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An Introduction to (Conjunctive) Scissional Logic

1. Can a unified definition of paradoxes be given? Can a common mechanism be identified and can paradoxes be traced back to a single fallacy? There are at least two reasons for rejecting this possibility. Firstly, it is by no means certain that a common mechanism can be identified within the sphere of separative or disjunctive logic; secondly, and far more importantly, because the linguistic (as well as, arguably, the perceptive and physical) space of paradoxes must be investigated from the standpoint of logical pluralism. By this I do not simply mean various types of logic (such as bivalent, many-valued, deontic, temporal, fuzzy, paraconsistent etc.); all these types have a common *stylistic identity*, since they make up the family of separative logic in its variety. Admittedly, their differences should not be overlooked, but they become less marked once another possibility is taken into consideration, i.e. that of types of conjunctive logic. This is a major downsizeing, although separative differences do not collapse. Then another question comes to the fore: *is conjunctive logic really possible?*

Its legitimacy was already claimed by Hegel, for example, as well as the dialectic tradition, e implicitly also by other authors, for example, by Heidegger. This logic was 'put into practice', and its working can be perceived in some of the leading works of western philosophy. That it is in a way perceptible or noticeable is confirmed by its very rejection. Are not the obscurity and confusion which allegedly utterly ruin the works of Hegel or Heidegger the consequence, in the eyes of separative philosophers (such as, among others, Russell and Carnap), of their styles of thought? As a matter of fact, conjunctive logic has never been rendered transparent by any of its interpreters. What are its principles, mechanisms and inference rules? And why is it so difficult to address these questions? If there were no difficulty, to the extent of even inducing the greatest thinkers to put off a

task that can no longer be put off, we would not be in such a weak position in the face of separative logic, of those logical styles whose limits are clear, tiresome and unacceptable – for those who could never accept their unilateral working.

Rendering the working of conjunctive logic transparent is a task that can no longer be put off: not so as to reduce or tone down the heterogeneity between various logical-philosophical traditions, but rather to display the legitimacy and productivity of their differences; and to defend the novelty of 'divided thought', which is in danger of being swallowed up by the obviousness of oppositions closer to day to day mentality, and especially by fluctuations between the Unity and the Multiplicity.

2. Initial ambiguity needs to be avoided: conjunctive logic is not unilaterally grounded in links or bonds, i.e. forms of unity overcoming and abolishing differences and contrasts. *Conjunctive logic is scissional*, *not synthetic*. This is my research paradigm. Therefore this essay will foreground (starting from the title) the link between scission and conjunction.

Very important consequences immediately derive from this *paradoxical connection*, albeit, for the moment, only intuitively. If 'conjunctive divisions' exist, then so do 'separative conjunctions'. Therefore, the meaning of terms such as *distinction*, *division* and *conjunction* can only be understood with reference to a struggle between styles of thought. Let us go into this line of thought in greater detail.

All styles introduce articulations. Each style articulates the flux of language-thought differently. *To articulate* means 'to distinguish': and since there are different types of articulation, a distinction can be separative or conjunctive. *Separative distinctions* enclose individuals and objects within their borders, even when they point to relationships of solidarity, strong resemblance or recirpocity. For example, the same makes and types of car (with the same optional extras and painted the same colour, etc.) can still be easily distinguished; Luca's identity is not diminished by the fact that he is Gabriele's brother, even though 'being someone's brother' is a relationship, not a property; and so

on. In the field of separative distinctions, numerical identity always allows *counting* and separating, i.e. avoiding confusion; and when confusion comes about, regarding a person or object, it can always be entirely dispelled. It does not appear to be an overstatement to say that all distinctions concerning identity, in the separative regime, rotate around numerical identity. *Conjunctive distinctions*, on the other hand, are grounded in reciprocity in a different way: not that numerical identity is absent, though its importance is drastically reduced. The notion of 'identity' thus needs to be redefined in an intrinsically relational way: conjunctive identity is *flexible.*

In the conjunctive regime, the opposition between rigidity and flexibility is overwhelming. But let us not be too hasty: these preliminary clarifications appeared necessary so as to open up to intuition of the complexity of the problems involved; let us now start off from the 'conjunction' phenomena appearing in paradoxes.

3. Many scholars see paradoxes as providing the best confirmation of the unavoidability and superiority of separative thought. If the reassurances that only this kind of thought can provide disappear, then *nulla salus*. We are entering uncertain territory, where every project and intention of coherence will inevitably be abandoned. Nevertheless, nothing forces us to enter or lose our way in excessively intricate places. There will be the chance of building up an area which cannot be encroached on by logical errors, and from which any possible error can sooner or later be driven out. The reader will easily recognise the reform of natural language begun by Frege in this description. As is well known, the aim of this programme, i.e. *paraphrase* of natural language in a language clarifying and showing its true form, developed in two contrasting, though essentially parallel versions. Some see paraphrase as a reformulation which does not completely discredit ordinary expression, while others see the need for systematic correction. Nevertheless, a separative philosopher can easily be recognised by his attitude to paradoxes: errors, sophisms, knots to be untied, which once done cannot be tied up or come to the fore again

This attitude is coherent with the rigidity of this style of thought: any violation of borders, which

are ‘good separations’ is a lapse into the *confusive* – is this not the name we should use for conjunctive thought? On the other hand, those who do not identify themselves with the separative conception, those who mistrust it or are irritated by it, will be tempted to begin the search for unresolvable puzzles. They may well exist and be pointed to as a limitation on separative *hybris*. Actually, the discovery of unresolvable paradoxes would be a poor result (just like all defensive, or in Nietzsche’s words, reactive outcomes). What is really important is discovering that, alongside ‘chained’ paradoxes, there are others whose legitimacy and productivity should be acknowledged. Is there, or could there be, a way of thinking where chains are not chains, where they are not constraints that slow down or act as stumbling blocks, but rather are the support and precondition for more agile movements, excluded from separative thought? "Dancing is a mistake, let us restrict ourselves to walking": is not this, in the end, the cautious fallacy of disjunctive thought?

4. We appear to have taken on a 'symtomal interpretation’ not only of paradoxes themselves but also of the ways of addressing them. What do paradoxes display or reveal syntomally? Is it the imperfection of ordinary language? Is it confusion, aporias, pathologies, from which one can defend oneself by building up a language capable of never being deceived over its own logical form? Or a set of links that can only in some cases be successfully investigated by separative logic? But to strengthen this hypothesis we will have to increase the list of paradigmatic cases and find genuinely ‘conjunctive’ ones: i.e. situations where the intervention of separative procedures turns out to be not impossible – unfortunately, in a flexible context like that of language, bad rigidity is always possible – but rather sterile, short-sighted, even stupid.

What should therefore be rejected is preliminary domestication of the problem. But where should we search for paradigmatic cases capable of making the failure of a specific type of logical paraphrase clear? For example, in a type of language undervalued by Frege’s research paradigm, relegated to the emotional sphere, a forgotten language, even as an object of criticism and

correction.

In the words of Wittgenstein: "What *we* do is to bring words back from their metaphysical to their everyday use". That here we have the rejection of a search for an artificial language, disastrously impoverished by its own hygienic ideal, is, without doubt, of enormous importance, but it is not enough. It is Wittgenstein's alternative that seems unacceptable. In opposition to this, one could well provide the following parody: "*We* aim to bring words back, from their metaphysical or everyday use to the aesthetic dimension. We want to look upon and judge all language from the viewpoint of the languages of art". From Wittgenstein, we want to return to Nietzsche.

5. What I shall now present is a *conceptual* research programme, rooted in types of philosophy, which, as has already been said, have never tried to make their logical working transparent. I look forward to receiving constructive suggestions, so as to add to and improve a proposal that I do not see as strictly individual, but rather open to cooperation. As mentioned at the outset of this essay, investigation of conjunctive logic can no longer be put off: it would be particularly beneficial to all those who, from different viewpoints, have in common their rejection of the separative style.

Looking forward to 'technical' cooperation does not mean aiming at formalisation: that conjunctive logic can be reformulated in the language of symbolic logic is very doubtful, to say the least. One has the feeling that a flexible logic cannot be formulated by means of a language primarily grounded in rigidity. Partial transposition, limited to only some aspects, could, however, be plausible; though this should not be done in a hurry. Placing technical aspects before conceptual analysis would be a very serious mistake.

Besides, is not conjunctive logic called upon to overturn Frege's paradigm? Should not one of its aims be to show the fallacies throughout symbolic logic? It should be noted that a fallacy is not an error. The two notions can be confused, as often happens among analytical philosophers, since they restrict themselves to 'local' fallacies. But the word *fallacy* ought to be used predominantly to cover deformations or distortions, which cannot be limited to mere, locally identifiable sophisms. This

word ought to be used to mean *widespread* errors, so widespread as to be difficult to perceive – unless one takes a step backwards to return to logical pluralism, the conflict between styles. I think that the greatest fallacy in analytical philosophy is *monostylism*, the superstition of separativism. But analytical philosophers are not at all aware of this superstitious faith.

Let us now return to the need for expanding the field of investigation, and finding paradigmatic cases other than those of the Liar or Sorites or the class of all the classes that do not belong to themselves. We have decided to look for conjunctive (not merely confusive) paradoxes in literature, but the working of flexible logic should also be investigated in the field of explicitly strategic relationships, i.e. in the art of warfare and politics, and, to some extent, psychoanalysis. I should also like to admit to being curious about physics.

This curiosity is not, however, that of a specialist. It may well be that no *conjunctive* phenomena can be found in the research domain of physics or other natural sciences. I would be disappointed if this were so, but this would clearly not lead me to modify the theses advanced so far; their legitimacy is to be searched for in the logical pluralism of the human mind and in flexible languages. It would, however, be very interesting to receive an affirmative answer to the question: "Are paradoxes present in the world of physics?" from specialists. The reasons for this interest should be clear. There are paradoxical statements to which nothing corresponds, as in the cases of contradictions. There is nothing that can correspond to "James is sitting and at the same time is not sitting", and the same can be said concerning the barber paradox. The non existence of a reference in the effectual dimension appears to confirm the opinions of those who consider paradoxes playful, or only ephemerally serious: they will be resolved sooner or later. The obstacle will disappear into the void whence it came.

The most stimulating paradoxes do not allow themselves to be restricted to the linguistic dimension but rather concern reality, in a broad sense, and these include the ones concerning personal identity. This is why physics can also be of interest to literary scholars, and philosophers who find logical inspiration in literature, and, more generally, the arts. If there are paradoxes in the

world of nature, physical reality is working paradoxically. We will have further confirmation of the existence of paradoxes that do not originate in the bumps of the mind when running up against the limits of language. Could conjunctive logic be *relevant* to the description of certain physical phenomena, or even the whole of nature? Has the unbroken wholeness of the universe anything to do with Nietzsche's idea that "all is enlinked, enlaced, enamoured"?

It is the specialists' task to clear up the matter of whether we are dealing with true affinities or merely fascinating, though ambiguous resemblances. For example, should Einstein's principle of separability be included in the domain of separative thought, in accordance with the definition given in this essay? And what kind of logic could adequately describe the unbreakable systems of quantum mechanics?

6. Let us take a quick glance at the paradoxes discussed especially by logicians and philosophers of language. They are very numerous: some scholars appear to be resigned to their great variety, while others have opted for listing them selectively in alphabetical order. The number and variety of paradoxes, especially when presented without taking into account their degree of complexity and mixing the more serious cases with the more playful ones, give rise to a feeling of randomness; and yet, if one highlights the better known cases, some kind of family resemblance does emerge. It is in the latter feeling that elementary typologies originated, such as Ramsey's division between set-theoretical paradoxes (e.g. Russell's paradox) and semantic paradoxes (e.g. the Liar). As is well known, Bertrand Russell was not convinced of the usefulness of this division and held that all paradoxes arose as the result of one fallacy, from violations of the 'vicious circle principle'. This is probably not the case: various mechanisms should be identified: reference to infinity, self-referentiality and links between opposites. Not all paradoxes originate in self-reference and there are many harmless self-referential sentences, such as "This sentence is in Italian". Besides, if we consider the fact that some mathematical arguments, including Gödel's demonstration of the incompleteness of arithmetic, make use of self-referential sentences, the damage that would be done

by the elimination of reflective mechanisms is quite clear. As far as the link with infinity is concerned, this only characterises a certain number of paradoxes: the most conducive to arithmetical solutions.

We still have the link between opposites, in various shapes and sizes: the circular structure, as in the case of the Liar paradox or that of the postcard; Orestes' dilemma, who was destined to commit a terrible crime, i.e. murder his own mother to carry out an act of justice, revenge his father's murder etc. We should not really be influenced by the family air in these examples but concentrate on the differences.

New distinctions should be tried out: for example, why not accentuate the difference between the paradoxes of finiteness and infinity? Zeno should not make us forget Heraclitus and the paradoxes pregnant with the tragic spirit and conflict: but what conflict could there be in infinity? Does not being attracted by infinity depend on a desire to suspend conflicts and struggle? An arrow flying through the air and staying still, Achilles who never catches up with the tortoise. One is tempted to say: let us leave infinity to the theologians and mathematicians and occupy ourselves with conflictual relations and strategy. Let us devote our energy to clarifying the paradoxes of flexibility, which elate and do not create ties, or rather do not chain up. And why not thoroughly explore the hypothesis that chained paradoxes, i.e. aporias, all originate in rigidity?

7. It is not difficult to find immediate confirmation: for example, in order to resolve the sorites paradox fuzzy logic is enough. But fuzzy logic is not the logic of flexibility, which is the object and aim of our research.. Nonetheless, fuzzy logic is a *somewhat more flexible* kind of logic than those that have dominated separative thought up to the present. Let us look at another example, which is conceptually more weighty: the problem of how to learn a rule (understand and apply it). Since any rule can be interpreted and applied incorrectly, there appears to be the need for a metarule to direct the mind correctly. But to assimilate a metarule correctly, another metarule will be required, and so on. Does not this movement backwards *ad infinitum*, discussed by Kant and Wittgenstein, originate

in rigidity? Only a rigid form of understanding feels the need to learn, as Kant observed, what no school can teach.

And this would be a source of paralysis. The solution of the paradox should not be sought by insistence on distinction and multiplication of levels – this can give rise to fallacies which separative rationality is unable to grasp – but rather in pluralism of modes (or styles) of rationality. No metarule could prevent a rigid subject from falling into the net invented by the suppleness of the enemy.

Can this conclusion be generalised? Perhaps. But it must be precisely expressed, nevertheless. Once the hypothesis that all chained paradoxes originate in rigidity has been posited, we are still at the initial stage: rigidity displays its effectiveness in many ways, and we must be able to understand it in detail. Let us therefore concentrate on a single paradox. If we manage to clarify its mechanism better than our rivals – a long tradition dominated by separative thought - , our analysis will immediately take on a paradigmatic value.

We will examine the Liar paradox, which recalls extremely important notions such as ‘truth’ and ‘meaning’ and initially discuss the best known solution, that by Tarski. We will consider the most significant aspects:

a) the semantic concept of truth. Tarski posits *factual* semantics oriented in the direction of actuality: "*Semantics* is a discipline which, speaking loosely, *deals with certain relations between expressions of a language and the objects* (or "states of affairs") *"referred to" by those expressions*". Tarski adds:

"As typical examples of semantic concepts we may mention the concepts of *designation*, *satisfaction*, and *definition*, as these occur in the following examples:

the expression "the father of his country" designates (denotes) George Washington;

snow satisfies the sentential function (the condition) "x is white";

the equation "2.x = 1" defines (uniquely determines) the number ½" .

b) the *property conception* (let us call it that) of truth. This means that ‘true’ is considered a property characterising certain sentences;

c) the relationship with the conception of truth as corresponding to facts. This is a controversial point. In Popper’s view, Tarski had rehabilitated the theory of correspondence: given any recurrence of the T-schema, e.g.

"snow is white" is true if, and only if, snow is white

Popper appears to argue that the left side refers to language and the right to facts. This interpretation has often been criticised, since it is in contrast with what Tarski writes and the originality of his presentation. In the T-schema

X is true if, and only if, p,

the symbol 'p' stands for an arbitrary sentence of our object-language, while the symbol ‘X’ represents the name of the sentence. Should we therefore consider Popper’s interpretation a total misunderstanding? The question is complicated by Tarski’s ambiguity. On the one hand, he states that the T-schema is epistemologically neutral, i.e. in respect of the debate between realism and idealism, while, on the other, he declares that "our formulation does conform to the intuitive content of that of Aristotle" and also conforms to common usage, to the point of view of everyday life. So, if the originality of Tarski’s argument consists of shifting the problem of truth from the relationship between language and reality to an (equivalence) relationship within language, these statements do not support this originality.

So Popper’s interpretation does not appear to be a banal misunderstanding, but rather an interpretative decision. Arguably he understood the implicit solidarity between Tarski’s theory and the traditional theory of truth as correspondence; and his decision appears the more plausible if we examine the T-schema in any saturated version, where, for example, «Snow is white» can be understood as a sentence and not a noun.

Tarski’s argument can be more easily understood if we examine the T-schema in an unsaturated version (*X is true if and only if p*). We can take a close look at Tarski’s aim, i.e. define the notion of

‘truth’ by means of that of ‘satisfaction’.

d) what are the advantages of this conception? It must be acknowledged that the T-schema is impregnable, and, in any case, more perspicuous than the notion "in agreement with reality". In support of his approach Tarski also mentions a test:

"I was by no means surprised to learn that in a group of people who were questioned only 15% agreed that '*true*' means for them '*agreeing with reality*', while 90% agreed that a sentence such as «*it is snowing*» is true if, and only if, it is snowing".

Naturally this test is not of crucial importance and one cannot fail to observe how Tarski’s ambiguity comes again to the fore. Here he is undeniably referring to the relationship between a sentence and a fact.

e) the distinction between *object-language* and *metalanguage*. According to Tarski, this distinction allows one to avoid or resolve paradoxes, and, in particular, successfully address the liar paradox. So Tarski relies on language hierarchy: the truth of a sentence for a given level is always expressed by a predicate of the subsequent level (if O is the object-language, metalanguage M will contain the means for reference to the expressions of O, and thus the predicates "true-in-O" and "false-in-O", and so on). The liar aporia "This sentence is false" will then take on a harmless form "This sentence is false-in-O"; the latter sentence will belong to M, and hence cannot be true-in-O, and is simply false instead of paradoxical.

8. Let us admit, for the moment, that Tarski's conception is error free. It can be blamed for a much more serious flaw: it condenses a series of fallacies and distortions – it resembles someone wearing such tight shoes that he can only walk with difficulty, in a stiff and awkward way. All in all these fallacies are *a perspective error* in the working of our intelligence. I shall now attempt to justify such a serious accusation. The main distortions in Tarski's conception are:

i) the semantics he posits is factual, i.e. *heteronomous*, only plausible in a modal mixture dominated by actuality. Tarski denies meaning any chance of freeing itself from a reflecting, servile elaboration; he denies the autonomy of meaning. This fallacy is opposed by what I shall call

Nietzsche's law, i.e. the non-derivability of the semantic from the factual: this is how I suggest the well-known thesis "there are no facts, only interpretations" should be understood. *Non-derivability* does not exclude partial derivability: it does, however, affirm the autonomy of the semantic, the possibility for meanings to find support in the empirical to take on unexpected identities, not modelled on sentences such as "Snow is white" (one could use the term *anaclisis principle* (*Anlehnung*), thinking of how, in Freud, sexual drives depend on self preservative ones so as to become autonomous thanks to greater flexibility;

ii) the T-schema is probably watertight but *vacuous*. It is tautological, has nothing to say to us about truth, either from the philosophical or epistemic viewpoints. One could answer the charge of philosophical emptiness by observing that Tarski did not intend to make a philosophical contribution, and had stated that he could not understand what 'the philosophical problem of truth' was. But this reaction presupposes an inadequate, stereotyped concept of 'philosophy', in the sense of the search for generalities and essences, and a discipline incapable of entering the technical domain. Undoubtedly, philosophy should not be limited to technical discussions; if this were the case it could only criticise errors and not fallacies. The expression 'the philosophical problem of truth' already seems less mysterious if use is made of this distinction. What the reader is reading is a philosophical essay because it aims at foregrounding, among other things, a number of fallacies concerning truth;

iii) there are areas of research where philosophy takes account of technical details, albeit in a wider perspective. Tarski's trust in the distinction between object language and metalanguage was undermined by Kripke. Let us consider these two utterances, made by Jones and Nixon respectively:

(1) "All of Nixon's utterances about Watergate are false"

(2) "All of Jones' utterances about Watergate are false"

An appropriate metalanguage level cannot be identified in this case: (1) is a higher level than Nixon's statements, but (2) is at a higher level than the statements by Jones. We must acknowledge

infinite pursuit as in the postcard paradox.

Have we again come up against a technical difficulty, from which we can only escape with an adequate technical artifice? Or is wider ranging philosophical reflection required? What is the limit we should become aware of, if we want to go beyond it? The discussion we are referring to – other names, such as Russell, could be added here to those of Tarski and Kripke – is entirely restricted to domain of separative thought, and trust in specific distinctions: so as to exclude all superimpositions, whatever the dimension, horizontal or vertical, in which they are articulated. The hierarchical construction of levels is one of the most characteristic options of the separative style: when a difficulty comes up, it is attributed to a loss of the correct distance, a shortening, or, as in the example of the Liar and that of Kripke, to a gap or interruption in the hierarchy. The aim of the separative logician does not change: i.e. to find a separation point, which, in turn, should interrupt the vortex.

There is never suspicion of a *levelling fallacy*, i.e. a disease caused by the cure. And yet the search for a *meta* level can lead to pathologies: is this not the case – as we have seen – in the retreat *ad infinitum* deriving from the pursuit of a metarule? It is rigidity, and not infinity that causes paralysis. This awareness gives rise, in some scholars, for example Lacan, to rejection of metalanguage. This does not mean that internal distances can never be created in language, that language can never be spoken about through language: the levelling fallacy, which becomes a metalinguistic fallacy, depends on the fact that *there is no object language* like the one described by the separative logicians, except in the domain of formalised languages. To be more precise: no language can become an object language (in the separative sense) which can be thought as a *divided language.*

iv) every fallacy is an epistemological obstacle which blocks research, at the same time simplifying and weakening it. The levelling fallacy prevents access to the new space of divided language and its initial exploration. The *property fallacy* – because the property conception, which has already been mentioned, is also fallacious – consists in treating the 'true' predicate as an empirical predicate. However, it is only a misleading grammatical resemblance that can lead one to believe in a

predicative analogy between "snow is white" and the sentence “«snow is white» is true". This consideration is undoubtedly accepted by other scholars. Nevertheless, the strangeness of the 'true' predicate appears to have been mostly perceived as a symptom of its superfluity. In the deflationists’ view, the redundancy of the word 'true' should be acknowledged on the basis of the fact that it makes no essential contribution to thought with its meaning:

"If I assert «it is true that seawater is salty», I assert the same thing as if I assert that «Sea water is salty»".

This quotation from Frege, who cannot be seen as a deflationist, could recall a remark by Kant concerning the ‘emptiness’ of the modal categories. They do not contribute to the semantic determination of entities; but can we neglect the difference between an object thought as only possible and one thought as existing? Certainly not. The fact that the 'true' predicate does not contribute to the determination of meaning does not justify its elimination; but what contribution does it make? Must we look for it at the level of *force*, and see it as an assertion operator? Motivation seems plausible but also weak: the 'philosophical problem of truth' is trivialised, entering an area of everyday tediousness; the fact that the ‘true’ predicate cannot be suppressed ends up by taking on routine features, resembling the need to devote time to shaving every day or at least every now and then.

Let us take a second look at the hypothesis that ‘true’ is a modal predicate. What is the cognitive role, the cognitive contribution of its *emptiness*? It should not be looked for on the content (things, properties, facts, events) level, since *true* has a perspective meaning. If it cannot be eliminated, this is because it is uneliminable like perspectives, modes and styles – which only *zero stylistic* (zero perspective, i.e. separative) *thought* can be under the illusion of eliminating.

To justify these statements one can obviously appeal to Nietzsche and Heidegger, to truth as *aletheia* rather than *adaequatio*. But it does not appear to be easy to persuade an analytical philosopher to spend some time reading Heidegger, so a swift, concise argument should be found. The need for a modal viewpoint on the problem of truth could be illustrated by an example aiding reflection on the limits of symbolic logic as a form of thought. As is well known, one of the most

innovative aspects of Frege's conception consists in doing away with the subject/predicate pair in favour of another conceptual pair: predicate and argument. Every proposition is primarily seen as an unsaturated formula of the type "X conquered Gaul"; this formula, or propositional function, will become true if we replace X with Julius Caesar, and false, if we replace X, for example, with Alexander the Great.

No doubt. But let us look at another example:

"On one occasion Sherlock Holmes asked me: «My dear Watson, what do you deduce from the fact that you can see the starry sky above you?». I answered: «I deduce that my position faces north; actually constellations in a cloudless sky allow one to take one's bearings not only at sea, but also in the mountains, where we happen to be». Satisfied with my answer, which sounded at the same time profound and complex, I smiled at my friend and companion in so many misadventures, who answered, calmly lighting his pipe: «My dear Watson, you never cease to astonish me; didn't you notice that our tent's been stolen?». By Jove, I never thought of that!"

Why does Watson's answer sound funny? Not because it is false, or even inexact, but because it is not relevant. He answers the question, which, when formulated in Frege's terms, would be "what value of *X* satisfies the propositional function «I deduce *X* when seeing the starry sky above me»?", "that my position faces north etc.". Overlooking the fact that being able to look straight up at the sky should suggest that he and his famous companion had been the victims of theft, Watson says nothing false. His answer, from the viewpoint of truth-values, correctly saturates the above mentioned unsaturated question. Correctly, but also foolishly.

What Frege's conception neglects – and throughout the 20th century the separative logicians were never aware of this gap – is the difference between *saturation modes*. Frege does not distinguish between what is 'foolishly true' and truth accompanied (or modalised) by intelligence. He does not consider cases such as "x foolishly satisfies y".

Could we make up for this gap by means of fresh attention to contexts? Taking account of context, linking exactitude and relevance, is certainly an important step forward, but it is entirely unsatisfactory, if contextual differences remain within separative rationality, and if there is no progress from differences between contexts to style division.

9. It is worth pausing briefly over the limits of the pragmatic turn observable in linguistics as well as logic, over the last few decades. It was inevitable that, initially, focus should be directed on relations and structures within language: thus the principle of context, stated by Frege, turned out to be somewhat less contextual than it could have been, and not sensitive enough to extralinguistic contexts. It would, however, be rather trivial to believe that the pragmatic turn had coincided with the discovery of flexibility as autonomous rationality, and with the acknowledgment of logical pluralism, and that it aimed at going beyond the intention of protecting rigid reason from its awkwardness. So there was no revolution, just an inevitable, cautious evolution, overseen by common sense.

It would also be trivial to believe that the saturation mode problem could be addressed, apart from being introduced, only by means of cases with humorous effects; and that the modal dimension of thought, which symbolic logic is unable to analyse, even when dealing with modality, should be exclusively identified with the problem of saturation modes. Given the introductory nature of this essay, it is wise not to range over too wide a field and return to paradoxes as a symptom of 'relational', and not only aporetic thought.

We had decided to concentrate on the liar paradox; from there attention has shifted to a piece by Tarski, where numerous fallacies were identified, among them the levelling fallacy. The distinction between object language and metalanguage seemed valid in restricted environments: it is not, however, effective in cases of circularity like the one pointed out by Kripke, which has some affinity with the liar, but could still be put to use in the latter case. Why is this? Because the separative can undeniably be successful when in contrast with the confusive: but the confusive is only a possibility of conjunctive thought. So other paradigmatic cases must be sought.

Other cases of *correlation*: in the liar paradox the reciprocal implication of true and false can be interpreted as a specific kind of relationship between opposites. And could not the correlatives be the opposites which presuppose each other, as far as existence and definition are concerned? This is how Aristotle posits them in a typology that deserves further investigation after a long period of

neglect. But let us move forward in an orderly fashion.

10. Let us try to see the Liar paradox as a node between opposite terms, implying instead of excluding each other, and not as a confusion of levels determined by self-reference. How can this come about? The first thing we need is a map allowing us to find our way through the intricate polysemy of opposite relationships: an area partially, but constantly submerged by the confusive, by intricacies, whose fascination it is difficult to avoid, and which one tradition calls *coincidentia oppositorum*. The difficulty of analysing these intricate areas of thought is undeniable, and one can understand the impatience with which the separative mind felt both the desire and need to keep them at a distance, with decisive strokes of an axe cutting through tangled knots and marking out an exit. We can find the first, exceptional description of this 'dark forest' in Aristotle and his table of opposites (αντικείμενα):

- contradictories (αντίφασις)
- contraries (ταναντία)
- privatives/positives (στέρεσις και έξις)
- correlatives (τα πρός τι).

The *contradictory* relationship concerns incompatible opposites: "Socrates is sitting" and "Socrates is not sitting" are propositions excluding each other, since they refer to the same individual at the same time. The *contrary* relationship is weaker and permits intermediate cases: white and black can mix and produce grey. The *privative/positive* relationship is exemplified by "not having/having sight". As for *correlatives*, the examples given by Aristotle are "half/whole" and "master/slave"; the characteristic of correlatives is reciprocal presupposition: one can only think of a master in a relationship with a slave, and vice-versa. So the relationship between correlatives immediately comes to the fore in its paradoxicality: here opposites are constrained, though not actually enchained, by each other; by opposing each other they necessarily recall each other.

In this brief presentation, taken from Aristotle, ambiguity can easily be glimpsed: the examples used cover both isolated notions ("white", "half") and propositions ("Socrates is sitting"). The difference is anything but negligible, since one isolated notion cannot be judged either true or false;

the minimum dimension of truth consists of a proposition, i.e. the link between two notions (or concepts). This ambiguity is suppressed in the construction in which medieval logicians returned to the four fundamental types of assertory propositions identified by Aristotle: in the square of opposition there are only propositions and not single terms.

In this arrangement, however, the fullness of Aristotle's typology is diminished. The 'privative/positive' relationship is no longer present, and this is not too serious, because it is the least interesting one from the conceptual point of view: Aristotle assigns specific limitations to it, connecting it with natural conditions and characterising it as a univocal shift from positive to privative and not vice-versa. But the correlative relationship is also absent. The contradictory and contrary relationships are left and their affinity is to be identified in the fact that they both foreground *reciprocal exclusion*. In the relationship between propositions there is no room for compromise, as is the case, on the other hand, when considering isolated terms: the contrary relationship between notions permits intermediate cases; a possibility that appears to be somewhat different from the interdependence of correlatives, because white is not forced to mix with black. Their reciprocity (as parts of the same paradigm, in the sense of the term as used by linguists) is *differential*, and not conflictual or strategic. Admittedly the relationship between half and whole is not conflictual either, but this means that Aristotle's typology needs to be improved, not put aside.

The medieval logical square is, stylistically, a separative construction: each constituent, placed in one of the four corners, is clearly separate from the others; opposites are *well separated*, so as not to create paradoxes or aporias. Paradoxes are always aporetic, from the separative point of view: knots to be untied, confusion to be eliminated. This is why the case of correlatives was eliminated: in this relationship opposites are no longer separated or separable. Quite the reverse: they are *inseparable*, defined by their conjunction. uite the opposite: inseparable*iiii*

It should be noted that close proximity and mixing between opposites does not in itself involve any particular risks: for mixtures to be a clearly *derived* and not originary case, thought will admit and observe them with no worries at all. But when opposites affirm their reciprocal dependence,

when their tie appears decisive for defining each one's identity, then separative logic perceives a risk of confusion and dissolution, even in its own case. Being powerless to analyse this type of relationship, it feels overwhelmed by it. The reaction that follows is entirely consequent: correlatives, the 'non separatives' must be driven out into the domain of the illogical.

The removal of the correlatives, ratified in the medieval square diagram, was to be inherited by the dominant tradition in western philosophy: for example, Kant would allow only two kinds of oppositive relationship: logical contradiction and real opposition (*Realrepugnanz*), which reflect Aristotle's contradictory and contrary relationships. From German idealism onwards, however, the removal bar was raised: different working of two modes of intelligence was foregrounded: understanding (*Verstand*), the faculty operating through disjunctions and reason (*Vernunft*), the faculty operating conjunctively. The sterile nature of the 'A = A' relationship was criticised and a step forward in respect of the principle of non-contradiction theorised, thus confirming the (implicit?) fears of the separative philosophers: the necessary interdependence between concepts, the relationship between correlatives, threatens the supreme logical principle. A real threat, on the one hand, though unreal on the other: real and dangerous like all infection, unreal and unfounded like a delirium. The attacks of dialectic thought on the principle of non-contradiction are merely fanciful and senseless.

Actually, if conjunctive logic were a "logic of contradiction", if it really managed to suspend the principle defined by Aristotle for the first time, how could it be justified? In the name of a mimesis in respect of the contradictions allegedly making up reality, especially social reality? But social conflicts do not exemplify contradictions in the logical sense. It is clear that the dialectic tradition, especially in its ideological (Marxist) version, became guilty of terminological misuse, with disastrous consequences at the conceptual level: if one gets used to calling every kind of conflict a *contradiction*, no attention at all will be paid to the polysemy of opposites. Instead of differentiating between contradictories, contraries, and correlatives, the primacy of contradiction will be established, both in logic and reality. The principle of non-contradiction will be criticised as the

logical bulwark of ideology, by means of which the ruling classes attempt to hide social conflicts. Yes, it must be admitted that there is a great deal of delirium in this conception.

Bad criticism strengthens the adversary's position. If separative thought could be opposed only by "logic of contradiction", then conjunctive logic would have no chance. It would not be flexible, warlike logic, but rather a caricature of reason. So let us hasten to point out that *the relationship between correlatives does not necessarily violate the principle of non-contradiction*: nor is it inspired by this intention. For example, a particular relationship between master and slave would only violate Aristotle's principle if it were and, at the same time, were not the relationship between a master and slave. No logical transgression comes to the fore in the overturning of a dominant relationship.

So the relationship between correlatives is not an overcoming, but rather a version, an interpretation of the principle of non-contradiction; but if a logical principle is subject to varying interpretations, this means that it has a *stylistic identity*. The style of thought interpreting it is crucial.

Every kind of opposite relationship interprets the principle of non-contradiction differently. Thus this principle should not be confused with the relationship between contradictories, which is only one version of it. Neither should it be thought (it is perhaps worth repeating this) that a particular version of the principle, i.e. that of correlatives, can invalidate, suspend or overcome it. Dialectical extremism is wrong when it believes it is able to put aside the principle of non-contradiction, but so is separative philosophy, inasmuch as it holds that all ties between opposites give birth to a contradiction (thus excluding correlatives, i.e. the inseparable opposites, from the area of investigation).

11. We have taken an important step forward in our research, and believe it is legitimate to foreground this: when taking a fresh look at the principle of non-contradiction, we realised that its neutrality – what makes it absolutely crucial and dominant – does not exclude *flexibility*. The

separative interpretation is only one of the possible interpretations: it is the outcome of a fallacy, which consists in superimposing the non-contradiction principle and contradictory relationship.

The latter statement could be modified, by observing that separative rationality takes other kinds of relationship into consideration, for example contrary and subcontrary opposition. This is actually the case, and there is no doubt that this should be acknowledged. What is essential is that the difference should be maintained – one could even use the term 'heterogeneity' – between disjunctive and conjunctive relationships. The principle of non-contradiction presides over all relationships between opposites: this does not mean that these relationships belong to the same logical family.

Family differences became visible by comparing Aristotle's four part typology with the medieval logical square: why were privatives/positives and correlatives left out? While privatives/positives can be seen as a variant or sub-species of contraries, correlatives contain something irreducible to the previous types: the enigmatic constraint linking these terms can only turn out to be incomprehensible to rationality functioning disjunctively, even when it joins together and connects (terms remaining separable and potentially autonomous). The result is the distinction between different logical styles. This need could be denied, if one were to note that correlatives infringe the principle of non-contradiction; in this case, correlatives would be unable to generate *another logic*, but only supply separative logic with working materials – riddles, puzzles, antinomies. However the compatibility between correlatives and the principle of non-contradiction has been demonstrated. Correlatives are the most flexible version of this principle, and, in any case, they reveal its flexibility.

Contradictories are by no means the strongest case of opposition, as is usually thought: they are *the most rigid case.* It is quite wrong to use the rigidity of contradictories as a criterion for judging the other relationships, and arranging them in an order of ever increasing weakness, dogmatically taking it for granted that all the relationships we call *opposite* are, because of the name we give them, homogeneous. Flexibility is not weakened rigidity, is not the weakest form of rigidity, but

something else. Correlatives are not weakened contradictories but something else. Aristotle's typology deserves criticism inasmuch as it does not recognise, but actually tends to hide, the heterogeneity between rigid and flexible relationships; but the reduction of the logical square, in both the medieval and Frege's versions should be even more severely criticised.

12. Let us imagine, however, an interlocutor who does not want to appear dogmatic, and who insists on the homogeneous nature of opposite relationships; let us try and imagine some of his arguments. He could mention the words of Catullus, "*Odi et amo*", and maintain that this "et" is a conjunction perfectly accepted and understood by separative logic, and that there is thus no need to split types of logic stylistically, positing the hypothesis of a linking logic. How should the conflictual relationship between love and hate be described? Evidently not as a case of contradiction – the opposites are mutually compatible here, albeit in an atmosphere of bitter strife – but as a case of contraries: one of those conflicts between forces to be observed in the natural and psychic worlds.

This interpretation is *possible*: but can we consider it satisfactory? In its apparent neutrality, this description chooses a specific opposite relationship: that of the contrary, or rather *subcontrary*. Since an individual's psyche contains a finite quantity of emotional energy, the conflict between love and hate, described on the basis of separative logic, should be transcribed as follows: "I love partially, I hate partially". Both statements are true (as can only be the case with subcontraries).

Among the relationships envisaged in the logical square, that of subcontraries is the least conflictual, articulated in the weakest incompatibility: "some have the y property" - "some do not have the y property" (or "there is at least one individual who has the y property" - "there is at least one individual who does not have the y property"). However, in the case under scrutiny, i.e. the psychic condition described by Catullus, the conflictual condition is especially intense.

We are somewhat uneasy here: something isn't working; there is a false note, as it were, in our tentative analysis. Let us attempt to understand the reasons for this.

13. A person loves and, at the same time, hates another person: where can we situate this conflict, looking at the square of opposition? The most plausible answer has already been given: the relationship between subcontraries. However this relationship asserts the possibility of an individual denying the universal affirmative proposition, or of another individual denying the universal negative proposition; it does not appear to be suitable to point out the case of an individual with conflictual predicates.

The logical square concerns the relationship between quantifiers, universal and existential, and that is as far as its function goes. If one wishes to describe a conflict between predicates in an individual, it is necessary to take the linguistic-semiotic version of the square into consideration, as suggested by Greimas, for example. Here we do not find propositions, but rather terms (notions). This construction is entirely foreign to the dimension of true or false; on the other hand it does add fresh possibilities: a *complex* term, generated by the joining of contraries, and a *neutral* term, generated by the negation of the semes occupying the sites of subcontraries. The *carré sémiotique* is an abstract construction, and thus disregards the concrete semantic investment of the places it provides for. In the case under discussion, as a matter of fact, mixed terms are not empty possibilities:

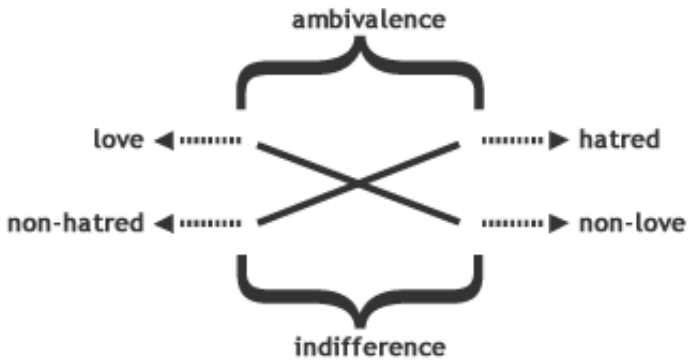

Figure 1

After shifting the love/hatred relationship to the relevant terrain, we can hardly avoid newly positing all the previous questions: does the semiotic square have similar defects to those of the

logical square, i.e. separative style and removal of correlatives? There is no doubt about this. And the difference between styles can be clarified with reference to mixed cases.

What Greimas calls a *complex term* is nothing more than the intermediate case, referred to by Aristotle as possible in the relationship between contraries. But is ambivalence a mixture of love and hatred comparable, for example, to mixing colours, where white and black produce grey? This seems not to be the case. There are mixtures in which each opposite does away with its own characteristics, to open up to a pacified composite. This is not what happens in a feeling of ambivalence, where opposites do not fade into each other; they actually engage in furious combat.

At this point, the separative philosopher, or linguist could put forward another proposal: divide, in the area of complex terms, irenic (more or less harmonious syntheses) from conflictual cases. The love/hatred ambivalence would then position itself in the latter subset.

How should this proposal be evaluated? It can be seen as partially plausible: does not everyday thought continually present us with half truths? Half empty and half full glasses? Nevertheless, the consequences of this obstinate inclination to compromise requires some consideration. Does *Odi et amo* mean "I hate you to some extent, I love you to some extent"? Or "I hate you sometimes, on other occasions I love you"? This description could prove acceptable in cases when this feeling has cooled down somewhat, only to come to the surface again intermittently. But the best interpretation of *Odi et amo* is "I hate you just because I love you": the two feelings are opposites, though they nourish each other, they support each other. Their struggle has stages when one of the two passions prevails, rather like the case of Empedocles' cosmic cycle: absolute love, or absolute hatred. It should be noted, however, that the triumph of one of the two passions is never final: in fact, it precedes the resurrection of the opposite passion; thus giving rise to states of furious mixing. All this happens because the two passions, although inseparable, are unable to unite. The impossibility of *being one* is the curse dominating their unbreakable union.

This is indeed the relevant interpretation, if one is referring to really complex cases, to which one has adequate access. Still in the area of language: a micro-text such as "*Odi et amo*" lends itself to

simplified interpretations, and also pointless discussion. It is only when the context is broadened that one can realise the loss, from the cognitive viewpoint, caused by recourse to separative connections.

So the typology of opposites must not be reduced, and the range of possibilities must always be available. Another mistake to be avoided is taxonomic rigidity: given two opposite terms, are we able to establish with definitive certainty what kind of relationship holds them together? No, because language is flexible enough to allow twisting and intensifications which only its most rigid structure tends to disallow. Let us consider the distinction between gradable opposites (like hot-cold) and ungradable opposites (like male – female). "Ungradable opposites, – as Lyons observes – when they are employed as predicative expressions divide the universe of discourse into two complementary subsets (i.e. the objects of which they are predicable)". However, natural languages do not work in a rigid way: one can say that a girl is 'very feminine' o 'not very feminine', etc. "But in cases like this, we are modifying the language system, if only temporally. Recognition of the possibility of grading normally ungradable antonyms, …does not imply that there is not a sharp distinction to be drawn between gradable and ungradable antonyms in a language system".

Other questions come to the fore: to what extent can a taxonomy keep its independence, and anteriority, in respect of speakers' actual usage? And vice-versa: to what extent does exuberance of usage – i.e. the pragmatic factor – leave a taxonomy intact?

In that posited by Lyons correlatives are classified as *converse*: two place predicative expressions concerning reciprocal social roles (doctor/patient, master/slave etc.), family relationships (father/son etc.), temporal and spatial relationships (above/below, in front of/behind, before/after etc.). It would indeed be difficult to justify the argument developed up to this point on the basis of this classification. Its trivial nature is partially understandable when taking into account Lyons' aim: a taxonomy applied to lexemes. There is no opening to the logical or philosophical dimensions, or even literary analysis, for that matter. But one has the right to rebel against this humiliating limitation: why should one acknowledge the legitimacy (or neutrality) of a taxonomy that entirely

ignores a whole area of problems which must be referred to? These problems are not so far off the mark, seeing that Lyons' book has chapters on logic and the philosophy of language.

Confrontation, exchange of ideas between specialists in various disciplines seems then to be an urgent requirement. As far as correlatives are concerned, their irreducible specificity and abundance of variants needs to be acknowledged. I will restrict myself to three research directions:

- the link between correlatives cannot be reduced to a distribution or sum (whether one considers parts or whole). Solidarity between correlatives is not simply a kind of complementarity, but a very strong link, reciprocal implication (while the distributive aspect prevails in complementarity);
- correlatives are often thought statically or as simultaneity: "Correlatives are commonly held to come into existence together, and this for the most part is true, for instance, of double and half", wrote Aristotle. This is not the case: the two terms of a correlation can be *consecutive*, in accordance with obligatory alternation; think of toxic objects and the circularity of the two phases of privation and enjoyment;
- no individual entity can have a contrary, not to speak of a contradictory. What could be the opposite of Gabriel or Louise? For Aristotle an individual can hold in him/herself opposite qualities at different stages, while remaining the same individual, numerically one: a rich person can become poor, a fat person thin, and vice-versa. Even positing an exceptional case, when two individuals are entirely characterised by diametrically opposite predicates, it is doubtful that one can speak of a contrary relationship.

Two individuals can be friends or enemies etc., but not contraries. A correlation could be set up between them, however; and this is not an exceptional, almost unthinkable case, but rather easily and frequently encountered reality. This is another reason for not removing correlatives from Aristotle's typology: they are the only case of opposition concerning *individuals*, and not predicates or quantifiers.

14. Correlatives are the obstacle or rather adversary in the way of separative thought, revealing its

rigidity; so every effort is made to dissolve the specificity of this relationship or resolve it within a domesticated taxonomy. By claiming specificity for correlatives, however, a more accurate typology is not merely aimed at – this objective would be pretty poor: the specificity of correlatives is absolutely crucial because it is the possible source of non-separative logic.

Let us return to the principle of non-contradiction. Linking it with the typology of opposites, with its variety of types, we have shown its stylistic identity: *the principle of non-contradiction is always implicitly modalised by a style of thought*. It can act in the sphere of rigid or flexible thought: this set of possibilities implies that flexibility resides at the very heart of this principle, the rigid version of which has almost always been enhanced.

Can the difference between versions influence the formulation modes? According to Aristotle's formulation, the principle of non-contradiction states that it is impossible for the same attribute at once to belong and not to belong to the same thing and in the same relation. There is another formulation, generally accepted as equivalent, i.e. the principle of identity, "A = A". But are these two formulations really substantially equivalent? Heidegger's answer is negative. In his view something happens in the passage from the traditional formulation to the one making use of the 'equals' sign: the polysemy of the verb *to be* is eliminated in favour of a univocal indication.

Polysemy is not a defect, a gap, a source of disorder and confusion, but rather a set of possibilities. Admittedly, the polysemy of a concept can be reduced to a list, in the sphere of which each meaning lines up with the others in mutual indifference: actually, this is the way separative philosophy operates, and not only in modern times. In the case of the verb *to be*, the most fascinating one, but also the vaguest in philosophical language, in order to dissolve its aura and abolish its mysterious reserves of meaning, it would be enough to distinguish between the copula function, that of identity and that of existence. "Thus the word 'is' figures as the copula, as a sign for identity, and as an expression for existence". Naturally conjunctive philosophy does not reject these distinctions, but believes that it is indispensable to analyse a set-up of distinctions (list, taxonymy, typology) from the stylistic point of view. Thus any polysemy potentially splits into modes of

articulation: there are typologies with a well ordered, homogeneous manifoldness, with no internal disputes, while others, and we have seen this in the case of opposite relationships, are the product of a *separative fallacy* which attempts to cancel the heterogeneity of types. Therefore, the conflict permeating them must be rediscovered.

If Heidegger posits retranslating "A = A" by "A is A", this is so as to return to a hastily investigated polysemy, which is wrongly believed to have been completely mastered, at least without possible surprises. Returning to the verb 'to be' allows access to the problem of ontological difference, but also allows one to think of the connection marked by "is" not as identity/equality or existence, or belonging, but rather *Zusammengehörigkeit* (belonging together). Heidegger frequently, and always at crucial stages in his arguments, addresses this notion, which refers to reciprocity, mutual inclusion, and therefore correlation. We cannot deal with the working of *Zusammengehörigkeit* in Heidegger here, so we shall restrict our attention to some passages concerning the problem of identity.

The departure point is scission of synonymy. Heidegger rejects equivalence between equality or identity (*das Gleiche*) and sameness (*das Selbe*): "In the merely identical the difference disappears. In the same the difference appears,…". This means that *das Selbe* does not exclude but includes difference: the concept of "sameness" iin Heidegger is interpreted *conjunctively*. Let us attempt to clarify this position further by translating it into our own language.

The identical, in the sense of 'equal', excludes the non-identical. The two concepts are incompatible, whether thought as contradictories or contraries: rigidly incompatible, as claimed by separative thought. Heidegger, on the other hand, argues that a relationship in which opposition between identical and non-identical is inclusive can be thought. What could we call this relationship? Do we already have a name, and a conceptual elaboration, able to refer to it and describe it correctly? This appears to be the case: if the identical and non-identical belong together, it is because they are *correlatives*. Heidegger's *Zusammengehörigleit* is an interpretation of Aristotle's correlatives.

There is no doubt that there is something new, however. Aristotle's typology has a 'constative' character: it says that cases of correlation exist. However, we have already seen that any typology can be interpreted dynamically, thanks to the inexhaustible flexibility of language. Non-gradable antonyms, such as male/female, can be treated as gradable and appear in sentences that make perfect sense. Logic can also act flexibly, turning opposition between contradictories or contraries into opposition between correlatives. The problem is: is this always possible in principle?

15. The scission of the synonymy between *das Gleiche* and *das Selbe*, in Heidegger's perspective, makes the division of the notion of 'identity' possible. "*Identity* does not necessarily mean 'coincidence': it can also be understood as 'non coincidence'.

Merely defining identity as coincidence is thus a fallacy. As far as we are concerned, we will no longer say that "A = A" is the principle of identity, unless we add that it is the principle of separative identity, i.e. the separative version of the identical.

Let us return to the question so far unanswered: is it always possible to treat relationships between contradictories or contraries as relationships between correlatives? That is to say: is the *principle of non-coincidence* – this is what we can call the scissional-conjunctive version of the principle of identity – referable and applicable to any entity? We must look again at the meaning of correlation, in identity, between the identical and non-identical. This conception of identity could be seen as bizarre and incomprehensible: how can one deny that everything is identical to itself and nothing more? Does not identity, strictly speaking, i.e. the relationship between an entity and itself, necessarily have a separative meaning? Everything is separate from everything else, and is inseparable from itself.

So, the scissional identity thesis (hinging on the correlation between identical and non-identical) strikes a double target: it denies the inseparability of a thing from itself when denying its separability from other things. Identity is a relationship, but not necessarily the relationship separating an individual from others; it is rather – for a specific type of entity – the relationship

joining him/her to some of them. *Identity* is thus understood as ‘identification’.

16. We use this term in the psychoanalytical sense. In Freud’s view, the identity of every human being coincides with the series of his/her identifications: identification is seen as a wide ranging, often conflictual, mostly unconscious process significantly modifying the previous personality. There is no Self preceding some process of identification. The relationship between the Self and the Other is therefore essential and constitutive. Unawareness of these processes and believing oneself to be a fully autonomous subject is part of the mendacious character of the Ego. Note that the identification process is asymmetrical: A becomes B, partially interiorising him/her, but B does not become A.

The concept of identification upsets the classic theory of predication, from Aristotle to Frege, Quine, etc. On the basis of the distinction between singular terms (like Socrates) and general ones (like Athenian, mortal, etc.), it is usually stated that a singular term is susceptible to predication (I can say that “Socrates is an Athenian”) but cannot occur as a predicate (I cannot say “Plato is Socrates”). For conjunctive logic, on the other hand, singular terms can also stand in the predicative position. On the basis of the theory of identity as identification, it is quite legitimate to say that Plato is (was) Socrates: by this we mean, and it cannot easily be challenged, that Plato identified himself with his teacher, took up his teaching and developed a philosophy inspired by his thought. Admittedly, we must distinguish the types and modes of identification, which is a scissional-conjunctive process: identification can be partial or almost total, can refer to the Ego or the Ideal of the Ego, can be distinctive or confusive (a confusive example is Don Quixote’s identification with Amadis of Gaul).

It should be pointed out, however, that a process of identification is characterised by a complexity that can only be partially described by means of predicative connections. When identifying him/herself with B, A assimilates some of his/her traits, and they can be indicated through properties or behavioural modes: it can be said, for example, that A is (has become) "a knight-errant

defending Christianity, fighting against injustice etc." but what would this description be worth as far as Don Quixote is concerned? Even if we were to list all the traits Cervantes' character had absorbed from his model, the description would remain schematic and insufficient. It is interesting to give these difficulties some thought, because it is from here that certain aspects of the problem under investigation can be clarified.

17. At this stage we must ask ourselves what the limits to be assigned to the new theory of predication are. We have established the fact that a singular term can appear – without any incoherence, and making perfect sense – in the predicate position ("Plato is Socrates", "Don Quixote is Amadis of Gaul"); but this does not mean that any singular term has the right to take on a predicative role and propose itself as the identification term.

For example, could one refer to a poplar which is – which has identified itself with – an oak tree? The sentence seems bizarre, not only because semantic rules or classification spheres are broken, but because the *desire to be* evidently only concerns entities equipped with consciousness. But even if we were to allow for an embryo of consciousness in trees, the metamorphosis would turn out to be implausible: metamorphosis – what else is identification? – is a process that can only concern *flexible* entities, entities whose identity is not reflected in the "A = A" formula, but in the correlation between identical and non-identical. It is only for flexible individualities (here there is no need to make a list: we are discussing logic) that the principle of non-coincidence is valid.

Two points:

(a) it is important not to overlook the difference between a process of *property substitution* (Lewis was rich, nice, smart etc.; he has become poor, nasty, scruffy etc.) and one of metamorphosis linked with identification. When predicates, by means of which an individual has been described, are replaced by a large number of opposite predicates, the individual can be said to have drastically changed, to have undergone a 'metamorphosis'. However, Lewis could have turned nasty because he is now financially worse off, which prevents him from taking care of his outward appearance,

etc., without this upset having anything to do with identification processes: actually, identification is not a ‘property’ metamorphosis, which can be described by means of an alternation of predicates. There is a perspective component in this process: identifying oneself means taking up the other’s gaze, his/her vision, values and taste;

(b) we have already mentioned the fact that the principle of non-coincidence only works in the sphere of the flexible; an entity with a rigid identity is situated, on the other hand, in the sphere of separative identity, A = A. Metamorphoses can also be imagined here: just think of Escher’s engravings, for example, the strange triangle which looks as if it has absorbed the traits of some other geometric figure.

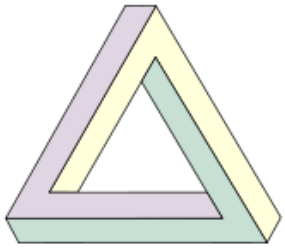

Figure 2

This is the point, however: we are considering a combination with *heuristic*, *cognitive* value, which can be judged true or false, as in the case of the sentence "Plato is Socrates", and not the result of unruly morphological imagination. Certainly, this imagination can produce extremely fascinating effects, belonging to the confusive; we cannot address the problem here of the possibile truths of the confusive regime.

18. There is a further question: is not the border between rigid and flexible in turn flexible? This is not the equivalent of the absence of a borderline, a week or vague border, though it forces one to ask oneself about the possibility of metamorphosis. We will now quickly deal, in the small amount of space still available, with metamorphoses *in language*, i.e. in the modalities of language named *figural*.

The most fascinating rhetorical figures (metaphor, oxymoron, etc.) are actually conjunctive. In figural language we encounter metamorphoses of identity recalling processes of identification; an

affinity confirmed by the fact that Lacan indicated the identification relationship of a son with his father, and subsequent access to the Symbolic, with the expression *paternal metaphor*: the father acts as a modelising force, similarly to metaphorical focus (if we turn to Black's theory). He selects, foregrounds and transforms.

Differences must not be neglected, of course: identification, from the point of view of psychoanalysis, is a process whose protagonists are generally perspective entities. This does not prevent us from thinking of cases of identification with an abstract entity (an institution: the University, the State etc.) or even concrete objects. Rhetorical-figural processes are based, on the other hand, on relationships established by subjects imposing their perspective on entities that may not have one (or in the case of only one of the entities having one, as with "Joe is a flash of lightning").

The analogy between psychic and linguistic metamorphoses appears to break off completely if one takes on the point of view of predication. We have seen that, in the case of identification, a singular term can be the predicate of another singular term; rhetorical figures like metaphor appear to be closest to classic predication, even when they place an object, rather than a quality in the predicate position. When saying "Joe is a flash of lightning" we are not referring to any particular flash of lightning, i.e. an entity identified in space and time, as when one says that Plato is Socrates, but rather to flashes of lightning in general, the flash of lightning class, defined by specific properties.

Nevertheless, there is a lingering feeling that a metaphor describes a non-property metamorphosis, one that is not entirely translatable into a series of predicates. Predicative paraphrase implies cognitive loss: what is lost is the perspective component, which is grounded in the individual positing or inventing the metaphor, and which can also be perceived in the metaphorical utterance; the *foregrounding* carried out by the metaphor is not perceived, and this is a function frequently neglected by scholars restricting their interest to the similarity connections: metaphor partially acts as hyperbole, intensifying and distorting. If these aspects are taken into account, metaphor tends to move away from the classic predicative scheme.

Moreover, have we not perhaps learnt from modern philosophy of language to mistrust the exterior appearance of a sentence? We know that there can be a great distance between grammatical and logical form. So why should we be inhibited by the fact that the metaphoriser appears as a general term? What counts is its logical form, and, from the logical point of view, the metaphorising expression (the focus of the metaphor) appears to act as a singular term, or position itself half way between classic and singularity predication.

This hypothesis is further confirmed if we look at oxymorons. Irrelevant cases should be avoided, i.e. those where the conflict is not true opposition. This happens, for example, when the conflict does not concern the same but different parts of the psyche, (leaving aside adherence to Freud's theory of the divided subject, one can continue to use traditional psychology of faculties). Thus Zerlina's "Vorrei e non vorrei" in Mozart's *Don Giovanni* (I, 9) is not really a case of an oxymoron, since it originates in two different areas of the psyche, desire ("felice inver sarei") and reason, the rational fear of being deceived ("ma può burlarmi ancor"). Here the conjunction "e" (and) is not oxymoric or paradoxical, but rather antithetic and separative. An excellent, paradigmatic case can be found, on the other hand, in the phrase "the light of darkness".

The criterion for discovering authentic oxymorons could be the semiotic square (whose limits we will provisionally accept). While the conflict between desire and fear is not paradoxical opposition, since the notion of 'desire' is the contrary of 'repulsion' and the contradictory of 'non-desire', light and darkness can make up a paradoxical link.

In the phrase under examination, however, opposition has been transformed into specification: what light are we talking about? Light attributed to darkness. There is no antithesis, but rather a predicative connection: light is predicated by darkness.

Incompatibility between opposites has been overcome; disjunction has become conjunction. Once more we can take note of the flexibility of language. But what kind of link has been set up? Incompatibility does not appear to have been removed by means of an intermediate term (or *complex* one, as Greimas calls it); the mix between light and darkness is arguably intermediate, as

perceived at dawn and sunset. The semantic intention giving rise to this phrase can be recognised if we translate it into a perspective: try to imagine glaring darkness, which can dazzle with the same strength as light. Dazzling, blinding darkness.

Have we obtained a classic predicative form? Or a conjunctive transformation? We have not mixed opposites – the only possibility accepted by separative logic, i.e. mixed cases - , we have tied them together. But this is not an aporetic node: it does not produce paralysis, as is the case when I say that something true is false or something false is true. Here opposites strengthen one another – is this not what happens in Heidegger's 'belonging together' (*Zusammengehörigkeit*) ? We cannot go further into the resemblances between different nodes, and are unable, here, to explain why some oppositions produce paralysis while others do not. Perhaps, in all non aporetic correlations, there is an asymmetrical component. "*Festina lente*" (Make haste slowly): another excellent example of an oxymoron. This is not an invitation to the intermediate behaviour (be neither too quick nor too slow). The golden mean (*mesotes*) is not being pointed out here, but rather a 'golden extreme': hurry up – speed is a strategic virtue -, without giving up the advantages of taking your time. It is not a suggestion in favour of the intermediate condition, but one of inclusion: to take it over it is not enough to calculate; shrewd, strategic intelligence is required. Augustus addressed this maxim to his commanding officers.

19. Here follows a list of theses, considering the route followed so far and its possible developments:

- scissional (conjunctive) logic is paradoxical, but not aporetic logic;
- if the scissional component is missing or fails, conjunctive logic becomes *confusive*. Opposites are tied together, as it were, by over tight knots, which give rise to a block or paralysis. Movement is no longer possible;
- ancient (Aristotle) and modern (Frege, etc.) logic turned to a single logical style, i.e. the separative one: a style that should reduce the possibilities of paradoxes to a minimum, or at least ensure their solution;
- the separative style is perhaps able to unlock all the enchained paradoxes or aporias; but cannot think the logical ties called *correlatives* by Aristotle, which are the source (or principle) of flexible

logic. Ties between correlatives are not errors or confusion, except for the case of the subset of aporias;

- the *postulate of incompatibility* between opposites must be eliminated (just as the postulate of parallels was denied in geometry): it prevents the onset of flexible, scissional logic;
- the postulate of incompatibility has its best known expression in the square of opposites (logical version). The linguistic version (semiotic square) allows for mixed cases, albeit thought as *derivations.* Both versions of the square are subject to the separative;
- a typology of opposites must not ignore or minimise the *heterogeneity* between disjunctive and conjunctive relationships
- neither should one ignore or minimise the difference between identity as coincidence and identity as non-coincidence (scissional, correlative identity);
- flexible logic is quite different (unless proved otherwise) from polyvalent logic, and also fuzzy logic. It is not enough to admit (or generate) unprovable propositions to create flexibility;
- Freud's principle of *anaclisis* must be conceptualised as a logical principle
- the list of logical connectives must be newly expressed and expanded: in logic that is no longer 'zero sylistic', a priority is the introduction of the connective *as*;
- rhetorical figures, or at least some of them, such as metaphor and oxymoron, correspond to conjunctive mechanisms; beyond grammatical expressions, they should be studied in their logical form.
- what we call *language* is a mixture and conflict of styles.

Appendix

The curved logic of correlatives: a reformulation of the square of opposition

Is it possible to reformulate and expand the logical square, by introducing conjunctive relationships? Or must we consider it a tool only capable of articulating disjunctive relationships (between contradictories, contraries and subcontraries)? Even if we reached the latter conclusion, there would be no reason for disquiet on my part. In my view, what counts is having stated the legitimacy of a perspective to be understood and judged above all *conceptually* (technical developments follow on from this).

I have tried to remove the prejudice, according to which there is supposed to be a preferential link (an affinity) between the principle of non-contradiction and disjunctive relationships. Actually, the principle of non-contradiction exists in its different versions, and correlatives are the most flexible of them. Consequently, inasmuch as it excludes conjunctive relationships, denying them logical legitimacy, the square of opposition is a *major fallacy,* and one must rid oneself of this fallacy once and for all.

How can this be done? By acknowledging the limits of the logical square (its monostylism) and trying out a richer, more complete elaboration, even graphically. But how can correlatives be represented graphically? This is my suggestion:

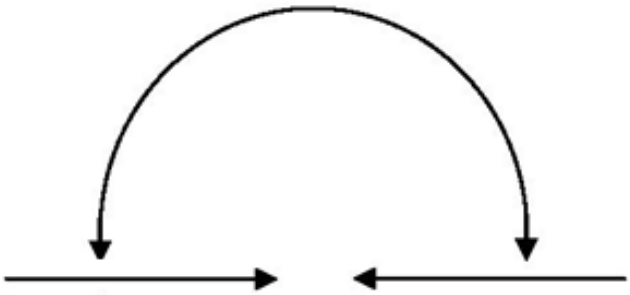

Figure 3

The two arrows pointing at each other represent conflict (I am not interested in eirenic correlatives); the curved line connecting them represents interdependence, reciprocal, necessary presupposition

Where can the relationship between correlatives be inserted? There are two possibilities: 'horizontal' insertion, above the relationship between contraries, and a 'diagonal' one, next to the relationship between contradictories. Here it is enough to illustrate one of the two options, the one accentuating paradoxical characteristics:

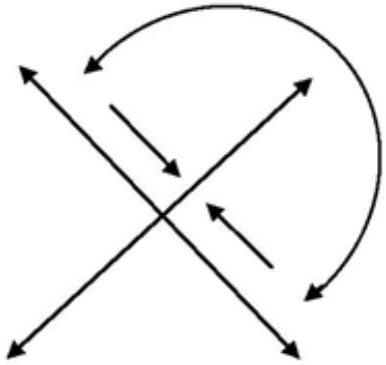

Figure 4

But the curve was principally chosen so as to indicate the elasticity, the *flexibility* of correlatives in comparison with the rigid linearity of the contradictories and contraries. One further, albeit obvious, point: when a logic is *curved* it is so in a way unlike that of rails or a road, or a jar handle (because these forms belong to rigidity).