

Chapter Seven

Tadeusz Kotarbiński

On Things and their Phases

1. *The Development of Reism*

Our concern in the present chapter will be with the metaphysical or ontological views of the Polish philosopher Tadeusz Kotarbiński (1886–1981). We shall deal also with the criticisms of Kotarbiński's views put forward by other members of the Lvov-Warsaw school of Polish analytic philosophers, paying special attention to the work of the logician Stanisław Leśniewski (1886–1939). As we saw, both Kotarbiński and Leśniewski were students of Twardowski in Lvov, and the influence of Twardowski on Kotarbiński's writings reveals itself most clearly in the fact that the ontological theories which Kotarbiński felt called upon to attack were in many cases just those theories defended either by Twardowski or by other thinkers within the Brentano tradition. Leśniewski, too, inherited through Twardowski an interest in Brentano and his school, and as a young man he had conceived the project of translating into Polish Marty's *Investigations on General Grammar and Philosophy of Language*. As he himself expressed it, Leśniewski grew up “tuned” to “general grammar” and logico-semantic problems à la Edmund Husserl and the representatives of the so-called Austrian School'. (1927/31, p. 9)

The influence of Brentanism on Polish analytic philosophers such as Kotarbiński and Leśniewski has, however, been largely overlooked – principally as a result of the fact that the writings of the Polish analytic school have been perceived too narrowly against the background of Viennese positivism or of Anglo-Saxon analytic philosophy. I shall seek in what follows to do something to rectify this imbalance, by presenting a critical survey of Kotarbiński's development from his early nominalism to the later doctrine of

‘temporal phases’.¹ It will be shown that the surface clarity and simplicity of Kotarbiński’s writings mask a number of profound philosophical difficulties, connected above all with the problem of giving an adequate account of the truth of contingent (tensed) predications. I will then examine Leśniewski’s attempts to resolve these difficulties, concluding with an account of the relations of Kotarbińskian reism to the ontology of things or *entia realia* defended by the later Brentano.

We shall be concerned, in the first place, with Kotarbiński’s *magnum opus*, the *Elements of the Theory of Knowledge, Formal Logic and Methodology of the Sciences*, first published in 1929 and hereafter referred to as *Elementy*. The principal doctrine expounded and defended by Kotarbiński in this work is that of ‘reism’, a doctrine according to which all existence is made up entirely of individual things, *realia* or *concreta*. A more specialized version of the doctrine is referred to by Kotarbiński as the doctrine of ‘somatism’ (or sometimes also ‘pansomatism’), which results when one adds the thesis that individual things are to be identified in every case with physical bodies – a thesis which Kotarbiński also accepts. In an essay of 1958 appended to the second edition of his *Elementy*, Kotarbiński speaks retrospectively of seven ‘stages’ in the development of reistic theory, from his own early acceptance of nominalism – which he himself preferred to call ‘concretism’ – to the working out of a full-blown pansomatist ontology in the 1930s.

It is especially in relation to the chronologically earlier stages in this development that Twardowski’s influence is most strongly felt. Stage 1 consists in the rejection of universals, properties, or general objects. All entities are individuals, on this (‘concretist’) view, though it does not thereby follow that they must all be things. Kotarbiński’s adoption of nominalism in this sense may be attributed on the one hand to the effects of his early exposure to the thinking of the British empiricists at the hands of Twardowski. On the other hand however it can be seen as a reaction against Twardowski’s own thesis that there are *general objects*, objects which result when the features common to the particular objects falling under a given concept are ‘unified into a whole’ (1894, p. 105, Eng. p. 100). As we have seen above, a discipline like geometry is

1. Here I follow in the footsteps of Jan Woleński’s recent work; see above all his 1989, and compare Schnelle 1982 and the papers by Schnelle in Cohen and Schnelle (eds.) 1986.

concerned in Twardowski's eyes precisely with general objects in this sense (*triangle, circle, square*, and so forth), and a similar thesis may be extended to the other sciences. As Husserl points out, general objects as conceived by Twardowski are subject to all the disadvantages of the Lockean general triangle. This suggestion is taken still further by Leśniewski, who offers a proof that Twardowski's theory (together with a range of similar theories, including Husserl's own) is contradictory,² and Kotarbiński would later claim that it was only concerning universals or general objects that nominalism 'succeeded in convincingly proving their non-existence by a *reductio ad absurdum*.' (1966, p. 55)

Stage 2 consists in the rejection of events, processes, states of affairs, and other putative particulars falling outside the category *thing*. This, too, may be interpreted as a reaction on Kotarbiński's part to the Brentanist views of his teacher Twardowski, given that the ontology of states of affairs or *Sachverhalte* was in the first decades of this century on the continent of Europe a quite peculiar preserve of the Brentanist movement.

Stage 3, the rejection of sets or classes, reflects the influence of Leśniewski, and above all of Leśniewski's criticisms of the theory of sets.³ The set-theoretical antinomies had resulted, in Leśniewski's view, not from any inherent contradiction in the notion of set as originally conceived by Cantor, but from a departure from this notion in the direction of a conception of sets as abstract entities. As Cantor's original formulation has it: 'Every set of well-differentiated things can be conceived as a unitary thing in which these things are constituent parts or constitutive elements.' (Cantor 1887/88, p. 379) Thus for example a musical composition is a set consisting of the sounds which are its constituents, a painting is a set consisting of various patches of colour. A set, therefore, on Leśniewski's interpretation of Cantor's views, is a concrete whole made up of concrete parts, not an abstract or immanent *ens rationis* sealed off

2. See Leśniewski 1913, p. 319, and also the summary of Leśniewski's argument in Kotarbiński 1920, and Lejewski 1979, pp. 200f. As Woleński (1988) shows, Leśniewski was influenced here by Marty's criticism of Husserl's Platonism in his *Investigations of General Grammar* (1908), § 71.

3. See Leśniewski 1914, 1927/31. It may be also that Leśniewski's criticism of properties in his 1913 helped to provoke Kotarbiński's initial nominalism.

from changes in the real world of material things.⁴ According to Leśniewski, it would be correct to say, for example, that the Black Forest is just the set of trees now growing in a certain area, and that this set becomes smaller as trees within it die. Clearly, on this view, there can be no empty set, and a set consisting of just one object as member will be identical with that object. Moreover, sets can change, not least in that they can acquire and lose members over time. Further, there can be no sets of higher type, which means also that there is no way in which the more usual antinomies may be generated.

Frege, too, as Leśniewski points out, attacks those mathematicians who introduce into their theories such arbitrary ‘inventions’ as the empty set merely because they prove expedient for certain purposes.⁵ Leśniewski’s own strictures in this respect are directed in particular against axiomatic theories of sets such as were developed by Zermelo. These do not merely lack the sort of naturalness that would dispose one to accept them; they lack also that intrinsic intelligibility which would make their meaning clear, so that Leśniewski can in all honesty assert that he does not understand what is meant by ‘set’ as this term is supposed to be ‘implicitly defined’ by theories like Zermelo’s.⁶

Leśniewski, himself, in contrast, starts not from ‘inventions’ or from axioms or hypotheses selected for pragmatic reasons, but from what he calls *intuitions*, commonly accepted and meaningful to all and relating to such concepts as whole, part, totality, object, identity, and so on.⁷ The language of Leśniewski’s theories is therefore an extrapolation of natural language, a making precise of what, in natural language, is left inarticulate or indistinct. His work forms also part of that strand in the development of logic, represented also by Frege and by the early Russell, which sees logic as a descriptive enterprise, part and parcel of the attempt to produce formal theories adequate to and true of the actual world.⁸ Hence he is mistrustful of the model-theoretic semantics that

4. Leśniewski 1927/31, p. 17, citing Cantor 1887/88, pp. 421f.

5. Leśniewski 1927/31, p. 18, citing Frege 1893, pp. 2f., Eng. p. 31.

6. Leśniewski 1927/31, p. 22.

7. 1927/31, p. 24.

8. Leśniewski 1929, pp. 6, 78, Lejewski 1958, pp. 123f.

has been built up on an abstract set-theoretical basis, and he is opposed also to the work of those who embrace an essentially abstract-algebraic approach to logic, or see logic as having to deal essentially with uninterpreted formal systems.⁹

Stage 4 in the development of reism consists in the rejection by Kotarbiński of mental images and other ‘immanent contents’, and this once again reflects the influence of Twardowski. The status of mental entities was an issue of particular importance to Kotarbiński, since it marked one of the very few areas of disagreement between himself and Leśniewski. For Leśniewski admitted contents and images into his ontology, remaining in this respect faithful to the heritage of Brentano and Twardowski.¹⁰ In this sense, and perhaps also in others, Leśniewski is not a reist. Since, however, he held like Marty that contents are concrete individual items existing in time as a result of being tied, in effect, to specific mental episodes, his acceptance of contents does not imply a departure from nominalism or ‘concretism’.

Stage 5, which consists in the awakening of Kotarbiński’s interest in certain precursors of his own way of thinking, was provoked by the discovery of what he took to be reist tendencies in Brentano’s later work – a matter which will be dealt with in more detail below.

Stage 6 consists in an amendment to the reist doctrine, provoked by criticisms put forward by Ajdukiewicz in his 1930 review of the *Elementy*.¹¹ These criticisms concern in particular the question as to how the negative theses of reism (‘properties do not exist’, ‘events do not exist’, and so on) are to be treated. Are such formulations to be accepted as literal renderings? Certainly not, Ajdukiewicz claims, if ‘exists’ is taken in the literal sense – the sense it has in sentences like ‘rabbits exist’, ‘dinosaurs no longer exist’ and so on. For the

9. Interestingly, Tarski, at least in his early years, up to and including his paper on “The Semantic Conception of Truth”, agreed with Leśniewski in this (see esp. pp. 342f. of Tarski 1944). Tarski, be it noted, was never a formalist: Tarski and Leśniewski parted company rather because Tarski came gradually to accept the use of set theory and infinitistic methods in his work.

10. See Twardowski 1894, §§ 1–2. Leśniewski did not himself develop a *theory* of contents, since he held that the problems involved would be too difficult to allow him to achieve the appropriate degree of theoretical rigour.

11. See the detailed account in Lejewski 1979. Kotarbiński’s initial reaction to Ajdukiewicz’s criticism was in part inspired by Carnap.

subjects of such sentences are in every case the names of things, which is *ex hypothesi* not the case where we have to deal with expressions like ‘property’, ‘event’, and so on. Yet the reist allows no other sense of ‘exists’.

Kotarbiński himself initially responded to this criticism by taking up Ajdukiewicz’s suggestion that the negative theses of ontology be reformulated on the level of semantics, as theses to the effect that certain kinds of apparent statement are nonsensical.¹² This solution is unsatisfactory for a number of reasons. Thus as Lejewski points out in his paper “On the Dramatic Stage in the Development of Kotarbiński’s Pansomatism”, it implies that ‘the negative theses of ontological reism fail to say anything about reality’ because they are merely ‘statements about the language of the reist.’ (1979, p. 200) A semantical doctrine in this sense must however, as Lejewski argues, presuppose a prior ontological doctrine: ‘Semantics without ontology is like a house without foundations. It collapses into a set of arbitrary injunctions and prohibitions justified by *ad hoc* considerations.’ (pp. 205f.) Moreover, how, in the absence of some more deep-seated ontological theory, could the reist be assured of the truth of his semantic claim that all nonsensical ‘onomatoids’ or merely substitutive renderings will vanish in ultimate formulations? And how could he account for the fact that, as he will want to insist, translation into the language of things is both natural and clarificatory?

An alternative response to Ajdukiewicz’s criticism would be to accept that the reist’s negative theses make good sense (are in good grammatical order) as they stand, not, however, in the language of the reist but in the language of his opponent, i.e. of someone who accepts both a multi-categorial ontology (accepts categories other than that of *thing*) and the concomitant multicategorial language. For if, as Lejewski puts it, the multicategorial ontologist’s assertions ‘are made in terms of a multi-categorial language, the same language must be used to negate those assertions’. Propositions such as ‘there are no properties’, ‘there are no relations’, ‘there are no events’, etc., are properly

to be understood in the light of the multicategorial idealization of natural language. And on this assumption the nouns ‘property’, ‘relation’, ‘event’, etc. belong to different fundamental semantical categories, which in turn determine the semantical category of the expression ‘there are no’ in each of the conjuncts. (Lejewski 1979, pp. 211f.)

12. Cf. 1966, p. 433.

The reist, we might say, can accept his opponent's multi-categorial language as a ladder, to be thrown away when once it has served its polemical purpose. This response too, however, presupposes an underlying ontological doctrine, for how else could the corresponding negative statements be justified?

Stage 7 sees the re-institution of reism as an ontological doctrine, founded on a recognition of the need to supply non-tautological definitions of notions such as 'thing', 'object', 'body', etc. This development, too, was provoked by a criticism of Ajdukiewicz, a criticism to the effect that, if 'exists' has a literal sense only when used in conjunction with names for things, then the positive statement of reism, to the effect that only things exist, is equivalent to the truism: 'only things are things'.

Here, also, Kotarbiński's initial reaction was one of retreat to semantics. Later, however, he responded to Ajdukiewicz's objection in a more ontologically-minded fashion, by seeking definitions of concepts such as 'thing', 'object', 'body', etc., in a way which he hoped would render non-tautological the fundamental theses of reism and somatism. Since a formal statement of such definitions has been provided by Lejewski in his just-mentioned paper, it will be sufficient if we examine briefly (and critically) the concepts Kotarbiński here employs.

All reality, according to Kotarbiński, is composed exclusively of things, and things are in every case bodies. Kotarbiński initially sought to define body as that which is extended in space and time, as that which is 'bulky and lasting'. Then, however, he saw reason to add the further condition that bodies are 'such as to offer resistance'. Certainly it would be sufficient, Kotarbiński holds, to define 'body' as 'that which is extensive':

But in order to avoid misunderstandings which might lead someone to suppose, on the strength of that definition, that physics is also concerned with 'fragments of empty space' (which in our opinion, do not exist) or 'immanent coloured patches' (which also seems to be a hypostasis), we prefer to narrow the definition as to intension – without thereby, as we think, narrowing its extension – by adopting the formula stating that 'a body is what is extensive and such as to offer resistance'. (1966, p. 330, translation amended)

All is not quite clear, however, about the application of either formula. Thus Kotarbiński is on the one hand keen to insist that the term 'body', as he understands it, embraces not only planets, rocks, etc., but also objects

investigated by physics ‘such as electrons, protons, magnetic fields’. (1966, p. 331) On the other hand, however, he stresses that it excludes for example ‘immanent coloured patches’. Consider, however, a glass cube that is uniformly red in colour. Is the transcendent redness of this cube (an individual three-dimensionally extended moment of colour), a body, on Kotarbiński’s view? Certainly this redness is bulky and lasting and, perforce, such as to offer resistance. Kotarbiński, it would seem, was able to ignore such cases in framing his account of ‘body’ only because his attentions were concentrated on instances of *surface* colour, entities which fall short of three-dimensionality and can be excluded on this count. In order to rule out examples like the cube of colour from the class of ‘bodies’, Kotarbiński would have to add something like a condition to the effect that a body is that which exists (is extended and such as to offer resistance) *in its own right* (has need of no other thing in order to exist).¹³ As we shall see, a condition of this sort is very much in the spirit of Aristotle. Certainly such a condition would capture the sense in which the given example gives grounds for suspicion – that the cube of colour exists merely as a dependent moment of the cube of glass, and enjoys no separate existence. Yet how are we to formulate the condition in question in such a way that it would not rule out other examples which we would wish to count as *bona fide* bodies? Does a human being, for example, exist ‘in his own right’, given that he has need, for example, of nourishment, and processes of breathing and metabolizing (to say nothing of parents and solid ground beneath his feet), in order to exist? How, moreover, are we to make precise the sense of ‘other’ in ‘has need of no other thing’? Simple non-identity will not do, since *everything* may in this sense stand in need of its own proper parts in order to exist. On the other hand spatiotemporal discreteness or disjointness will not serve, either, since the cube and its colour would seem to coincide in space and time. All that can be said here is that considerations such as this have exercised Kotarbiński (and Leśniewski, *et al.*) too little, so that the project of a somatist ontology still

13. Something similar would be required to exclude from the realm of things also certain sorts of events. Consider, for example, a rotation of a metal sphere. This rotation is extended in space and time and, again, it is such as to offer resistance.

leaves much to be desired in terms of a clear statement of what is meant by ‘body’.¹⁴

2. *Reism and Truth*

Kotarbiński’s reism is, as we have seen, a doctrine according to which all existence is made up entirely of individual things. At the same time he defended in the *Elementy* a form of the correspondence theory of truth derived from his teacher Twardowski. Twardowski himself, as we saw, had come to the conclusion that a conception of truth as correspondence requires special ‘states of affairs’, unitary entities which would stand to sentences or acts of judgment in something like the way in which things or objects in the narrow sense would stand to names or acts of presentation. Kotarbiński, in contrast, sought to maintain a correspondence theory of truth and at the same time embrace the view that there are no entities other than things. This he did by rejecting that ontological interpretation of correspondence which would interpret truth in terms of ‘copies’ of reality existing somehow in the mind of the judging subject. He advances, rather, what might be called a ‘weak’ version of the correspondence theory of truth,¹⁵ which he expresses as follows:

The point is not that a true thought should be a good copy or simile of the thing of which we are thinking, as a painted copy or a photograph is. A brief reflection suffices to recognize the metaphorical nature of such a comparison. A different interpretation of ‘accordance with reality’ is required. We shall confine ourselves to the following: ‘John thinks truly if and only if John thinks that things are so and so, and things in fact are so and so’. (1966, pp. 106f.)

He came, in other words, to interpret the correspondence theory in the superficially neutral terms of the Aristotelian ‘to say of what is that it is not, or of what is not that it is, is false, while to say of what is that it is, or of what is

14. Note that the problems raised in the text show only that the canonical reistic notion of *thing* is indeterminate in its application. They do not show that one could not deal satisfactorily with colours (or three-dimensional shapes or masses of sound or heat) within the Leśniewskian framework. As Lejewski has suggested in conversation, just as Chronology and Stereology (theories of time and space) can in principle be obtained from Mereology by the addition of certain extra-logical constants, so it would be possible to conceive a discipline of colourology or chromatology, obtained by adding constant terms such as *red*, *blue*, etc., and a relational predicate such as *is the same colour as*.

15. See Woleński and Simons 1989, p. 418.

not that it is not, is true.’¹⁶ Conceptions of truth in terms of the copy theory are to be avoided, from Kotarbiński’s point of view, not merely because they involve a hypostatization of states of affairs or other special entities on the side of the object; they commit us also, on the side of the subject, to ‘immanent contents’, ‘thoughts’, ‘judgments’, ‘propositions’ or ‘meanings’ – and all of these terms are mere *façons de parler*, to be eliminated from any language adequate to the purposes of ontology. When I judge truly, then I judge in accordance with the things, and that is all that need be said.

Can matters really be so simple, however? Certainly in the case of judgments expressed by positive existential sentences such as ‘John exists’ or ‘cheetahs exist’, it is plausible to account for their truth or falsehood exclusively on the basis of an appeal to things or bodies as commonly understood. ‘John exists’, on a view of this sort, is made true by John himself; ‘cheetahs exist’ by some one or more cheetahs.¹⁷ But how, on this basis, are we to deal with negative existential judgments like ‘Ba’al does not exist’ or ‘there are no unicorns’. It was precisely difficulties in the treatment of judgments such as this which led some Brentanists to the view that what makes a judgment true are special *sui generis* entities designated by expressions of the form: *the existence of A*, *the non-existence of B*, *the existence of an A which is B*, and so on, where *A* and *B* stand in for expressions like *a horse*, *the redness over there*, *unicorns*, *God*, *Ba’al*, and so on. The consideration of sentences like ‘John is suntanned’, ‘John is eating’, ‘John is a heavy eater’, ‘John’s eating is on the increase’, ‘John has a bad case of dyspepsia’, ‘there is a ridge of high pressure over the Atlantic’, suggests moreover that the domain of such special, non-thingly truth-makers must be extended even more widely, to embrace complex states of affairs involving events, processes and states as their parts.

16. *Met.*, 1011^b25ff. Less neutral is Aristotle’s remark, somewhat later in the *Metaphysics*, to the effect that truth and falsehood depend ‘on the side of the objects on their being combined or separated, so that he who thinks the separated to be separated and the combined to be combined has the truth, while he whose *thought is in a state contrary to that of the objects* is in error.’ (1051^b3, emphasis supplied.)

17. On this terminology of ‘making true’ see Mulligan, Simons and Smith 1984. The terminology has a number of advantages over the more usual talk of correspondence. It is disembarassed, first of all, of all connotations of ‘copying’. It does not suggest that the relation between a sentence and that in virtue of which it is true would be a symmetrical relation. And it can cope with the fact that there may be more than one entity which makes or helps to make a given sentence true. Thus, in the simplest possible case, ‘I have a headache’, may be made true by my present headache (‘from the beginning to the end of its existence’), or by any phase of this headache overlapping with my present utterance, or by relevant states of nervous tissue upon which my headache supervenes.

How, then, can Kotarbiński cope with cases such as this in a way that will not stretch ontologically beyond the realm of things? Two answers to this question may suggest themselves: firstly, that it would be possible to effect a logical or linguistic analysis of the sentences in question, of a sort that would reveal their underlying form as involving a relation only to things; and secondly, that it would be possible to embrace *special sorts of things* as truth-makers for the given sentences, so that reism would be saved, though only at the expense of our embracing a notion of ‘thing’ which would depart in some degree from common sense. As we shall see, elements of both solutions are present in Kotarbiński’s work.

We might consider, first, the semantic side of Kotarbiński’s doctrine. Consider the sentence ‘John’s jump cleared the hurdle’. This seems to refer to a certain concrete individual event or process – John’s jump – which occurred at a certain time. And it must therefore surely correspond, if true, to a segment of reality containing this jump as part. We have a strong intuitive disposition to suppose that any account of what makes the given sentence true will be inadequate if it takes no account of this specific jump. According to Kotarbiński, however, this intuition cannot even be properly expressed. For all apparent references to jumps and other events or processes are in his eyes ‘merely substitutive’. A literal rendering of the intentions of one who utters the sentence in question would be: ‘John jumped clear of the hurdle’, a sentence in which the only names that occur are names for things.¹⁸ It is renderings of this sort, Kotarbiński insists, that reproduce ‘the intention of any statement that says something about an event or events.’ For, ‘it is only seemingly (and never in fact) that we can make a true statement about an event, namely if we take that statement in its substitutive, and not literal and fundamental role.’ References to events are mere ‘onomatoids’ or ‘apparent names’. They are terms which merely sound like names. When the attempt is made to establish a literal interpretation, then it becomes clear that the expressions in question belong to a category quite different from that of names in the strict and proper sense.¹⁹

18. Similarly when a person states the fact of London’s lying somewhere on the Thames, ‘he merely states, in a devious way, that London lies on the Thames’ and here – as Kotarbiński conceives it – there is no reference to facts or states of affairs or anything other than things. (1966, p. 429)

19. Kotarbiński 1966, pp. 52, 401, n. 4.

Physics too, along with many other disciplines such as phonology, military history and meteorology, seems to trade largely in sentences of greater or lesser generality about events. Such disciplines are, accordingly, in need of radical linguistic reform, so that, as Kotarbiński points out, ‘one of the most topical but unperformed tasks of concretism is to work out a dictionary of mathematics and physics in the reistic interpretation.’²⁰ It is not difficult to appreciate the obstacles confronting such a project in relation, say, to the physicist’s talk of energy-fields characterizing points or regions of spacetime. Kotarbiński in fact copes with the latter not by semantic means, but ontologically. As we have seen, he accepts into his ontology fields and other creatures of physics. These, too, are extended in space and time and are ‘such as to offer resistance’ (or, at least, they are presumably such as to be involved in causal relations of certain sorts). Reality, as the reist conceives it, is not therefore ‘a “static conglomerate” (“a mere sum”) of “rigid and changeless solids”’; it is a ‘fabric composed of changing things’, in a new and extended sense of ‘thing’.²¹ No explicit criterion is provided, however, as to what is ‘thing’ and what ‘event’ or ‘change’ on this more liberal dispensation, so that one does not know, for example, whether quarks, neutrinos, or flashes of lightning are to be admitted as (short-lived) things or rejected as events.

Moreover, even where we are dealing with non-scientific sentences of the everyday world, the reist’s literal renderings are not in every case so easy to come by. What, for example, is to count as a ‘literal’ rendering of a judgment like: ‘John’s jump impressed the spectators’? Perhaps: ‘John jumped and impressed the spectators’. Yet it is far from clear that this rendering is even roughly adequate. John’s jump, after all, may have impressed the spectators, but not John himself. Or John may have jumped, and impressed the spectators, without it being the case that it was his jump by which they were impressed.²²

20. 1966, p. 426. Compare Szaniawski 1977.

21. 1966, pp. 330f., 426.

22. Similar difficulties arise for the proposed reistic translation of ‘Justice is a virtue of honest people’ by ‘Any honest man is just’ (Woleński 1987, p. 168). Thus it may for example be that all honest men are as a matter of fact just, though not in virtue of being honest.

Kotarbiński's problem here results from the fact that there is as it were a *selectivity* of intentional verbs like 'see' or 'think about' or 'be impressed by'. It seems that such verbs may relate their subjects to entities such as events, processes, images, contents, meanings, surfaces, boundaries, states of affairs, absences, and so on, in ways not accountable for exclusively in terms of any mere directedness to things. Such selectivity is characteristic especially of memory, which may as it were conceal from our present consciousness the things which serve as thingly supports for events or circumstances remembered. Thus Harry may remember the intonation of Mary's voice, yet he may have forgotten both Mary herself and the voice that had this certain quite specific intonation.²³ There is, notoriously, a parallel selectivity of 'cause'. Consider for example a sentence such as: *The fact that agreement was reached caused universal joy*, which Kotarbiński (somewhat counterintuitively) wants to render as: *All were overjoyed when they agreed*. (1935, p. 491)

Further problems arise for an approach of the sort sketched by Kotarbiński when we consider sentences apparently involving quantification over events or types of event (*John danced the same jig twice*), or when we consider relational or comparative sentences like *Mary's blush was redder than Susan's*, *The beginning of John's jump was more elegant than the end of Jack's*, and so on.²⁴

Kotarbiński himself, since he believes that somatistic reism is true, can countenance neither a selectivity of mind to non-things, nor the possibility of relations involving apparent non-things in ways which could not be cashed out satisfactorily in terms of corresponding things. Hence he is constrained to hold, for example, that when Harry remembers the intonation of Mary's voice, then there is of necessity a sense in which he remembers Mary also, and that the precise content of his memory can be accounted for without loss of content in terms of his relation to this and other *things*.

23. See § 3 of Mulligan, Simons and Smith 1984, for a discussion of this example.

24. See Tegtmeier 1981 for an extended treatment of such cases and of the reasons why they seem to dictate an ontology richer than that of the reist.

Later reists in the Polish tradition take a more relaxed view of such translation problems, conceiving reistic semantic analysis as of value only when confined to theses purely philosophical in character. Outside ontology, as Lejewski would have it, reistic semantics ‘loses its rationale’:

There is not much point in avoiding abstract noun-expressions in disciplines of lesser generality. Elimination of onomatoids from final pronouncements is of paramount importance only if these final pronouncements are meant to be used in ontological arguments.²⁵

Now there is, certainly, some justice to this, if it means that the reist is restrained from embarking on gratuitous attempts to reform the language of his fellows, language which must surely be in order as it is. What Lejewski has to say should not, however, be interpreted as implying that we may properly ignore those forms of everyday and scientific language which pose *prima facie* problems for the would-be reist translator.

3. Kotarbińskian Psychology

As we have seen, Kotarbiński rejects the doctrine of mental contents propounded by his teacher Twardowski. Contents and images are, as Kotarbiński points out, commonly held to come into being when someone recalls something or dreams of something. The subject who dreams or remembers is then ‘ready to formulate various true judgments, allegedly pertaining to those images’. (1966, pp. 430f.) Brentanists such as Twardowski had defended the thesis that such contents or mental images enjoy an immanent existence ‘in the subject’ or ‘in a person’s head’.²⁶ Kotarbiński, however, does not see how this ‘in’ is properly to be interpreted. Surely not spatially, ‘as though it referred to the nervous tissue in the brain?’ (And where, for example, would we locate such mental phenomena as the pain in a phantom limb?) Yet it

25. Lejewski 1979, p. 206. A compromise position is put forward by Wolniewicz in his 1989. Wolniewicz maintains that sufficient support for reism is provided by a demonstration that it is possible to reduce apparently non-reistic theories to theories having a reistic axiomatization. Reism, on this basis, would thereby concern whole theories and not separate sentences.

26. See e.g. Brentano 1874, pp. 124–32, Eng. pp. 88–94; Twardowski 1894, p. 3, Eng. p. 1; Höfler 1890, § 6.

seems equally inappropriate to regard mental images as located outside the brain, for instance where imagined external objects seem to be located. Leśniewski had been prepared to conclude from these difficulties that contents and images exist ‘nowhere’, a conclusion in the spirit of Descartes, with his view of *res cogitans* as unextended, and accepted also among the Brentanists.²⁷ Kotarbiński, however, could permit himself no such radical departure from somatistic realism and concluded that immanent contents and images are not to be accepted as *bona fide* things at all. This conclusion he saw as being supported further by the fact that such putative entities are not three-dimensional. Thus they cannot count as ‘bodies’ as the pansomatist conceives them, and this, for Kotarbiński, rules out their counting as things in any sense.²⁸

But how, then, are we to cope semantically with our apparent references to images and other like phenomena? Here, again, Kotarbiński’s attack is both semantic and ontological. On the one hand he hopes, with Leśniewski, to ‘de-intensionalize’ psychological statements, to find means of converting such statements to extensional forms. On the other hand, however, he hopes to develop a reistic conception of the discipline of psychology itself, a conception according to which psychology would deal not with mental acts of hearing or thinking or desiring and with the contents of such acts, but rather with things of certain sorts – with the sentient person, the hearer, thinker, or desirer.

That which sees and hears and desires is, Kotarbiński holds, identical with a certain organism (or at least with some part of the organism such as the brain or the system of nerve receptors).²⁹ To think, then, is to be a thinking brain or body, a brain or body which, in non-reistic language, enjoys certain special states or processes of thinking. As Kotarbiński is himself careful to stress, this is not a materialist or behaviourist doctrine. For while he certainly holds that physics investigates all that there is, Kotarbiński does not suppose that all scientific statements about what there is will turn out to be statements of physics. As for Spinoza, so also for Kotarbiński, it is as if, in the case of sentient

27. See e.g. Marty 1908, p. 401.

28. Cf. Kotarbiński 1966, p. 342. From this it follows, too, that there cannot be psychic subjects if the latter are conceived as systems or sequences of contents or images: see Kotarbiński 1935, p. 493.

29. 1966, p. 344.

beings, one single substance is able to support two different systems of determinations which might be mutually incommensurable. Physics describes how sentient organisms (and other bodies) move and how their particles are located. Psychology describes how sentient organisms think and feel.³⁰

Suppose, however, that during some given period of time one and the same sentient organism is both thinking and jumping. The *same thing*, in such circumstances, is both a thinker and a jumper. Is not the reist left in such circumstances with no means in his ontology to distinguish between what are, surely, activities of different sorts? Clearly, he cannot solve this problem by appealing to the fact that different (mental and physical) *predicates* are applied to the thing in question, for the issue here is precisely that of establishing *in virtue of what* such different predications are true, and to this end the reist has only things to which he can appeal. The problem cannot be solved, either, by appealing to any special understanding of the material ‘thing that thinks’ (which had been left indeterminate by Kotarbiński himself). For whichever concrete thing is fixed upon by the reist as that which thinks, be it the brain, the central nervous system, or some other proper or improper part of the organism as a whole, there will always be physical truths about the thing selected in relation to which the given problem of distinguishing physical and mental processes and states will recur. Moreover, whatever the nature of the material thing that the reist puts forward as his candidate ‘thing that thinks’, it seems not logically excluded that two parallel consciousnesses should be realized simultaneously within it in pervasive fashion. We might then have occasion to assert that consciousness₁ is thinking this, while consciousness₂ is thinking that, and then it seems that the reist – short of assuming special *immaterial* things – would have no way of doing justice to truths relating to parallel thinking processes in the given case, for there are *ex hypothesi* no separate bodies which might here serve as subjects of the respective predications.

Reism has consequences not only for the subjects of mental experiences, however, but for the objects of such experiences also. As already stated, the reist insists that that to which our experiences are related is in every case a thing. In everyday perception, as also in hallucinations, dreams and memories, we are typically presented with external things which seem to us to be coloured

30. Cf. Kotarbiński 1966, p. 346; 1935, pp. 495f.

and shaped in this or that particular way. And in dreams and memories, as Kotarbiński puts it, we as it were ‘observe, though somehow in a secondary manner, things from our past environment, which seem to us to be such or another’. (1966, p. 431) This account will clearly face problems in connection with iterated reference to what is mental – dreams about dreams, for example – as also in connection with that peculiar selectivity of memory and other acts discussed above. Kotarbiński’s view, nevertheless, is that our mental experiences are in every case a matter of our being related in special ways to things. From this he infers that all (third person) psychological statements must have literal readings of one or other of the forms:

- A feels this: B,
- A experiences this: B,
- A thinks this: B,

and so on – where ‘A’ stands in for the name of some sentient body and ‘B’ for words or phrases which answer the question ‘what?’: ‘What does John imagine?’, ‘What does John think?’, ‘What does John want?’, and so on. ‘B’ will stand, typically, for a ‘summary description of [A’s] surroundings made in extrospective terms’, and is of course supposed in every case to involve reference exclusively to things.³¹

A slightly different analysis may be required for statements like ‘my tooth aches’ or ‘I feel sick’. These may on the one hand be compared to statements like ‘my shoe is pinching’. Taken in this sense, ‘I feel sick’ would be formulated as ‘This is sickening’, ‘where the indicative pronoun would point to a certain region of the alimentary tract and adjacent parts of the body.’ (1966, p. 348) Quite often, however, the sense of ‘I feel sick’ is to signify ‘I experience a feeling of sickness’ and this is a statement which can be read as complying with the original Kotarbińskian scheme. It means ‘I experience this: it (my body) is sickening’ – where again, reference is made exclusively to things.

But in virtue of what are sentences of the form ‘A feels ...’, and so on, true? Perhaps we can express Kotarbiński’s view as follows. It is as if there are

31. Kotarbiński 1966, p. 347; 1935, p. 499. Recall Marty’s treatment of inner linguistic form at the end of Chapter Four above.

certain *sui generis* determinations of sentient bodies in virtue of which such bodies are directed in a quite specific way to things. It is not the case that the determinations in question could be somehow isolated, whether actually or in thought, in such a way that they could be examined in their own right. Yet they are not simply unknowable, either; for there exists the possibility of *imitation*, in the sense that one subject can think in a way which duplicates the thought- and feeling-determinations of another. Such imitation is possible because our mental determinations characteristically express themselves physically in a range of typical and familiar ways. Above all, there is an organic relationship between a subject's thoughts or feelings and the kinds of things he *says*. Hence we can come to know the former indirectly, by coming to an understanding of the latter in a way which amounts to a (more or less perfect) duplication of those mental determinations which they characteristically bring to expression. Here Kotarbiński draws on the work on meaning and expression of his teacher Twardowski, as also on Gestalt-psychological ideas concerning our knowledge of other minds.³² Strangely, he applies these ideas even to reflexive self-knowledge. We acquire knowledge of our own experiences, he holds, only by 'self-imitation',³³ so that there may be a sense in which we do not know what we think until we hear what we say.

Kotarbiński's claim, then, is that we may come to know what another person experiences by allowing ourselves to be guided by his statements or by other overt behaviour in such a way that we come to *imitate* his experiences within ourselves. Reistically expressed, we can make ourselves think or feel (more or less) as the other person thinks or feels, by allowing ourselves to be determined psychically by the things he says.

We try to interpret the word 'experiencing' as follows. It is merely an announcement of the imitation of the individual spoken of by the speaker, and it informs in a summary way in what respect he will be imitated; thus, that the individual spoken of will be imitated as looking, or listening, or exploring tactually, and so on (1935, p. 499).

32. See Köhler 1947, pp. 128ff., Koffka 1935, pp. 655ff.

33. 1966, p. 347. Similar notions are present also in the writings of Theodor Lipps on the notion of empathy: see e.g. his 1905 and also the discussion in Chapter Five above.

For this to make sense in reist terms, therefore, it must be that our utterances themselves are in some extended sense imitations of the very psychic determinations they bring to expression. Thus in the general formula of the psychological statement ‘A experiences this: B’, the ‘B’ may be seen as an imitation in this extended sense by the one who makes the given statement of the relevant experience on the part of A. When I say, ‘John thinks this: $2 + 2 = 4$ ’, ‘John feels this: they are playing badly’, ‘John doubts this: do angels exist?’, ‘John desires this: to be happy’, then I become a samesayer with the way John thinks or feels. And we can even

generalize this formula so that not only a sentence, but any phrase referring to how a given person experiences, could be substituted for ‘B’. It might even be an inarticulate exclamation, so that a given psychological statement would be: ‘John experiences so: Oh!’ (1966, p. 428)

Kotarbiński’s remarks here will remind us of Davidson’s analysis of indirect discourse in his paper “On Saying That”. My assertion of ‘Galileo said that the earth moves’, on this analysis, is an assertion to the effect that Galileo said something, and my immediately succeeding utterance of ‘the earth moves’ makes Galileo and me samesayers:

Galileo said that.
The earth moves.

Here it is only the first sentence, consisting of the name of a speaker, a two-place predicate ‘said’ and a demonstrative pronoun, that is asserted. The second sentence is, as it were, merely exhibited. For Davidson, too, therefore, there is a sense in which the best we can do is to *imitate* (make ourself samesayers with) the speaker whose words we are reporting.³⁴ A similar idea was incidentally advanced already by Leśniewski³⁵ who considers an interpretation of expressions of the type ‘ $\vdash p$ ’ in the language of *Principia Mathematica* as meaning:

34. Davidson 1968, p. 108.

35. 1927/31, p. 10.

that which follows is asserted p .

As Küng points out, it is an important feature of such devices that they allow us to talk *about* a sentence while employing to this end not a name of the sentence but (a token of) the sentence itself; that is, they allow us to avoid an ascent into the metalanguage ‘while at the same time obtaining benefits usually associated with such an ascent.’ (Küng 1974, pp. 243f.) A similar device can be used also to avoid an ascent into set-theoretical language: instead of ‘The set of men is identical with the set of featherless bipeds’, we can say: ‘The following two items are extensionally identical: man, featherless biped’. As Küng and Canty argue, it is a device of this sort that lies at the basis of Leśniewski’s understanding of the quantifiers.

4. *The Aristotelian Concept of Thing*

Kotarbiński started out in the *Elementy* from the common-sense idea of thing as physical body. He drew in particular on the clarification of this idea that was set forth by Aristotle in his treatment of ‘first substance’ in the *Categories* and in the *Metaphysics*. Thus at the beginning of the *Elementy* we read:

it is in Aristotle that we can trace the distinction, within the category of things, namely, of first and second substances. Those second substances, universals, are the first to fall victim to eliminating analysis as carried out by nominalism ... On the other hand, first substances, things in the primary sense of the word, and for us simply things, fared in exactly the opposite way, since the entire reduction of categories [takes] place precisely to their benefit. (1966, p. 55)

But what are the marks of *first substances* as Aristotle conceives them?³⁶

(i) They are, first of all, individual. A substance is a ‘this’.³⁷

(ii) They are not ‘predicable of a subject’ nor ‘present in a subject’.³⁸

(iii) They are that which can exist on their own, where accidents require a support from things or substances in order to exist. First substances are prior in all senses: in definition, in order of knowledge, and in time.³⁹

36. Compare, for what follows, Novak 1963/64.

37. *Cat.*, 3^b10.

38. *Cat.*, 2^a11–13, *Met.*, 1017^b10–14, 1028^b35–1029^a1.

(iv) They are that which serves to individuate the accident, to make it the entity that it is – the feature seen by Brentano as the most crucial element of the Aristotelian theory.⁴⁰

(v) They are that which, while remaining numerically one and the same, can admit contrary accidents at different times.⁴¹

(vi) They are able to stand in causal relations.⁴²

(vii) They are ‘one by a process of nature’. A substance has the unity of a living thing. Hence it enjoys a certain natural completeness or rounded-offness, both in contrast to parts of things and in contrast to heaps or masses of things.⁴³ Hence also, for Aristotle, a thing is that which has no actual but only possible parts.⁴⁴ A part of a thing, for as long as it remains a part, is not itself a thing, but only possibly so; it becomes an actual thing only when it is somehow isolated from its environing whole. In this sense (and also in others) the substance is the bearer of potentiality, and it is at this point that we should have to list those marks of substance which flow from Aristotle’s hylomorphic theory, and from his theory of act and potency.

There are further marks of *substance*, less easily documented in Aristotle’s texts since they were taken entirely for granted in Aristotle’s day. These are above all:

(viii) A substance is independent of thinking, a part of nature – where no Greek would have understood what is meant by ‘independent of thinking’.

(ix) A substance is that which *endures* through some interval of time, however small. This means, firstly, that things exist continuously in time (their existence is never intermittent). But it means also that there are no punctually existing things, as there are punctual events (for example beginnings, endings,

39. *Met.*, 1028^a30ff.

40. *Cat.*, 2^b1ff. Cf. Brentano 1933, pp. 37, 108, 112, 131, Eng. pp. 37, 86, 88, 109 and Chapter Three above.

41. *Cat.*, 4^a10.

42. *Met.*, 1041^a9.

43. *Met.*, 1040^b5–16, 1041^b28–31, 1052^a22ff., 1070^b36 – 1071^a4, *Cat.*, 1^b5. See also *Met.*, 1042^b15–32, for other kinds of unity.

44. *Met.*, 1054^a20ff.

judgings, decidings, and instantaneous changes of other sorts).⁴⁵ A thing is also typically such as to endure for such a length of time that it may acquire a proper name for purposes of reidentification.⁴⁶

(x) A substance is that which has no temporal parts: the first ten years of my life are a part of my life and not a part of me. As our ordinary forms of language confirm, it is events and processes, not things, that have temporal parts. The parts of things, in contrast, are their arms and legs, organs and cells, etc.

Even leaving aside the passages where Kotarbiński explicitly allies himself with Aristotle,⁴⁷ the focal instances of the concept of *thing* made prominent in the *Elementy* make it clear that he had intended to follow Aristotle in almost all of the above. A body, as we have seen, is bulky and lasting and such as to offer resistance. Further marks of bodies distinguished by Kotarbiński are:

- They are three-dimensional.
- They are all and only those entities that can be investigated by science; every object is ‘knowable in principle’.
- They enjoy essential perceptibility, and are further characterized by the fact that they all exert influence upon perceptible objects.
- They are at a definite place (that is, they are at a specified spatial distance from certain perceptible objects), and at a specified time (that is, they are at a specified temporal distance from certain perceptible objects).⁴⁸

Each of these marks is perfectly in conformity with the Aristotelian view expressed above. Kotarbiński’s most important departure from Aristotle, in the *Elementy* at least, is in regard to (vii). For Kotarbiński – almost certainly under the influence of the Leśniewskian conception of sets as concrete wholes – rejected the thesis that things must in every case be unitary, so that he counted

45. See Ingarden 1964/65, vol. I, §§ 28f.

46. As is clear also from Aristotle’s treatment of (ii), it is possible that the marks of the concept of substance may be established in part through considerations of the language we use to refer to substances themselves. See *Met.*, 1029^b13.

47. See e.g. 1966, pp. 326ff.

48. 1966, pp. 327, 435, 342. Note that, like the feature of being such as to offer resistance, these marks are held by Kotarbiński to be incidental; that is, they do not affect the extension of the concept *thing* or *body*.

as things also masses and quantities of things and even non-detached thingly parts. Bodies of air, swarms of bees, the solar system, are ‘compound bodies’, in Kotarbiński’s terms, as also are society, nation, social class and all other institutions.⁴⁹

While a lack of sensitivity to the distinction between things, masses, and parts seems to have been shared quite widely by Polish philosophers,⁵⁰ one (Austro-)Polish philosopher who did draw clear distinctions in this regard was Twardowski. As we saw, Twardowski follows Aristotle in insisting that what he calls ‘objects of presentation’ are characterized in every case by the fact that they are *integrated wholes*, a thesis he extends even to the objects of general presentations.⁵¹ Leśniewski, in contrast, goes so far in rejecting the idea that to be a thing an object must in some sense form a natural unity, that he accepts in effect what we might call a principle of the *arbitrariness* of thingly boundaries. This principle is built into the axioms of his system of Mereology, which includes a theorem to the effect that if *a* and *b* are objects, then so also is their sum, irrespective of whether *a* and *b* are connected or contiguous or materially related in any way (irrespective, even, of whether *a* and *b* exist at the same time). Leśniewski does not deny that some objects (in his highly general sense) have a natural unity. It is merely that he does not see the need to introduce this concept of natural unity into his theories of Ontology or Mereology. The latter are theories dealing with what he holds to be more primitive notions, notions which would in any case have to be clarified before a rigorous treatment of ‘natural unit’ could be attempted.

How, given his essentially Aristotelian ontology of things, does Kotarbiński cope in the *Elementy* with the problem of accounting in

49. The latter consist of human beings standing in certain relations to each other – which is not to say that there exist entities called relations (of dependence, leadership, authority etc.), in addition to and as it were alongside the human beings themselves. The various elements of a given institution are somehow related one to another in the sense that some of them behave in such a way because the others behave in such a way. A similar treatment is offered by Kotarbiński for terms like ‘function’, ‘disposition’, and so on. As Kotarbiński would have it, “‘X has the function of typist in a bank’ means the same as: X systematically types letters according to the instructions of her superior’ (1966, p. 490).

50. Some have suggested that this may reflect the fact that the Polish language, with its lack of articles, makes a less than clear distinction between mass and count nouns or between mass and count uses of the same noun, though it must be admitted that there are clear enough ways to make this distinction in Polish by other means.

51. 1894, pp. 88, 105, Eng. pp. 86, 100. Cf. Ingarden 1964/65, vol. I, p. 219.

correspondence-theoretic terms for the truth of sentences such as ‘John is jumping’? Sentences of the given sort are analyzed, first of all, as what Chisholm has called ‘concrete predications’, expressing relations between things.⁵² Thus ‘John is jumping’ is analyzed as a sentence of the form: ‘John is a jumper’, ‘John is red’ as of the form: ‘John is a red thing’, ‘John desires apples’ as of the form: ‘John is an apple-desirer’, and so on. In each case we arrive at a sentence containing two names of things joined together by the copula ‘is’,⁵³ so that the things picked out by the names in question are to have the job of making true the relevant judgment.

Remember, in all that follows, that ‘John is a jumper’ is to be understood as an analysis of the sentence ‘John is jumping’ (‘John is at present executing one or more jumps’). Thus we are to resist the natural tendency to understand nominals like ‘jumper’, ‘swimmer’, ‘bouncer’, as relating to a habitual or professional performance of the relevant activity. This tendency derives from the already mentioned fact that names are in normal circumstances used for purposes of re-identification; thus they presuppose some duration on the part of what they name.

‘John is a jumper’ analyses ‘John is, on this particular occasion, jumping’, where ‘is’ expresses a real continuous present. The thing picked out by ‘John’ seems relatively easy to identify, at least against the background of the broadly Aristotelian conception described above. But what, in the light of this conception, are we to make of the thing picked out by ‘a jumper’? And what is the relation between John and a jumper that is expressed by the copula ‘is’?

Our first port of call, given the strong influence exerted by Leśniewski on Kotarbiński’s (formally much less sophisticated) ontological views, is Leśniewski’s own system of Ontology, a theory built up on the basis of Leśniewski’s system of Protothetic or ‘theory of deduction’ by the addition of the new primitive term ‘is’ and the single axiom:

$$\forall ab [a \text{ is } b \leftrightarrow \exists c (a \text{ is } c \ \& \ c \text{ is } b)].$$

52. 1978, p. 199. Cf. the discussion of Brentano’s ‘B-theory’ in Chapter Three above.

53. More generally we arrive at a sentence containing exclusively logical constants and ‘genuine names’. See Woleński 1987, p. 168.

Colloquially:

a is b if and only if, for some c , a is c and c is b .⁵⁴

Here ' a ', ' b ' and ' c ' are any expressions belonging to the category *name*. This means, as Leśniewski sees it, that they may be either:

- (i) ordinary singular designating names or nominal expressions like 'Ronald Reagan' or 'the British Prime Minister';
- (ii) shared or 'general' names like 'philosophers' or 'apples in Vermont';
- (iii) fictitious or empty singular names like 'Pegasus' or 'the largest prime number';
- (iv) fictitious or empty general names like 'sirens' or 'fates'.

All such expressions belong to a single category, Leśniewski argues, since whether a name like 'man at the door' is singular or shared or empty depends on the factually existing state of the world, and so cannot be regarded as basic from the point of view of logic.⁵⁵ From this, however, it follows also that we must admit as 'names' expressions like 'jumper', whose number is in a certain sense indeterminate.

The axiom of Ontology lays down simply that for ' a is b ' to be true, it must be the case that every a is b and that exactly one object is a . It is not difficult to show, on these terms, that if both ' a ' and ' b ' are singular and designating, then ' a is b ' is deductively equivalent to ' $a = b$ '. Applied to what has now become the Polish-sounding sentence 'John is jumper', however, this analysis of 'is' tells us only that, if this sentence is true, then 'John' must be a singular designating name and 'jumper' a designating name designating (possibly *inter alia*) what 'John' designates.

From this point of view it becomes clear that the system of Ontology is in fact not an ontology at all (a theory of the different types of being). Rather, it is a theory of *names*, as is reflected in Kotarbiński's use of the expression 'calculus of names' for what Leśniewski called 'Ontology'. More precisely, it is a theory of the relations of designation that hold between singular, shared and empty names on the one hand and objects (of whatever variety) on the other. It

54. We here leave out of account peculiarities arising from Leśniewski's special reading of the quantifiers.

55. Küng 1967, p. 111. Such apparent logico-grammatical distinctions as that between common and proper names, marked in English by the presence or absence of articles, were consistently overlooked by Leśniewski.

reflects a concern, therefore, not with problems of ontology, or metaphysics, but with the issues that arise when one allows ‘*a*’ and ‘*b*’ to stand in not merely for singular terms as straightforwardly understood but also for any expressions within the wider category thus defined. To put the matter another way, Ontology may be seen simply as an extension of the theory of identity to cope with a somewhat liberal view of what may count as ‘name’, so that the absolute universality of ‘=’ is inherited by the new Ontological ‘is’. This makes it supremely tolerant, being compatible with *any* ontology formulable by means of expressions belonging to the given category. As Woleński puts it, ‘Ontology is metaphysics free.’ (1987, p. 175)

If we return to our sentence ‘John is jumper’ in the light of the Leśniewskian analysis of ‘is’, then it would appear that two alternative readings present themselves, according to whether we take ‘jumper’ as singular or plural. On the first alternative, ‘John is jumper’ will be equivalent to the more English-sounding ‘John is identical with a jumper’, so that the referents of ‘John’ and ‘a jumper’ will be one and the same. ‘John’, as we normally suppose, designates an enduring object, subject at different times to contradictory determinations (he is now jumping, now not). If, therefore, the referent of ‘a jumper’ really is to be identical to the referent of ‘John’, then ‘a jumper’, too, must designate something that endures, so that ‘John’ and ‘a jumper’ would be merely two different ways of referring, now, to one and the same ordinary continuant. On this account, however, the truth-maker of ‘John is jumping’ would differ in no wise from the truth-maker of ‘John is John’, and this is an outcome which surely flies too blatantly in the face of our intuitions to the effect that one or more *present jumps* must somehow be involved in making true the former sentence. If ‘John’ and ‘a jumper’ are two different ways of referring to the same thing, then surely, our intuitions tell us, they refer to this same thing ‘under different aspects’. It is unclear, however, how Leśniewskian Ontology could be made able to take account of such ‘different aspects’.

What, then, as regards the second alternative, which would make ‘John is jumper’ equivalent to: ‘John is one among the jumpers’. Since from any sentence of the form ‘*a* is one of the *bs*’, one can infer within Ontology a sentence which might be rendered colloquially as ‘*a* is this *b*’, where ‘this *b*’ is a singular name for that individual *b* which *a* is, this second reading might seem to bring us back once more to the first alternative, which we have seen reason to

reject. We may, however, be able to infer from ‘John is one among the jumpers’ also that there are jumpers to which John himself stands in the relation of similarity. And since John’s circle of similars *qua* jumper is different from his circle of similars *qua* thinker, this may enable the reist to distinguish separate truth-makers for ‘John is thinking’ and ‘John is jumping’ even in those cases where the two activities are performed simultaneously. From this it would follow, surprisingly, that the family of jumping things contributes in some way to making it true that John, in particular, is jumping – a consequence which certainly goes beyond what Leśniewski himself had to say on these matters, but which nevertheless has advantages from the reist point of view (to the extent that it has been found acceptable by Lejewski). In particular, it enables the reist to distinguish the truth-makers of ‘John is jumping’ and ‘John is thinking’ by tacit appeal to those other jumpers, who contribute to making true the former sentence in a way in which they do not contribute to making true the latter.

5. *Time and Tense*

This is not quite all that can be said on Leśniewski’s behalf, however, and before returning to our discussion of Kotarbiński’s ontological views it will be useful to look at the Leśniewskian treatment of the phenomena of verbal tense. Recall that the ‘is’ in ‘John is jumping’ is intended to express a real present tense. The Polish ‘jest’, on the other hand, for example in ‘Jan jest skaczący’ (John is jumping) – a form which sounds odd due to the absence in Polish of the continuous aspect – does not express a present tense, and this holds too of ‘Jan skacze’ (John jumps) and ‘Jan jest skoczkiem’ (John is a jumper).

In and of itself the Polish ‘is’ is timeless. In order to mark the fact that the jumping is taking place *at the moment*, the speaker of Polish must add an explicit temporal index and say, for example, ‘Jan teraz skacze’ (John jumps now) or (more stiltedly) ‘Jan jest teraz skaczący’ (John is now a jumper). This timelessness, we see, must be characteristic also of the ‘is’ of Leśniewski’s Ontology. This is first of all because Leśniewski, again under the influence of Twardowski, insisted that the sentences of Ontology should be absolutely true, i.e. true independently of time and occasion of utterance. But it is also because, as already noted, the ‘is’ of Ontology is to enjoy absolute universality of scope; it is to be applicable to abstracta as much as to concreta, to objects past and

future as much as to objects of the present. It is in fact the same timeless ‘is’ as that which we customarily employ when we say, e.g., ‘3 is a prime number’ or ‘whales are mammals’.

Ontology is not, however, restricted to ‘timeless’ sentences of the given sort. Return, for the moment, to ‘Jan jest teraz skaczący’ (John is now jumping). We should normally interpret the temporal index (‘now’ or ‘teraz’) in such a sentence as governing the verb. Given the universality of scope of Ontology, however, and of the category *name* with which it deals, it is open to us to allow such temporal indices to govern not the verb but the subject of the sentence.⁵⁶ This yields sentences of the form ‘John_{teraz} jest skaczący’ or ‘John_{now} is a jumper’ – sentences of a sort which make possible a new Leśniewskian reading of our original ‘John is a jumper’.

‘John_{now}’ is a name, like any other; but a name of what? We shall think of it, for the moment, as designating a *phase* of John, remaining neutral as to what exactly this might mean and presupposing only (1) that some of the phases of John are jumping phases, some not; and (2) that phases exist only for some (normally relatively short) interval of time.

Someone who asserts that John is a jumper may be seen as asserting that a present phase of John is a jumping phase of John – with a timeless ‘is’, exactly as dictated by the conditions laid down by Leśniewski on the sentences of his Ontology. The notion of a present phase of John may be elucidated in turn as: a phase of John that is simultaneous with the utterance in question, i.e., in reist terms, with the relevant phase of the speaker.⁵⁷ The advantage of a reading of this sort is that we now have no need to regard ‘a jumper’ as the name of an enduring object. The identity of the referents of ‘John’ and ‘a jumper’ is assured, rather, by the fact that ‘John’ itself has come to refer to an entity which enjoys a merely transient existence.

Does this really help, however, in understanding what it is that makes true the sentence ‘John is a jumper’? For what is this ‘phase’ of John that is both John and a jumper? There are, it will turn out, a number of crucial difficulties

56. Bolzano, too, in ‘45 of the *Wissenschaftslehre*, sees time-determinations as part of the subject, so that, as he puts it, ‘a pair of propositions such as “Caius is now learned” and “Caius was not learned ten years ago” turn out to have different subjects.’

57. Compare the similar ideas expressed by Brentano in his 1976, Part II, Ch. VIII.

which we face in establishing what such phases might be. Most importantly, as already remarked, it seems that, however this issue is decided, the phase ontology will dictate a departure from the broadly Aristotelian conception of ‘thing’, in spite of Kotarbiński’s apparent assumption that this ontology represents a natural and inconsequential extrapolation of his own reistic ontology, which was in turn seen by him as a natural extrapolation of the Aristotelian ontology of substance.⁵⁸

There are, be it noted, no phases in Kotarbiński’s *Elementy*, and that Kotarbiński held to a strictly Aristotelian view in this work is seen above all in the fact that – as his examples show – he takes it for granted there that things may *change*, in the sense that what is true of a given thing at one time may be false of *that same thing* at another. In his paper of 1935, “The Fundamental Ideas of Pansomatism”, in contrast, Kotarbiński embraces the phase ontology seemingly without a second thought. Every object, he writes,

is something corporeal or something sentient (or a whole consisting of such components).

An example of something corporeal is: a watch of the trademark Omega No. 3945614 from 1st January, 1934 to 31st December, 1934, inclusive (or any of its parts – for instance, the minute hand from 5th March, 1934 to 7th April, 1934, inclusive). And an example of something sentient: I, from 8 o’clock to 1 o’clock on 20th March, 1935 (or any temporal portion of this object, e.g., I, from 9 o’clock to 10 o’clock inclusive on the same day). (1935, p. 488)

From this, however, it follows that at least one further stage needs to be added to the list of ‘stages’ in the development of reism given above. This consists in the transition from an essentially Aristotelian ontology on Kotarbiński’s part in the period up to 1931, to a quite different ontology of phases (or mixed ontology of phases and substances) in the years thereafter.

How this apparently unconscious change of mind on Kotarbiński’s part came about can be seen if we look at the final section of Leśniewski’s work “On the Foundations of Mathematics” (1927/31). Here Leśniewski begins by expressing his gratification that so many of his own views, especially in connection with the system of Ontology, had found support in Kotarbiński’s work. Leśniewski goes on to quote extensively from the *Elementy*, including the

58. A similar suggestion is implicit also in Leśniewski’s work. See e.g. Sinisi 1983, pp. 57ff., quoting from the final section of Leśniewski 1927/31. Cf. also Lejewski 1982.

famous passage in which Kotarbiński compares Leśniewski's work to that of Aristotle, thereby providing a retrospective justification for Leśniewski's use of the term 'Ontology' – a justification which Leśniewski himself was only too willing to accept.⁵⁹ For a long time, Kotarbiński writes, the term 'ontology'

has come to designate investigations of the 'general principles of being' conducted in the spirit of certain parts of the Aristotelian 'metaphysical' books. However, it should be noted that if the Aristotelian definition of First Philosophy, perhaps the main concern of these books, is interpreted in the spirit of a 'general theory of objects', then both the word and its meaning are applicable to the calculus of names as conceived by Leśniewski. (1966, pp. 210f.)⁶⁰

In the paragraphs which *follow* this discussion of Kotarbiński, however, Leśniewski goes on to consider a certain difficulty for Ontology posed by the colloquial reading of Ontological sentences of the form '*a* is *b*', and it is in this context that he first introduces his notion of phase or 'temporal segment'.

Let us suppose, Leśniewski writes, that someone were to assert:

- (a) Warsaw is older than the Saxon Gardens
- (b) Warsaw in 1830 is smaller than Warsaw in 1930
- (c) Warsaw in 1930 is Warsaw
- (d) Warsaw in 1830 is Warsaw.

Then, taken together with the axiom of Ontology, we can derive from these sentences the following assertion:

- (e) Warsaw in 1930 is smaller than Warsaw in 1930,
- which is absurd.

In his response to this objection Leśniewski insists, first of all, that the expression 'Warsaw' be used consistently throughout. Either, he claims, it should be used to refer to 'only one object having a definite time span, which at present we do not know', in which case it has the sense of 'Warsaw from the beginning to the end of its existence'. Or it should be used in such a way that it refers to indefinitely many different objects, so that it would be possible to assert 'of "Warsaw from the beginning to the end of its existence" as well as of "Warsaw in 1930" and of "Warsaw in 1830" ... that they are Warsaws.'

59. See Woleński 1987, pp. 170f.

60. It should go without saying, in light of the discussion of Ontology above, that I do not share this estimation of the nature of Leśniewski's achievement.

Moreover, ‘it would be possible to say with complete generality that if some object is Warsaw, and some other object is a temporal segment of the first object, then the second object is also Warsaw.’⁶¹

On the first reading, which sees ‘Warsaw’ as a singular name, ‘it is not possible to call by the name “Warsaw” any temporal segment or temporal “section” of the unique Warsaw referred to’. In this case we shall be able to assert neither (b) nor (c) nor (d). On the second reading, on the other hand, ‘Warsaw’ is a plural name, which means that we shall find it impossible to assert any sentence of the form (a). Only on the basis of some such sentence, however, given Leśniewski’s logic, can we infer the consequence (e). Whichever alternative is chosen, therefore, the supposed absurd implication can be avoided.

We may be inclined to suppose that Kotarbiński, wishing to keep in step with Leśniewski in this, as in other matters of Ontology, simply took over the notion of temporal phase, going so far as to accept arbitrary temporal phases of an object as of fully equal status with that object itself. Closer examination of the relevant passage reveals that Leśniewski himself is here more circumspect. Thus he accepts the greater appropriateness of talking not so much of *the temporal segment of the rector of the University of Warsaw in January, 1923* but rather of *the man* (‘from the beginning to the end of the existence of this man’) *who was in January, 1923 the rector of the University of Warsaw*. Further, he has ‘the inclination to use the expression “Warsaw” as a name denoting one object only’. Since, however, he is using ‘man’ and similar expressions to designate simply the relevant maximal phase (‘man, from the beginning to the end of his existence’), it seems that even here Leśniewski is embracing the phase ontology, though in a form which seeks to come to terms with the fact that the ontology in question threatens conflict with our ordinary usage.

Certainly we refer quite naturally to: Napoleon in his youth, Nixon during the period of his presidency, the later Wittgenstein, and so on. Normally, however, we take such expressions in their sentential contexts, as signifying for example that Napoleon himself was such and such in his youth. That is, we treat expressions like ‘in his youth’ as adverbial modifications of the relevant verb.

61. Sinisi 1983, p. 58, quoting Leśniewski 1927/31.

The phase ontologist, in contrast, takes such forms of speech as modifying nouns in such a way as to sanction the view that there are special objects, Napoleon in his youth, Nixon during the period of his presidency, and so on, which are temporal parts of Napoleon and Nixon respectively ('from the beginning to the end of their existence'). Objects are therefore seen as having temporal parts in just the way that they have spatial parts like arms and legs. Thus where common sense and Aristotle prefer a view according to which things (for example people) exist *in toto* in any given moment of their existence, the phase ontologist seems to condone a view according to which only the relevant temporal parts of things would exist in any given moment. He may thereby be driven to the view that temporal parts must be in every case instantaneous, for any temporal part of duration longer than a single instant would have just as little claim to exist in that instant as would the relevant temporal whole. Adoption of the phase ontology may thereby lead to a view of ordinary things as mere *entia successiva*, the separate 'momentary slices' of which would exist in successive instants of time (as, according to some philosophers, the world as a whole has to be recreated anew by God in each successive instant). An enduring thing, on this view, is a mere logical construction upon the various instantaneously existing entities that may be said to do duty for it.⁶²

Alternatively the phase ontologist may seek to understand 'John_{now}' as signifying John himself, exactly as understood within the Aristotelian theory, but restricted to some interval of time (t,t') which includes the present moment.⁶³ If, however, as is required by the Aristotelian theory, John exists *in toto* in every moment of his existence, then it must surely follow, according to a process of reasoning encountered already above, that John_(t,t') is in fact identical with John himself. To get round this problem the phase ontologist might seek to regard 'John_(t,t')' as referring to John as he would have been had the universe (conceived as being in other respects identical to the actual universe) begun at t and ended at t'. ('Napoleon in his youth', on a view of this sort, might be

62. Woodger, who independently developed a phase ontology similar to that of Leśniewski, comes close to a view of this sort in his 1939. Cf. also Chisholm 1976, pp. 98f., Wiggins 1980, pp. 24f. and Lewis 1983, pp. 76f.

63. A natural language reading of 'John_{now}' may involve a necessary indeterminacy in the precise extent of the relevant interval; since this indeterminacy can in principle be eliminated, however (for example by utilizing the resources of a formal theory such as the 'Chronology' proposed by Lejewski in his 1982), we can ignore the matter here.

understood as referring to Napoleon as he would have been had he ceased to exist on the point of reaching maturity.) This, however, would make of phases merely possible existents. It would leave us in the dark as to the referent of 'John_(t,t')' in this, the actual world and it would tell us nothing as to the relation, if any, between John_(t,t') and John himself.

Leśniewski's own motivation in introducing the notion of temporal segment seems to have derived on the one hand from his timeless conception of truth, and on the other hand from those cosmological theories (of 'spacetime', 'world lines', and so on) which have grown out of the idea that there is a certain analogy between the spatial and temporal dimensions of the entities treated of by physics.⁶⁴ We shall assume, then, that on the Leśniewskian view we are to regard each object as a four-dimensional whole, capable of being cut up into parts in any of its four dimensions. Phases result when objects are sliced in the temporal dimension. Why must such a view embody a conception of the way in which the spatiotemporal world is parcelled into separate entities that is in conflict with the Aristotelian ontology of things? To answer this question we must understand what it is for an object to *change* (to admit contrary accidents at different times). Consider, to this end, the following passage from Zemach's important paper "Four Ontologies" of 1970:

An ontology may construe its entities as either *bound* or *continuous* in time and in space. An entity that is continuous in a certain dimension is an entity that is not considered to have *parts* in the dimension in which it is continuous. It can be said to *change* or *not to change* in this dimension, but what is to be found further along in this dimension is the *whole* entity *as changed* (or unchanged) and not a certain part thereof. The opposite is true of an entity's being bound. If an entity is bound in a certain dimension, then the various locations along this dimension contain its parts, not the whole entity *again*. (Zemach 1970, pp. 231f.)

The Aristotelian substance ontology is an ontology which sees substances as, in Zemach's terms, continuous in time and bound in space. We see the same

64. This analogy is very restricted (see e.g. Mellor 1981, pp. 66f., 128ff.). The acceptance of the concept of a world line in a four-dimensional continuum is moreover fully consistent with a continued belief in the ontology of things (Sellars 1962, p. 578). One might indeed go further, and argue that the concepts of the four-dimensional ontology themselves presuppose the thing ontology for their coherent formulation, that, for example, the idea of a world line makes sense only if there is some identical *thing* that is tracked from one time-point on the line to another. See Simons 1987, pp. 126f., and also Brentano, 1976, pp. 296ff., Wiggins 1980, p. 25, and Runggaldier 1992 who offer further criticisms of the view of time as a 'fourth dimension' of space. But compare Heller 1992 for arguments against such criticisms.

substance *again* on successive occasions, not a different slice thereof.⁶⁵ The four-dimensionalist phase ontology, in contrast, is one which sees entities as bound both in space and in time, i.e. as having both spatial and temporal parts. Entities so conceived are excluded entirely from change. That a four-dimensional whole has red phases and green phases no more signifies a change than does the fact that my pen is at one end red and at the other end green.

Interestingly, the term proposed by Zemach for the four-dimensional wholes that are accepted by Leśniewski is the term *event*:

An event is an entity that exists, in its entirety, in the area defined by its spatio-temporal boundaries, and each part of this area contains a *part* of the whole event. There are obviously indefinitely many ways to carve the world into events, some of which are useful and interesting (e.g. for the physicist) and some of which – the vast majority – seem to us to create hodge-podge collections of no interest whatsoever. Any filled chunk of spacetime is an event ... When philosophers and physicists talk about spatiotemporal worms, about point-events, or about world-lines, when they describe material things as ‘lazy processes’ and refer to spatial and temporal slices of entities, they are using the language of this [event] ontology. (Zemach 1970, p. 233)

Now it is no mere terminological matter to suggest that the phase ontology brings us close to an ontology of events. Leśniewski himself, while critical of the specific formal treatment of the event ontology that is given by Whitehead,⁶⁶ seems to have been not too negatively disposed to the idea that objects and events may constitute a single category. The whole tone of Kotarbiński’s *Elementy*, however, is precisely counter to an outcome of this sort, and there is not a little irony in the fact that Kotarbiński (like Lejewski in our own day) sees no incongruity in doing away with events via ‘onomatoids’, and then (apparently) resurrecting them via temporal parts.

Certainly Leśniewski does not countenance anything like the dissolution of things into events or processes that was envisioned by, say, Heraclitus, Schopenhauer or Bergson. For not every four-dimensional whole is such as to count as a ‘thing’ from Leśniewski’s point of view. His reasoning seems to have been, rather, that it is possible to restrict the totality of four-dimensional wholes in such a way that the resulting ontology will remain more or less in

65. See also the discussion of ‘existence in the present’ in Ingarden 1964/65, ‘ 30.

66. Sinisi 1966, summarizing part of ch. IV of Leśniewski 1927/31.

harmony with our presuppositions concerning things or concreta and aggregates thereof. Thus, we might say, a four-dimensional whole, before it can be admitted by Leśniewski into his ontology, must satisfy the two-fold condition that it be (1) ‘bulky and lasting’ (i.e. extended in all its four dimensions) and ‘such as to offer resistance’, and also (2) such that all its (bulky and lasting) parts are resistant in the relevant sense.⁶⁷ It is, however, far from clear that such conditions can of themselves suffice to transform an ontology of four-dimensional wholes into an ontology of ‘things’ in the sense of the consistent reist. Indeed, there is a suspicion that they involve a surreptitious smuggling in of the goal to be achieved (not least because the phrase ‘offers resistance’ seems to belong still to the language of continuants or substances).

Not merely does the phase ontology have no room for change. It precludes also any account of what we might refer to as the ‘stability’ of enduring substances. As W. E. Johnson points out, the ontology of four-dimensional wholes springs from that post-Humean doctrine which regards change as fictitious and substitutes for it ‘merely differently characterized phenomena referred to non-identical dates.’ It may be that for most scientific purposes ‘no more transcendental conception than that of a whole constituted by the binding relations of time and space is required; and hence the philosophers who reject the conception of a continuant are satisfied to replace it by the notion of such an extensional whole.’ What, however, is to explain, on this account, the stability of that spatiotemporal nexus which connects, for example, the successive ‘phases’ of a living organism? As Johnson argues, a mere succession of processes ‘offers no explanation whatever of what in objective reality determines the stability of any given nexus.’ (Johnson 1924, pp. 100f.)

6. *In Defence of a Bicategorical Ontology*

There is an assumption running through the thought of Leśniewski, Kotarbiński and their followers, as also through that of Zemach, to the effect that the most worthy aim of the ontologist is that of producing a monocategorical ontology –

67. This is to exclude, for example, the case where a *bona fide* bulky and resistant whole is aggregated with, say, an empty volume of spacetime.

and more generally of demonstrating that one or other sort of eliminative reduction can be achieved. A more natural resolution of the problems raised in our reflections on time and change, and on tensed predications like ‘John is jumping’, is achieved, however, if we abandon this concern with reduction and embrace instead a shamefacedly bicategorical ontology of things and events or phases, the latter being conceived as changes in things, as dependent particulars (after the fashion of, say, accidents in the category of action as these are conceived in the Aristotelian ontology).⁶⁸ Events, we can say, occur *in* or *between* things, and are no less individual than these things themselves. They may be instantaneous or extended in time, and in the latter case they have temporal parts which are themselves events. On this basis we can go on to distinguish clearly between a thing, on the one hand, as something that is given *in toto* from the very first moment of its existence, and the ‘life’ or ‘history’ of this thing on the other hand, as a certain type of complex event, bound up inseparably with the thing whose history it is. The purported temporal parts of things will then turn out to be parts of such complex events, so that the cleavage between John as child and John as adult can be recognized, commonsensically, as a cleavage not in John, but in his life or history. Note, incidentally that there is no comparable move in regard to spatial parts. We cannot say that these are really parts of a substance’s shape, for example, or of the space a substance occupies.

Clearly, the bicategorical ontology of things and events provides a peculiarly simple account of what makes ‘John is jumping’ true in terms of states of affairs as hybrid wholes, containing both things and events as parts. This same ontology can account also for certain properties of the linguistic phenomena of verbal aspect,⁶⁹ properties which are important for us here in that they reflect a parallel on the side of the verb to the opposition among nouns between ‘mass’ and ‘count’ (as for example between ‘sugar’ and ‘snow’ on the one hand, and ‘tiger’ and ‘ox’ on the other). The former correspond to verbs of progressive and continuous aspect (‘John knows how to jump’, ‘John’s been jumping all day’), the latter to verbs of achievement (‘John jumped over the ridge’, ‘John just jumped to victory’).

68. See Simons 1983 for a formal treatment of a view along these lines within a Leśniewskian framework.

69. See Mourelatos 1981; Galton 1984, Appendix II; Hoeksema 1985, ch. 6.

What this tells us in ontological terms is that the opposition between what is 'unitary' and what is 'mass' or 'collective' is to be found not merely in the realm of things but in the realm of events, too, though in an interestingly more complex form. For while events of reddening or exploding or whistling, as well as institutional affairs such as weddings, funerals and runnings of races, are all such that they have or could have temporal parts, they may also – by inheritance from the (moving and extended) things which support them – be extended in space. Hence they may participate in the opposition between 'unity' and 'mass' in two distinct dimensions: events may be spread out in time, in space, or of course in both.

Consider, for example, the process of jumping. This is made up, we may suppose, of minimal unitary temporal parts – which we may call 'jumps' – comparable to substances in the world of things. Each jump may then be analyzed in turn as a continuum of bodily movements of a certain sort.

We can distinguish, in the world of things, not only what might be called 'substantial' parts (lumps of sugar, molecules of water), but also atomic parts, which are marked by the fact that they have no parts of their own. This distinction, too, can be drawn in the realm of events, where we can distinguish on the one hand unitary events which take time but have no homogeneous sub-events as parts, for example judgments, decidings, and so on, and on the other hand events which are strictly punctual, such as beginnings, endings and instantaneous changes.⁷⁰ Leśniewski's Ontology and Mereology have shown themselves adept at coping in a formally rigorous way with some aspects of the opposition count vs. mass as this is manifested in the realm of things. Truth, however, is a relation which involves not only things and the names of things. It involves also verbs and that in reality to which verbs correspond, which is typically an event of one or other sort. Hence we can begin to understand why it is that the bicategorical ontology may be particularly suited to the task of giving an account of what makes sentences (particularly empirical sentences) true. For it allows us to take account of just those differences in reality which are reflected in language in the differences of verbal aspect (differences which are preserved, incidentally, even if we move over to a language shorn of tenses of the sort that was favoured by Twardowski, Leśniewski, and other proponents of the 'absolute' theory of truth).

70. Ingarden has contributed most to the ontological analysis of these distinctions. See his 1964/65, ch. V.

Return, however, to the properly reistic ontology and to our original pair of questions: what is the referent of ‘a jumper’ in ‘John is a jumper’, and what is the relation between John and a jumper that is expressed by the copula ‘is’? Is it possible to provide answers to these questions in monocategorical terms, i.e. in a way that would tell us what *things* make ‘John is a jumper’ true? Kotarbiński’s *Elementy*, at a number of points, suggests an answer to this question that comes interestingly close to simulating the effects of the bicategorical ontology of things and events discussed above. This answer, which is nowhere to be found in Leśniewski, rests on the idea that ‘is’ in the given sentence expresses a special kind of relation of part to whole. ‘A jumper’ – or what might now be called ‘jumping John’ – is, on this reading, the name of a special sort of transiently existing thing, in which John himself is included as part.⁷¹ The idea here is that things may at certain times exist as it were in a raw state, but that they may on occasions extend themselves qualitatively, or become modified in certain ways (by what the tradition called ‘accidents’ or ‘modes’) so that John, for example, may on occasions become jumping John or cursing John or sleeping John, and so on. John himself will survive in each of the latter – though, because of the semantic restrictions imposed by Kotarbiński, we cannot isolate that which gets added to John to yield the various self-extensions in which he may partake.

It is more than anything else Kotarbiński’s *examples* that suggest this qualitative extension view. Thus he tells us that ‘it is obvious that only things are stimuli: burning flames [!], sounding strings, pressing solids, etc.’ (1966, pp. 434f.), and these are examples which seem to imply not only that Kotarbiński is intending to refer to things that can survive and acquire and lose accidental determinations in something like the Aristotelian sense, but also that the result of a thing’s acquiring an accidental determination may be a new thing, qualitatively extending the thing with which we began: a string becomes a sounding string, solids become pressing solids, a match becomes a lighted match, and so on. The qualitative extension view allows, moreover, a particularly simple interpretation of Kotarbiński’s views on psychology: a thinker is a body that is qualitatively extended in a special (deliberating,

71. See again the discussion of Brentano’s own ideas in this direction in Chapter Three, Section 4, above.

worrying, deciding) sort of way. There is not only jumping John, but also thinking John, hoping John, dreaming John, and so on.

Even after the *Elementy* there are hints of this qualitative extension view in Kotarbiński's treatment of words and sentences as things. Thus consider the following passage from a piece first published in 1954:

a linguistic sign is for us a physical body, whether it is a graphic sign or an acoustic sign (in the latter case it is a *certain amount of air vibrating in a specified way*); thus it is a thing, and not a process in the sense of a specified changing of something. (1966, p. 399, emphasis added)

The same amount of air, considered as enduring thing, is vibrating now in this way, now in that, and it is a different 'acoustic sign' in the two successive cases. As such passages reveal, however, there are certain consequences of the qualitative extension view that run counter to our common-sense understanding of 'thing'. For things, now, include not only Tom and Dick, but also Tom-the-jumper, Dick-the-thinker; not only quantities-of-air but also quantities-of-air-vibrating-in-a-certain-way. Note, however, that while qualitatively extended things may exist for a very short time, so that they typically do not acquire special (proper) names of their own for purposes of re-identification, it seems that all the qualitatively extended things seemingly admitted *en passant* by Kotarbiński do have some duration, however short (so that their existence is never punctual, though it may be intermittent). This reflects, perhaps, the greater acceptability of nominal phrases like 'dying Jim', 'racing Tom', etc., as contrasted with 'ending-his-process-of-dying Jim' or 'beginning-to-run-a-race Tom', which are ungrammatical.

Clearly, not all complex names of the given sorts need be given the qualitative extension interpretation. Thus it may be that Leśniewski can entirely avoid this interpretation by means of his 'phases' (though again, it is difficult to see how this ploy will allow us to distinguish for example 'jumping John' from 'cursing John' when jump and curse are simultaneous). Moreover, there are cases of expressions of the form '— ing N' or '— ed N' where 'N' is a *bona fide* name but the '— ing' or '— ed' a merely modifying adjective which brings about a diminution or cancelling of the content expressed by 'N'.⁷²

72. See again the discussion of expressions like 'missing arm', 'assassinated president', 'shattered vase', etc. in Chapter Five, Section 2, above.

As we saw in Chapter Three, the qualitative extension view does suggest an elegant account of what makes sentences like ‘John is a jumper’ true in a way that involves reference exclusively to things. John himself and his qualitative extension are not identical; the former is a part of the latter. Note, however, that there is for the reist no third thing which, when added to the former would yield the latter. Hence the usual mereological remainder principle fails to hold. The idea of a mereological theory in which the remainder principle is weakened, or even suspended, is far from incoherent, as a number of algebraic parallels testify.⁷³ This failure of the remainder principle will however suffice to render the qualitative extension view unacceptable in the eyes of Leśniewski’s more devoted disciples.

7. Kotarbiński and Brentano

Return, for the moment, to our list of ‘stages’ in the development of reism. Stage 5 in this development was provoked by a letter Kotarbiński received from Twardowski in 1929 on the publication of the first edition of the *Elementy*, in which Twardowski pointed out that the doctrine of reism had been propounded already some years earlier in a series of pieces dictated by Brentano towards the end of his life and appended to the second edition of his *Psychologie*.⁷⁴ Kotarbiński, in response, came to see the need to add to his reflections on reism a certain historical dimension. Above all he began to stress the difference between his own pansomatist views and the reistic views he attributed to Brentano. In his paper on “Brentano as Reist” of 1966, Kotarbiński points out further that Leibniz, too, could be viewed as a precursor of reism, not only in the light of his monadology but also in reflection of his principle that all formulations containing names of abstract objects should be avoided. Kotarbiński sees himself, however, as the only ‘consistent and conscious’ somatist reist. He describes Leibniz as a ‘spiritualist reist’, i.e. as one who accepts souls or spirits as the only type of things. Brentano he describes as a

73. Thus, for example, just as we can have a pseudo-Boolean algebra with pseudo-complements (see e.g. Rasiowa and Sikorski 1963, pp. 52f.), so also we might distinguish a family of pseudo-mereologies in which the remainder principle fails.

74. Cf. Kotarbiński 1966a, p. 461, Eng. p. 195; Brentano 1924, pp. 228-77, Eng. pp. 330-68.

dualist reist who accepted into his ontology both bodies (*res extensa*) and souls (*res cogitans*): ‘As a former priest, [Brentano] stopped at the threshold of somatism and never crossed it.’ (1966, p. 428.) We shall investigate below the extent to which this is an adequate account of Brentano’s reism and of its relation to that of Kotarbiński.

Brentano, as we have seen, distinguishes three sorts of ways in which a subject may be conscious of an object in his mental acts: in presentation, in judgments and in what he calls ‘phenomena of love and hate’ and what Marty calls ‘phenomena of interest’. A judgment arises when, to the simple manner of being related to an object in presentation, there is added one of two diametrically opposed modes of relating to this object, called *acceptance* and *rejection* or ‘belief’ and ‘disbelief’. A judgment is in effect either the affirmation or the denial of existence of an object given in presentation, so that all judgments are reducible to judgments of existential form.⁷⁵

According to Brentano’s earlier view, there exist non-real objects of various kinds – mental contents or ‘objects of thought’, universals, states of affairs, possibilities, lacks and so on – all of which can be given in presentation and affirmed or denied in judgment. This points to a distinction, accepted by the early Brentano and his followers, between the existence or non-existence of an object of presentation on the one hand, and its reality or non-reality on the other. Thus what exists (for example values or universals) need not be real, and what is real (for example centaurs or chunks of wooden metal, and even the objects of simple acts of sensation) need not exist. These two oppositions are independent of each other, and only the former is involved directly in the correctness or incorrectness of a judgment.

Later, however, Brentano moved to a view according to which ‘reality’ and ‘existence’ would be equivalent, so that everything which exists is an *ens reale*. Brentano’s change of mind occurred, in fact, during the period when Kotarbiński was studying in Lvov, though it was initially made known only to

75. The topic of existential judgments was taken up by a number of philosophers in the years around the turn of the century and seems to have played a role also in inspiring the subject of Leśniewski’s dissertation under Twardowski in 1911. This includes a discussion not only of Brentano’s *Psychologie* but also of Twardowski’s *Content and Object* and of Husserl’s *Logical Investigations*. Leśniewski may have been influenced also by the *Sketch of a Theory of Existential Judgments* of Hans Cornelius, with whom he studied in Munich in 1909/10, attending also courses given by the phenomenologists Alexander Pfänder (Logic and Theory of Knowledge) and Moritz Geiger (Seminar on the Philosophy of Mathematics).

Brentano's closest associates, so that we can rule out any influence of Brentano's later view on Kotarbiński via his teacher Twardowski. Kotarbiński's and Brentano's thing-ontologies may however have a common source. Thus it is noteworthy that both views arose, in part at least, in reaction to certain apparent ontological excesses of Brentano's students, not least of Twardowski himself, a reaction which led in both cases to a reversion to an ontology rooted more narrowly in the Aristotelian conception of thing or 'first substance'. Moreover, as Ingarden pointed out already in the early thirties, there is a sense in which the roots of both Brentano's and Kotarbiński's reism are present already in Brentano's own earlier existential theory of judgment, since – when once '*Sachverhalte*' or 'facts' have come to appear suspicious – this has the effect of reducing each judgment to a form which asserts either the existence or the non-existence of some object.⁷⁶

It is not that the being of A must come into being in order for the judgment 'A is' to be transformed from one that is incorrect to one that is correct; all that is needed is A. And the non-being of A need not come into being in order for the judgment 'A is not' to be transformed from one that is incorrect to one that is correct; all that is required is that A cease to be. And if only this happened and nothing else ... would there not be in this fact alone, which relates to what is real, everything that is needed for the correctness of my judgment? Without doubt ... And thus the doctrine of the existence of such non-things has nothing whatever in its favour. (Brentano 1930, p. 95, Eng. p. 85)

It is important, however, to be clear as to the precise nature of the respective views of Brentano and Kotarbiński. Brentano came to believe that all objects belong to a single category of *ens reale*.⁷⁷ The fact that he sometimes uses the word 'thing' to refer to the entities in this category of itself tells us little as to the extent to which he shared with Kotarbiński tenets of the latter's reism.

Certainly there are a number of sometimes striking similarities between their respective philosophies. They agree, first of all, on negatives: for both philosophers, only concrete individuals exist. There are no abstracta, no universals or general objects, no properties, sets or classes, meanings or

76. Ingarden put this view to Kotarbiński around 1935 when the latter came to Lvov to give a talk on Leibniz as a precursor of reism. (Personal communication of W. Bednarowski.)

77. He was followed in this by his later disciples, above all Oskar Kraus, Alfred Kastil and Georg Katkov, who took over from Kotarbiński the word 'reism' to describe the later Brentanian view. See Kraus 1937, pp. 268ff.

concepts,⁷⁸ Brentano's motive for rejecting all such entities being rooted in his conviction that all that exists is completely determinate, down to lowest differences. Secondly, they agree as to the importance of the dimension of semantic or linguistic analysis as a complement to ontology: the apparent grammatical form of an expression is not always its actual or ultimate form. They agree also in the view that this actual form is to be achieved by translation into the language of things.⁷⁹

Thirdly, and most importantly, Brentano agrees with Kotarbiński and Leśniewski (and against Aristotle) in allowing collectives of things to count as things. Organisms, for Brentano, are collectives in this sense. Thus neither philosopher takes seriously the requirement that things should form a unity:

By *that which is* when the expression is used in *the strict sense*, we understand a thing ...; a number of things taken together may certainly also be called a thing, though one must not suppose that the two parts of a thing taken together constitute an additional third thing. For where we have an addition, the things that are added must have no parts in common. (1933, p. 4, Eng. p. 16)

Similarly they agree in allowing parts of things to count as things. Hence both are 'mereological actualists', in the sense that they believe that a part of something actually real is itself actually real even when it is still a part. Aristotle, in contrast, we referred to as a 'mereological potentialist', in the sense that he holds that parts of things are as such only potentially real.⁸⁰ Neither in Brentano nor in Kotarbiński do we find any trace of the Aristotelian theory of act and potency and of the hylomorphic conception of substances to which it led.

The points of disagreement between the two philosophers derive especially from the fact that Kotarbiński starts out with the idea that physical bodies are the prime examples of things, and sees 'resistance' or the ability to stand in causal relations as a distinguishing mark of the concept *thing*. For Brentano, on the other hand, this concept does not essentially have to do with the concept of causality at all. And even though things as Brentano conceives

78. Brentano 1924, vol. II, p. 162, Eng. p. 294.

79. Cf. Brentano 1930, pp. 87–97, Eng. pp. 77–87; 1956, pp. 38–48; Szrednicki 1965, p. 48; Chisholm 1978.

80. See the discussion in Chapter Three, Section 5, above.

them are not, except in special cases, psychological entities, there is nevertheless a sense in which even on this latter doctrine the term ‘thing’ is a psychological term; it signifies still: ‘object of presentation’.

This is shown most clearly in the different arguments the two philosophers bring forward to defend their respective views. Brentano’s argument for the ontology of *ens reale* rests on the fact that the univocity of ‘presentation’ implies the univocity of ‘thing’.⁸¹ Kotarbiński’s argument for his own reistic ontology, in contrast, is negative in form, resting on the unacceptability (for a variety of reasons) of theses to the effect that there exist universals, facts, classes and the like.⁸²

The Brentanian concept of thing is, we might say, a *formal concept*. It is, in other words, a concept capable of applying without reservation to objects in all material categories – since, for Brentano, objects in all material categories may serve as objects of presentation.⁸³ And then:

It doesn’t matter at all what word we use to refer to the concept which is common to all that is to be presented. Whether we speak of ‘thing’ or ‘entity’, it is enough that it represents a highest universal to which we attain by means of the highest degree of abstraction no matter where we look (1930, p. 108, Eng. p. 96).

Aquinas, too, sees the concept of a thing or of what is real as the most general concept to which reason can attain, and a broadly similar view is present for example in Husserl’s *Philosophie der Arithmetik*, where the purely formal concept of an *Etwas* or ‘something’ lies at the basis of Husserl’s theory of number-predications.

For Kotarbiński, on the other hand, ‘thing’ is a term of material ontology, to be understood by reflecting on specific sorts of examples of thing and on the meanings of terms like ‘bulky’, ‘extended’, ‘resistance’, and so on, whose significance is confined to the region of physical bodies.

81. 1924, vol. II, pp. 162, 213f., Eng. pp. 294, 321f.; 1933, p. 18, Eng. p. 24; 1956, p. 38.

82. These negative arguments are supplemented by an appeal to the fact that the language of things is psychologically more natural. Thus one natural way of explaining the meanings of words is to eliminate substitutive terms: ‘Should we wish to explain to a child what the word “similarity” means, should we not show him in turn several pairs of objects which look alike?’ (1966, p. 423)

83. On Brentano and formal concepts see Münch 1986; on formal vs. material ontology see Ingarden 1964/65, esp. § 9.

Marty is in this respect closer to Kotarbiński than he is to Brentano, since he pursued energetically the idea that the concept of thing or *ens reale* should be confined to those entities which participate in causal relations.⁸⁴ However, Brentano argues, in transforming the concept of *thing* into the concept of what is capable of standing in causal relations, Marty has ‘permitted himself to deviate from long-established usage’:

a term which has traditionally been the most simple and the most general of all our terms has hereby been transformed into a sophisticated thought-combination which has been a matter of controversy since the time of Hume. Given Marty’s sense of the term ‘thing’, we would have to say that according to Hume and Mill and many others, there are no things at all! (1930, p. 108, Eng. p. 96)

The opposition between physical and psychical things, too, is an opposition formulated in material-ontological terms, so that to describe Brentano as a ‘dualist’ is to misunderstand the formal nature of his views. Certainly Brentano accepts spiritual substances (souls) as possible objects of presentation. And he accepts three-dimensional bodies also. However, the (Cartesian) psychological origins of Brentano’s views imply that it is not at all clear that he accepted as objects of presentation physical bodies in Kotarbiński’s sense. Thus material things, for Brentano, are not restricted to the realm of what exists in three-dimensions. They embrace first of all ‘topoids’ (thing-like entities of higher dimension), which conceivably exist as it were alongside the more familiar three-dimensional bodies given in perception. Brentano’s concept of thing embraces further things of lower numbers of dimensions, above all boundaries (points, lines and surfaces). Note, however, that while Brentano does not rule out topoids of higher numbers of dimensions, he rejects the idea that three-dimensional bodies might turn out to be boundaries of four- or more dimensional topoids. This is because a boundary can exist only as the boundary of the thing which it bounds. Thus spatial and temporal *points*, on Brentano’s conception, never exist in isolation from the things, extended in time and space, of which they are the boundaries. A body, on the other hand, is a thing in its own right, which requires no other thing (except possibly God) in order to exist.⁸⁵

84. 1908, § 66.

85. See Brentano 1933, p. 108, Eng. p. 96; 1976, pp. 38, 95.

Kotarbiński, in contrast, reflects not at all on the nature of boundaries. More generally his work, like that of Leśniewski, lacks any topological dimension; things are seen as being arbitrarily divisible and as arbitrarily conjoinable (without even the topological requirement of connectedness in the latter case). This is despite the strong tradition of topology in Polish mathematics, and despite the fact that topological axioms can be added very easily to the axioms of Leśniewski's Mereology.⁸⁶

Brentano accepts also certain *sui generis* zero-dimensional things, which he calls souls. These have the capacity to comprehend intentionally things of all higher dimensions,⁸⁷ a notion which recalls Aristotle's dictum to the effect that the soul is somehow everything, for its nature is to be able to know everything and therefore in a certain sense to include everything within itself.⁸⁸ Like the Leibnizian monad, so also the Brentanian soul is unextended, and therefore not continuously *many*; yet it is for all that continuously *manifold*, comparable in this respect to the midpoint of a disc divided radially into segments of continuously varying colours, an entity which exists only as a boundary but in such a way as to inherit manifold complexity from that which it bounds.⁸⁹

The two philosophers differ further in virtue of the fact that, for Brentano, not all things need be perceivable. Thus souls are not perceivable, or at least not directly: we can apprehend intuitively at most the activities of the soul (the soul as accidentally extended in certain ways).⁹⁰ Further, topoids of greater numbers of dimensions would not be perceivable; and nor, either, would the empty spaces which Brentano came to accept at the end of his life as the very stuff of the universe.

Another difference between the two philosophers turns on the fact that Brentano *takes tense seriously* in the sense that for him 'exists' is in every case

86. See Grzegorzczak 1977.

87. See Brentano 1933, pp. 158f., Eng. pp. 119f.; 1976, pp. 20, 120f., Eng. pp. 15, 99f.

88. *De Anima*, 429^b25ff., 430^a14f.

89. See Brentano 1976, pp. 41ff., Eng. pp. 32ff.

90. Aristotle, too, seems to exclude immaterial substances from the realm of sensible substances. Cf. *Met.*, 988^b26, 1040^b31ff.

synonymous with ‘exists now, in the present moment’, so that everything exists for Brentano only *according to a boundary* (*einer Grenze nach*). This means that every existing object is as it were punctual from the point of view of its temporal extension, though always in such a way as to depend for its existence on that which has just existed or on that which will exist (or on both) as supplying the continuum which it bounds.⁹¹

For Brentano, it is as if the world of things is continuously annihilated and recreated anew with each successive passing instant. ‘Past thing’ and ‘future thing’ do not, therefore, refer to special kinds of things, but are modifying expressions, to be compared with ‘hoped for thing’, ‘imagined thing’ and so on. Our apparent references to the past and future are in fact in every case references to what exists in the present as set apart temporally either as future or as past from something else. This ‘something else’ refers, however, merely *modo obliquo* and embodies no ontological commitment (in much the same way that our reference to a believer in demons or in fates involves no ontological commitment on our part to demons or fates).⁹²

Brentano’s world is, therefore, in this respect, too, entirely different from that of Kotarbiński, for it is a world in which there exists only one instant of time (even if this time is continuously changing). Brentano in fact identifies what is real with what is subject to a certain continuous temporal transformation which is simultaneously a matter of *existing in the present, ceasing to be future and becoming past*.⁹³

Kotarbiński certainly holds that all things exist in time. Yet he reflects very little on the peculiar ontological features of things not yet and no longer existing – though from his discussion of the ‘things of history’ we can infer that he accepts into his ontology also past and future things.⁹⁴

91. See Brentano 1976, e.g. p. 37, Eng. pp. 28f.

92. Brentano 1976, Part II, Ch. III.

93. Brentano 1976, Part I, Ch. V.

94. See 1966, pp. 369f. Strictly speaking there are no ‘instants of time’ in Brentano’s ontology, not even the present instant. Rather, there are only *things existing now* or *presently (instantaneously) existing things*. Contrast *Elementy*, p. 191, where Kotarbiński denies the suggestion that ‘is’ would be an abbreviation of ‘is now’.

The ontological views adopted by Brentano at the very end of his life take him even further from reism in the Kotarbińskian sense. For things, as we saw in Chapter Two, came to be conceived by Brentano as falling into two groups, which we might refer to as *places* and *souls*. Places may be ‘empty’ (lacking in all qualitative determination), or they may be qualitatively extended or enriched (filled by qualities) in different ways.

A somewhat counterintuitive consequence of this view, as we also saw, is that any change of place or shape brings about the annihilation of the ‘body’ in question, so that bodies cannot move. Movement is, rather, the becoming accidentally extended in appropriate ways of a continuum of different places in continuous temporal succession, rather like a ripple which appears to move across the surface of a medium even though no molecule of the latter is displaced in the horizontal. There is no Red Rum (*qua* material object), but only a continuous sequence of Red-Rum-y places, so that Brentano’s later ontology implies just that view which is at the basis of Leśniewski’s logical grammar – that there is a sense in which we need not distinguish between proper names and predicates.

We can come to some better understanding of the reasons why the later Brentano came to choose places as the ultimate non-mental substances if we examine again the list of the marks of substance set out above. Places are (i) individual and (ii) neither ‘present in a subject’ nor such as to ‘require a support from things or substances in order to exist’. (iii) They can exist on their own, i.e. without being filled or qualified in any way. If, further, substance is identified with place, then it becomes clear why substances underlie accidents and do not themselves need accidents in order to exist (where it would seem that the organic substances canvassed by Aristotle would depend for their existence on processes of breathing, of metabolizing, etc.). Places, from this point of view, come to appear similar in this respect to the later Aristotelian *materia prima* – both are infinitely plastic in the sense that they can take on qualities *ad libitum*. They come close also to the undifferentiated Lockean I-know-not-what which would serve as the ultimate support for the qualities given in experience.

Most importantly, as Brentano insists, places are (iv) the best possible candidate for the role of that which *individuates* the accidents by which they are

filled. We can say that for the later Brentano a body is the accident (qualitative extension) of a place, and that a place is that which individuates one body from another. Two qualitatively identical things at different places are distinct, as Brentano sees it, only because their location is distinct. Further, (v) places can admit contrary accidents, being now filled by something red, now by something black, and they are also (viii) ‘independent of thinking’, and (ix) such as to endure through time.

Only (vi), (vii) and (x) – involvement in causal relations, natural unity, and absence of temporal parts – are less easily applied to the concept of place. As we have seen, however, the mismatch in regard to (vi) can be explained by pointing to the psychological origins of Brentano’s views, and in regard to (x) there is in fact no essential disagreement, since while Brentano accepts that things/places exist *as a whole* at all times at which they exist, his view that they exist merely *according to a boundary*, a view quite different from the phase ontologist’s view that they exist only *in one or other temporal part*, is in keeping with the views of Aristotle.⁹⁵ Which leaves only (vii), which is rejected with great force by Brentano – as also by Kotarbiński – since as we have seen, neither philosopher imposes on things a requirement of unity. From this point of view, however, the concept of place recommends itself still more strongly as that in terms of which an account of material (non-mental) substance is to be provided, since to regard things as merely (differently qualified) places is precisely to guarantee that arbitrary divisibility and conjoinability of things on which both philosophers insist. So strongly does Kotarbiński identify the divisibility of things into parts with their extension in space and time, that we may argue that Kotarbiński, too, ought properly to have accepted the idea that things are ultimately four-dimensional volumes of spacetime – a view that has been found attractive by not a few contemporary philosophers.

Note again how important are the psychological origins of Brentano’s views. Brentano had tended from the very start to view the world of transcendent objects as something like a sensory surface (like, say, the surface of the visual field). Objects come thereby to be seen as similar in many respects

95. E.g. his view of the now as boundary at *Physics*, 220^a22, 221^a25, 234^a1f., 251^b20-28.

to the images on a screen.⁹⁶ They are capable of being demarcated as things and as parts of things, and they are capable of being presented as moving, yet in both cases we have to do not with autonomous properties on the side of the objects themselves, but with mere ascriptions of properties to the images we experience. It would take us too far afield to give a precise account of Brentano's views of autonomous reality. His thinking is however at least in this respect comparable to that of Mach and Einstein, that all of them sought to cast off 'metaphysical' assumptions such as that of independent substance.

8. *The Varieties of Reism*

For all the divergences between Kotarbiński's pansomatist reism and the later formal ontology of Brentano, there is a clear sense in which they are proponents of a common approach to ontology. This approach is shared also by Leśniewski and his followers, as also by Quine, Goodman and other modern nominalists. It can be characterized as an approach which takes as its starting point in the construction of its ontology a view of things drawing equally on examples of *quantities*, *masses* or *homogeneous collectives* as on the unitary substances of the tradition. Thus it is contrasted with the approach to ontology of Aristotle, Leibniz, Twardowski and Ingarden, which takes its cue primarily from the unitary substance and from the individual accidents which may inhere therein.

There are, interestingly, a number of different routes taken by the philosophers mentioned to the homogeneous collective view of things ('homogeneous' because the distinction between thing and mass is held to reflect no fundamental ontological division). Thus Quine, for example, seems to have been inspired particularly by those physical phenomena (energy fields, liquids, gases) where arbitrary delineability does seem to hold, as also by related considerations deriving from the semantic treatment of mass terms in natural language. Quine, like Brentano and Kotarbiński, sees masses as full-fledged even though possibly scattered individuals. Thus he regards as of no importance the difference between what is spatially continuous and what is

96. Some clues as to Brentano's views are provided by the argument for the *a priori* impenetrability of bodies in his 1976, pp. 180ff., Eng. pp. 151ff. Brentano's views in this respect seem to have been stimulated by the positivism of Auguste Comte: see Münch 1989.

spatially scattered,⁹⁷ and his general approach is to view every object as a four-dimensional section of the world, after the fashion of what Zemach calls ‘events’.

Field-theoretic physics played a role also in inspiring the later Brentano’s view of things as accidents of places, as also in securing Brentano’s acceptance of topoids of higher numbers of dimensions.⁹⁸ Brentano’s acceptance of the homogeneous collective view was however motivated principally by his early work on the psychology of sensation, and for this reason he may have resisted the idea that ‘thing’ involves as one of its marks the concept of resistance or inertia. Goodman, too, was provoked by considerations deriving from the psychology of sensation in developing his ontology of ‘individuals’ in *The Structure of Appearance*, and Quine was to some extent led to the homogeneous collective view by psychological considerations concerning ostension.⁹⁹

Leśniewski, on the other hand, was brought to his version of the homogeneous collective view of things by formal considerations deriving from the general theory of part and whole and from his critique of the set-theoretic paradoxes, formal considerations which played a role also in the work of Whitehead, Goodman and Quine.

Both the homogeneous collective ontology (mereological actualism) and the Aristotelian substance ontology (mereological potentialism) are contrasted with ontologies allowing general, abstract and non-temporal entities of various kinds. Thus they may be contrasted with the positions of, for example Bolzano and Frege, or with Platonist ontologies of sets or classes. Bolzano, Frege and the set-theoretical Platonists are, we might say, maximally liberal in the sense that they impose on the entities admitted into their ontologies none of the conditions of temporality, inertia, perceivability and so on that have concerned us in the foregoing. Marty and the early Brentano are one degree less liberal than this, in that, while they admit into their ontologies *entia rationis* of various

97. Quine 1960, pp. 90–110.

98. See the “Appendix” to Brentano 1933: “The Nature of the Corporeal World in the Light of the Theory of Categories”, and also Brentano 1976, p. 184, Eng. p. 154f.

99. Cf. e.g. Quine 1960, p. 52.

kinds, they insist that all such entities enjoy a strictly temporal existence. They thereby recognize a division among temporal entities between the real and the non-real. The bicategorical nominalist ontology sketched above imposes the further restriction that all entities be not only temporal but also real. The bicategorialist does not, however, insist that all real objects must also count as things, since he holds that events in his sense may enter into causal relations. The later Brentano did however impose this further restriction, though at the same time he abandoned the requirement that all things must be real in the sense of being such as to enter into causal relations.

Kotarbiński can be said to have gone one step further than Brentano in insisting that all things are physical bodies. Neither Brentano nor Kotarbiński however lays any requirement of *unity* on the objects in their respective ontologies, as contrasted with Aristotle – *qua* ontologist of first substance – who does impose a requirement of this sort. All of which implies that there is a spectrum of gradually more restrictive positions, from the Platonism of abstract objects at the one extreme to the Aristotelianism of unitary substances at the other, a spectrum which may be represented as follows:¹⁰⁰

All entities are:	Plato Bolzano Frege	Marty	Bi- categorical Nominalism	Later Bren- tano	Kotar- biński	Aristotle qua Substance Ontologist
Temporal	No	Yes	Yes	Yes	Yes	Yes
Real	No	No	Yes	Yes	Yes	Yes
Things	No	No	No	Yes	Yes	Yes
Physical bodies	No	No	No	No	Yes	No
Unitary	No	No	No	No	No	Yes

100. The reader should bear in mind that it is by no means clear where Aristotle would have to be posted on this spectrum if the whole of his ontology were taken into account. Here we concentrate exclusively on Aristotle's philosophy of first substance.

We could go further, and extend this chart by taking into account oppositions of other sorts, relating for example to the issue as to whether entities are or are not general,¹⁰¹ independent of mind,¹⁰² atomic,¹⁰³ or such as to have temporal parts.¹⁰⁴ In addition we could think more carefully about the different meanings of ‘unitary’, distinguishing for example the requirement of connectedness of parts, the requirement of spatial separateness from other entities, the requirement of functional interdependence of parts, and so on.¹⁰⁵ We could investigate further the extent to which things may have parts which are themselves things – as an organism may include cells, chromosomes, genes, etc. as parts.¹⁰⁶

Already as it stands, however, the chart will enable us to see the inadequacy of any simple-minded opposition between ‘reism’ on the one hand and ‘Platonism’ on the other. Thus it would be wrong to go along with Lejewski in his view that ‘Ontologists who oppose reism are believers in so-called abstract entities’,¹⁰⁷ a view dictated no doubt by the fact that the principal enemies of the homogeneous collective view in recent philosophy have been advocates of ontologies based on the theory of sets or of a more or less Platonistically oriented semantics.¹⁰⁸ More recently, however, and especially

101. See again Twardowski 1894, § 15, and also Ingarden 1964/65, vol. I, p. 219.

102. Ingarden admitted both autonomous and dependent things, examples of the latter being creatures of fiction. See 1964/65, § 12 and ch. IX.

103. Is the ultimate furniture of the universe itself atomic? Do all entities have atomic parts? See Sobociński 1971; see also Bunt 1985, for an interesting treatment of these issues from the point of view of the semantics of mass and count expressions.

104. See Zemach 1970.

105. See, on this, Simons 1987, ch. 9.

106. See Woodger 1937, for an experiment in this direction.

107. 1979, p. 210. Compare Lejewski’s assertion in his 1976 to the effect that events are non-material objects, so that anyone who admits events into his ontology would be a ‘Platonist’ on Lejewski’s reading of this term. This reading is no doubt derived from the fact that events, for Lejewski, are the referents of abstract nouns like *swimming*, *falling*, *talking*.

108. See Woleński 1987, p. 170.

with the bringing to light of hitherto neglected aspects of the Brentanian and Husserlian ontologies, it has become clear that reism has other, non-Platonistic opponents. Thus for example it would not be to move into the realm of abstract entities were one to embrace in one's ontology events as well as things. For events may be accepted – as for example on Davidson's account, and on that of Whitehead – as *bona fide* individual entities existing in time and space and entering into causal relations with other events. More controversially, we may say that Brentano (and Husserl) have shown how we may cope in a non-Platonistic framework with those kinds of dependent, inseparable, divisive, interpenetrative parts which fall outside the purview of mereology as standardly conceived but which yet seem indispensable to an understanding of the structures of *minds*, and of the different sorts of relations between minds and other concrete objects. Contemporary discussions of intentionality, for example in the literature of the so-called 'cognitive sciences', have neglected such mereological considerations at their peril, though it is interesting to see how ideas derived from topology and other branches of formal ontology, as also from the theory of Gestalt, are beginning to be taken seriously in artificial intelligence circles and elsewhere.