attitudes and actions of an anti-individualist nature.

When applied to systems of cultural philosophy this yields a concept that recently was recommended (by Brian Fay) in connection with the case-Heidegger and also in connection with Paul de Man (by Charles L. Griswold, Jr.): look at the books (Fay), but do not only ask whether or not Heidegger's and de Man's philosophies are positively proto-nazi, which they very well may not be while still being politically/ ethically deficient. Examine instead whether the oeuvre in question 'could serve as a basis for repudiating (and so for providing an ethical critique of) Nazism',<sup>55</sup> i.e., examine 'whether it is deficient because without the conceptual means to respond to one of the most important events of our time'.<sup>56</sup>

<sup>55</sup> Charles L. Griswold, Jr., in *New York Review of Books*, 12 October 1989; on Paul de Man's method of Deconstruction.

<sup>56</sup> Brian Fay, in *London Review of Books*, 22 March 1990. — I have explicitly added the condition that in order to subject a system of thought to criticism for fundamental systemic political incompleteness, one must verify in advance that the system demonstrably features pretensions to axiological relevance.

*Def. (b)* The system features *fundamental systemic political incompleteness of the second degree* if and only if it also contains the Oligodynamic principle, Methodical Dichotomization, or any other clearly anti-individualistic principle or routine of internal or external representation.

I think this, or something very similar, should do it.<sup>57</sup> And I think that since there are systems of representation and argument with this incompleteness property, all students of general philosophy ought to be confronted with incompleteness notions.

Of course all concepts can be polished and refined in the going. The important thing is that we remain on the go, that we do not give up the idea of analytical and empirical research. Just keeping the conversation going is not quite enough.

<sup>57</sup> As I see it, O'Brien's proto-scientific notion of 'legitimation structures' for political activities is a concept of some complexity which is compatible with our definitions of systemic political incompleteness.

