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Abstract. The philosophical procedures of the philosopher-scientist N. Goodman and the philosopher-artist H. Broch exhibit a dual nature within the Peircean frame of treating ontology and epistemology as 'two sides of the same coin'. The relativization of the distinction between objects and signs of objects is used by Goodman to arrive at many world-versions for the same subject and by Broch to discriminate many subjective viewpoints towards the same world. Some implications from this state of affairs are drawn with respect to the distinction of perceptual and conceptual knowledge inherent in the work of the two authors.

Résumé. Les approches philosophiques du philosophe-scientifique N. Goodman et du philosophe-artiste H. Broch présentent la dualité du cadre peircéien traitant de l'ontologie et de l'épistémologie comme "l'envers et le revers d'une même médaille". La relativisation de la distinction entre les objets et les signes des objets est utilisée par Goodman pour établir de nombreuses versions du monde pour un même sujet et par Broch pour établir de nombreux points de vue subjectifs d'un même monde. Quelques implications de cette position sont tirées au sujet de la distinction de la connaissance perceptuelle et de la connaissance conceptuelle inhérente au travail des deux auteurs.

1. Instead of starting with an investigation of my subject matter conceptually, I venture to present two authors whose ideas exemplify in a peculiarly dual manner how to cope with the distinction of perceptual and conceptual knowledge. In variation of a previous study [Lorenz 1993], I will make an attempt to compare the philosopher-artist Hermann Broch who originally wanted to become a mathematician with the philosopher-scientist Nelson Goodman who, for many years in his life, was a leading art-director and art-critic. As a tertium comparationis I will utilize ideas of C. S. Peirce's pragmatist semiotics.

Let me start with quoting the now famous characterization of his theory of symbols, Goodman gave in the introduction of his *Ways of Worldmaking* almost twenty years ago:

It belongs, he states, to

> that mainstream of modern philosophy that began when Kant exchanged the structure of the world for the structure of the mind, continued when C. I. Lewis exchanged the structure of the mind for the structure of concepts, and that now proceeds to exchange the structure of concepts for the structure of the several symbol systems of the sciences, philosophy, the arts, perception, and everyday discourse.

And, indeed, in the light of this characterization it is easy to see that pragmatics has become the modern heir of ontology with semiotics being its counterpart as the heir of epistemology. Of course, both disciplines have to be understood in the sense of Peirce, and that means, not as just two newly established empirical sciences but as ways of investigation where empirical procedures are united with philosophical or reflexive procedures. Within this broader

perspective both actions and sign-actions are not only treated as the *objects* of research and representation as, e.g., in the works of Charles Morris or Umberto Eco, but also as a *means* of research and representation. You not only observe and describe these entities according to certain standards but you also produce them in a perspicuous fashion in order to arrive at some kind of reconstruction of what you take to be available, already.

Ludwig Wittgenstein, as is well known, has used the term 'language game' for this kind of activity which aims at disclosure of what is going on by providing tools of comparison. Hence, the reconstructions in question serve cognitive purposes in the sense of delineating the very areas of objects you proceed afterwards to investigate in the more usual way. A language game may count as a paradigm case of perceptual knowledge insofar as its significative function works by being an icon in the sense of Peirce. You have found an area of internally structured objects by inventing a prototype.

Proceeding in this way it becomes obvious that even the distinction of action and sign-action, a special case of the embarrassing distinction between world and language, has to be relativized in view of a purely functional account of both what it means to be an object and what it means to be a sign of an object.

In fact, it belongs to one of the basic tenets of Goodman's approach, as I understand it, that the seemingly clear-cut division of world and language — nonverbal language of course included — as a division between the given and the constructed, between that which is found and that which is made, between the fact and the artefact, is outdated. Any matter we are concerned with, Goodman tells us, is dependent on some manner as the means by which we deal with it. So worlds are but versions and worldmaking begins with one version and ends with another. The message we should learn runs thus: "never mind mind, essence is not essential, and matter doesn't matter" [Goodman 1978, 96].

Goodman goes on in claiming that we choose the facts as much as the frameworks, though this statement, I think, should better be split into two complementary statements: we produce the facts as much as the frameworks *and* we experience the frameworks as much as the facts. Constructions, when serving cognitive purposes, are always reconstructions.

Aγειν (doing) and πασχηειν (suffering), the last two Aristotelian categories which seemed forgotten throughout most of modern philosophy in the Descartes tradition will enjoy a lively comeback, for example in the work of John Dewey, as the two way^s

we are concerned with when doing something: you do it yourself (active) and you 'see' others including yourself doing the same (passive).

I will return to these two ways a bit later under the labels: performance and recognition (of actions). Now, no doubt, we are able to live with, or in, different versions: no difficulty for anyone of us to say both 'the sun rises in the morning and sets in the evening' and 'the earth rotates around its axis'. The problem is not one of selecting *the* right version and identifying it by its being literally true whereas the wrong version is at most metaphorically true. We should rather ask two more general questions:

(1) If there is — by way of comparison with the one world it is claimed we all live in — no chance to characterize one version uniquely as the true one (apart from the fact that only sentential versions can be true, others like pictorial versions cannot be subjected to a truth claim), what can be the criteria to distinguish right versions from wrong ones?

(2) If there exist different, even conflicting, right versions, how is it possible to live as 'the same person' in different worlds or, to have communication between persons living in different worlds?

The issues connected with question 1 which essentially boil down to the issue of *how to identify the objects*, i.e. colours, feelings, lines, perceptual actions, things, experiments, etc., we succeed and fail constructing, are dealt with extensively in Goodman's *Ways of Worldmaking* where rightness of rendering is basically declared to be a matter of fit to what is referred to, and that is nothing but ultimate acceptability.

The issues connected with question 2 which in turn are focussed in the issue of *how to secure the identity of the subjects* living in possibly different worlds have not yet been considered, because only the significative ('referential' is Goodman's term) function of sign-actions and not the communicative one is dealt with by Goodman. Hence, an explicit consideration of the interrelation of these two functions is called for which I am going to sketch in the last section where I make use of some Peircean ideas.

For the moment it is enough to feel convinced of Goodman's success in showing that the reorganizations of world views and the constructions used to achieve them make the Cartesian separation of ontology and epistemology obsolete — a move put forward already by Peirce when he characterizes the methodology of pragmatism by just this claim: ontology and epistemology are but two sides of the same coin [cf. Peirce 1931-1958, 5.257].

Furthermore, one should be prepared to take seriously the fact that there are many people engaged in very different activities through times and places, with obviously limited capacities to understand each other. To tie acquisition of knowledge basically to individual persons and justification of knowledge basically to social communities exercising control over the individual idiosyncrasies, would itself be dependent on the Cartesian topos of individual persons starting to digest the sensory input each for him- or herself and afterwards confronting each other with possibly different experiences which, then, have to be 'unified'. Yet, what kind of criteria are available for this task as socially one doesn't have the experience but only their semiotic representations? The two moves open, and nowadays in various versions defended by different parties, to holistic conventionalism and to metaphysical realism, lead nowhere, since they have to beg the question: conventionalism because it is essentially an instrumentalist version on the level of signs dependent on social decisions, and realism because it is essentially a substantialist version on the level of objects assumed to be the same for all individual persons.

The only way out, I think, is Goodman's move to relativize the distinction between objects and signs of objects. This leads quite naturally to the construction of another version out of everyday discourse using the concept of sign-action in such a way that we start by looking at verbal language, or other symbol systems in use, as types of actions like eating and sleeping, and by looking at nonlinguistic, especially nonsymbolic, objects as parts in a web of interrelated and interdependent actions. Hence, what we do initially is to naturalize language including other symbol systems — a radicalization of Quine's program — and to symbolize world — a corresponding radicalization of Ernst Cassirer's program — by paying attention to that feature of actions which is underlying Goodman's treatment of exemplification as a tool to tie actions to symbols, and which Wittgenstein has achieved by introducing language games.

Actions are both done — their natural side of performance — and understood — their symbolic side of recognition — which in the first case results in being able to produce tokens of a type, and which in the second case results in being able to identify different tokens as belonging to the same type. It should be addded that the move to naturalize symbol systems on a par with symbolizing the world should not be treated as a move to make the steps of theory, i.e. the steps of creating world versions, amenable to moral philosophy. Goodman has stated quite concisely:

> My argument that the arts must be taken no less seriously than the sciences is not that the arts 'enrich' us or contribute something

warmer and more human, but that the sciences as distinguished from technology, and the arts as distinguished from fun, have as their common function the advancement of understanding [Goodman 1979, 619].

Sign-actions may be the concern of many persons and shall both in their natural or pragmatic aspect (performance) and in their symbolic or semiotic aspect (recognition) be viewed at with respect to enlarging or refining men's abilities and not with respect to serving men's needs, though, of course, this can be done, too. In this context, the abilities on the semiotic side, only, we call understanding; beside conceptual abilities they include also perceptual abilities which may be served, e.g. in painting, by skills with or without external tools.

2. I am now going to supplement these ideas of Nelson Goodman with ideas of his almost one generation older contemporary Hermann Broch in order to shed more light on the distinction of perceptual and conceptual knowledge, that is, of knowledge in the arts and in the sciences, by closing the gap between objects and signs of objects. Broch and Goodman, they both make claims concerning the epistemological relation of cognizing subject and cognized object which on the part of Broch is a *conceptual* one, whereas Goodman puts forward a *perceptual* claim: Broch assumes that there is *one* world underlying the *various* semiotic representations, whereas Goodman holds that there are *many* ways of worldmaking by the *same* agents.

Broch characterizes the difference between conceptual and perceptual knowledge with the following words:

> es ist die Aufgabe der wissenschaftlichen Erkenntnis [...], zur Totalität der Welt in unendlich vielen, unendlich kleinen rationalen Schritten vorzudringen/it is the task of scientific knowledge [...] to reach the totality of the world by means of infinitely many and infinitely small rational steps [Broch 1933a/1986, 48].

and one year later:

> [in einem einzigen] Kunstwerk [läßt ein Akt der Erkenntnis] die Totalität der Welt erstehen/[in a single] work of art [an act of cognition] gives rise to the totality of the world [Broch 1934/1986, 243].

In both cases we operate on the level of signs: Scientific procedure is a process of gradually increasing the internal differentiation of a representation of the world until it approximates reality. Broch uses the terminology of contemporary philosophy of science as he has learned it from the logical empiricists in Vienna and speaks of 'setting up a rational model' in the effort to approach

a 'map of totality'. Artistic procedure, on the other hand, is with each successful instance a repetition of creation by means of multifariously articulated symbols, a symbolic cosmogony eventually producing a 'symbol of the world'. He states:

> das Wertziel des Dichterischen, die kosmische Unendlichkeit, erfüllt sich in der einzigen Realitätsvokabel eines lyrischen Gedichtes/the value aim of poetization, cosmic infinity, is satisfied by the single expression of reality of a lyric poem [Broch 1933b/1986, 136].

The term *Realitätsvokabel* is used for a linguistic expression which, as material in a literary artefact, thereby generates a situation. For contemporary readers, Wittgenstein's quite similar idea in his *Philosophical Investigations* comes into mind, where a rabbit-situation is generated by the exclamation 'A rabbit!':

> I look at an animal and am asked: "What do you see?" I answer: "A rabbit." — I see a landscape, suddenly a rabbit runs past. I exclaim "A rabbit!" — Both things, both the report and the exclamation, are expressions of perception and of visual experience. But the exclamation is so in a different sense from the report [...] It is related to the experience as a cry is to pain [Wittgenstein 1953, part II, sect. XI].

In the report case I proceed from something perceptually known to something known conceptually — a case of knowledge by description. In the exclamation case something becomes known perceptually, using language as a means of perception, not of conception — a case of knowledge by acquaintance.

If we call the elements of processes leading to perceptual knowledge 'poietic actions' or poiesis, the concern of poiesis is a determination of *what* can become a sign and *how* this is going to happen: the result, something invented, is, if successful, mimesis, something found. And philosophy which Broch calls 'value-theory' is just semiotics combined with pragmatics in the Peircean sense, though mainly based on abilities of single grown-up individuals rather than on acquisition processes of these abilities while individually and socially growing-up as in Peirce.

Research and representation, being the pragmatic and the semiotic side, respectively, of philosophy in the broad sense which includes artistic as well as scientific activity, will appear in two complementary garbs both of which are grounded in a unity of object and method in the sense of dealing with the object which has to be uncovered by an appropriate systematical and historical investigation. Broch shows through analysis of many examples in history that separation of object and method of dealing with it yields a growing appearance of mutual independence among primordially interrelated ways of scientific and artistic activity. The sciences

become 'positive' fields which determine themselves 'objectively' — even treating their respective methods as something specific for them, their 'metaobjects'. They, thereby, gradually lose their ability of self-reflection. The arts, on the other hand, turn into disciplines which define themselves by their techniques — even reducing their respective objects to technical problems concerning the specific materials. They end up. therefore, at activities of mere 'l'art pour l'art' which are unable to symbolize totality.

The first, conceptual, garb of philosophy, according to Broch, is epistemology inseparably tied to philosophical critique; the second, perceptual, garb of philosophy is 'philosophical poetry' (philosophische Dichtung), that is an art-work which is simultaneously an instance of art criticism.

Conceptual knowledge is bound to an 'ideal' language which is invariant with respect to a change of individual standpoints, whereas perceptual knowledge is conveyed by the use of a 'style' which comprises those properties of an art-work that determine its being an articulated symbol. To uphold the unity of object and method, it is in both cases essential, Broch says, to realize that knowledge is concerned with the relation of 'form' or 'structure', and 'content'. Hence, neither the move of the autonomously acting sciences to treat problems of method as problems of higher order content, nor the move of the likewise self-sufficient arts to turn problems of content into problems of more refined techniques will be a step towards the desired goal. Broch knows that attempts to characterize true cognition in the sciences internally, for example by following standards of rationality, do not suffice; they have to be complemented by focussing upon what he calls the 'irrational roots' or the 'irreducible remainders' which show up when you pay attention to the way scientific activity is growing out of daily life problems. It is likewise necessary, Broch insists, in order to grasp the cognitive value of the arts, to pay attention to the basic structure of a symbol which is determined by an 'inseparable connection of archetype and logos' , i.e. a schema and its articulation. The unity of content and form of knowledge is dependent on realizing the 'totality of knowing and experiencing/Totalität des Erkennens und Erlebens'.

With these two terms *Erkennen* and *Erleben*, we have arrived at the German equivalents to what Russell has called 'knowledge by description' and 'knowledge by acquaintance', and which had been equated earlier with the difference of report and exclamation in Wittgenstein's rabbit example. Knowledge by acquaintance is knowledge completely dependent on the situation of acting and speaking — one knows what the exclamation 'rabbit' means only within a rabbit-situation — and I, therefore, call it 'object-

competence' to avoid unwelcome associations to sensualism connected with Russell's term. On the other hand, knowledge by description is knowledge independent of that situation — one knows what the report 'rabbit' means also outside that situation, by previous experience, so to speak — hence, I call it 'meta-competence'.

The level of language belongs to both sides, to the level of objects and to the level of signs of objects, depending on the circumstances. If language, or another sign-system, is constitutive of the objects, i.e. if it is applied object-competence, it displays *symptomatic*, object-like, features; if it is descriptive of the objects, i.e. if it is applied meta-competence, it displays *symbolic*, representational, features.

3. Throughout his life Broch ponders systematically and historically on the common roots of science and art. He treats both as continuous rational 'organisations/Formungen' of the unorganized which, in fact, contains always previous rational organisations. Both the sciences and the arts are *re*organisations of world views quite in tune with Goodman's idea that worldmaking consists in deriving a specific new version out of an older one. Now, scientific reorganisations take place on the level of meta-competence of second order, with their two branches of giving descriptions *about* the knowledge of acquaintance — this is called (scientific) research — and of giving descriptions *about* the knowledge of description — this is called (scientific) representation, e.g. by presenting the descriptive knowledge axiomatically. In correspondence to this, artistic reorganisations take place on the level of object-competence of second order which is an ability to construct semiotic objects or signs *showing* thereby that you are on the one hand acquainted with structured objects and on the other hand that you have descriptive knowledge about them. With respect to showing a knowledge by acquaintance which is dependent on at least partial presence of the object, the artistic activity is called poiesis: what counts is what you do with semiotic objects like pictures, music-pieces, words etc., not what they may signify. Yet, with respect to showing a knowledge by description, the artistic activity may be called mimesis: what counts is that which the semiotic objects signify.

It is the object-competence of second order which we should call perceptual knowledge, in correspondence to meta-competence of second order being conceptual knowledge. On the level of second order only we are confronted with whole structures of pieces of knowledge by acquaintance and of knowledge by description which usually is implied when referring to perceptual or conceptual knowledge.

Broch treats myths as 'first' rational organisations, though, I think, this should be understood as restricted to artistic organisations, everyday discourse being the candidate for 'first' scientific organisations. He states that rational organisations must 'fully balance' the unorganized which it mirrors. An art-work must 'balance the totality of the world', because what is understood delimits what is not understood and must balance it.

In his essay „Über syntaktische und kognitive Einheiten" [Broch 1946/1986, 246-299] Broch has even tried to sketch a reconstruction of the primary epistemic relation between a cognizing subject and the cognized object which is in full accord with the methodology of pragmatist semiotics.

He starts with the smallest syntactical unit, a sentence, and he asks in which way a cognitive unit which he calls an eidos, can be made visible and audible through it. To answer this question he states that each cognitive unit is related to a section of reality, an 'elementary situation' such that the eidos acts as an object-*type* or object-schema with the elementary situation being one of its *tokens* or actualizations of the schema. Hence, the primary epistemic relation may be described as *understanding a situation as actualization of a schema*. The eidos is universal, the situation is singular, and the two are strictly correlated to each other.

The next step, the articulation of a type, serves to show the correlation of type and token: the cognitive unit is represented by a syntactic unit. In contemporary terminology this means the following: An elementary sentence — Broch's example: 'this is flickering light' — states that an elementary situation as a token instantiates a schema, in our example the eidos FLICKERING LIGHT. Every such sentence, if uttered in an appropriate situation, is an accompanying part of that situation which uses the 'verbal sense' — looking at that situation would add to it by using the visual sense — thereby making the eidos perceptible. We would say that by uttering such a sentence the situation is *understood as* an instance of a schema, or: by uttering such a sentence the situation is *schematized*, i.e. imbedded in a possible sequence of like situations.

But Broch does not stop here. He continues by declaring that the grammatical subject, i.e. the demonstrator 'this' in our elementary sentence, should be understood as 'a projection of the speaker'. To proceed in this way has consequences which reach far beyond common logical or even linguistic analysis which stops at saying that 'this' refers to an object given in the situation of utterance. Broch says, and here his sophistication matches the one of Peirce, that the demonstrator 'this' is within the utterance an *index* of the *construction* of the object about which something is stated *out of* its various subjective perspectives.

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Every object splits into the indefinite set of modes of presentation with respect to the perceiving subjects, and it can be identified with the whole out of perceptions. Within our example one could articulate the perception which is used when uttering 'this' in 'this is flickering light' by 'that which I just see'. Broch calls the perceptions 'identifications of the speaking subject with its surrounding'; hence, through them there appear the cognizing subjects, whereas the cognized object is defined by the operation of constructing the invariant out of the many perceptions.

The consequences for the eidos can easily be drawn: Through an articulation each eidos gets split into perspectives each of which is a *sign* of the same eidos, whereas the signs themselves are appearances of a subject. While performing an articulation both aspects are completely amalgamated: a section of reality is, by virtue of the various signs which are used for the same eidos, simultaneously present and interpreted.

In this way Broch has succeeded in presenting a construction where object and method of treating it, ontology and epistemology, appear as merely two sides of the same coin such that conceptual knowledge which searches for *invariance* of the represented is 'objective', whereas perceptual knowledge which aims at *variance* of the means of representation is 'subjective'.

A sentence, or better the correlated predicative expression, becomes a symbol in Broch's sense — in Peircean terminology it is a symptom — not by simply being a sign of a schema but by *exemplifying* the schema. The difference between exemplification and representation as two ways of reference tied to perceptual and conceptual procedure, respectively, was introduced by Goodman to account for the difference between artistic and scientific cognition. And it is surprising how close Broch's description of the functioning of verbal symbols in 'philosophical poetry' comes to Goodman's exposition. Exemplifying a schema refers to the schema not by convention but by certain properties which the exemplifying predicative expression has in common with the schema. By implication the schema itself is not any more a simple eidos but an eidos with a structure. The cognitive claim of poetic worldmaking is substantiated according to Broch by a piece of art being a structured symbol of reality as a whole. So it is tied to art as mimesis, whereas Goodman has tied the cognitive claim of poetic worldmaking to art as poiesis. Both are right, if you take in account the additional condition that in art mimesis is effected exclusively by means of poiesis.

4. In order finally to explicate the relation between the two types of reference, exemplification and representation, I turn to Peirce and try to sketch his idea of deriving signs out of objects. The best exposition will be found in his late essay "Meaning" of 1910:

> If a Sign is other than its Object there must exist either in thought or in expression some explication or argument or other context, showing how — upon what system or for what reason the Sign represents the Object or set of Objects that it does. Now the Sign and the Explanation together make up another Sign and since the Explanation will be a Sign it will probably require an additional Explanation which taken together with the already enlarged Sign will make up a still larger Sign; and proceeding in the same way, we shall, or should, ultimately reach a Sign of itself, containing its own Explanation and those of all its significant parts; and according to this Explanation each such part has some other part as its Object. According to this every Sign has, actually or virtually, what we may call a *precept* of Explanation, according to which it is to be understood as a sort of emanation, so to speak, of its Object [Peirce 1931-1958, 2.230].

The argument calls for something which is a sign of itself, that is, which combines object- and sign-features, or better: which functions both ways. It was the basic tenet of Peirce's pragmatic foundation of semiotics to give a convincing account of the process of separation between sign and its object within the framework of his Pragmatic Maxim. And the arguments used for this purpose are themselves sections of an open-ended sign process on the level of reconstruction: they are conceptualizations of Wittgensteinian language-games, something Wittgenstein would never have envisaged. For further clarification it is useful to turn to the Peircean reading of the semiotic triangle:

> A sign [...] stands in such a genuine triadic relation to its object as to be capable of determining its interpretant to assume *the same* triadic relation to its object in which it stands itself to the *same* object [Peirce 1931-1958, 2.274].

Each interpretant (cognitions of a mind, i.e. mental interpretants, are some of them) is itself a sign for the same object; hence, it is generating a new interpretant, and so on. The descending sequence of interpretants which gets started in that way may be called a sequence of growing understanding of the object by supplying more and more differentiated determinations. It ends with an ultimate logical interpretant which is identified as a habit-change. A habit-change, or, in a modern terminology, an acquisition of an action schema, is the candidate for something

which is a sign of itself. We may conclude that a verbal sign of an object signifies a range of possibilities to deal with that object. Even more general, leaving out now the dummy term 'object', we may say that to understand a sign-action is tantamount to knowing, by that very action, of a whole range of further actions which should be called being signified by the sign-action. If the sign-action itself is part of the range of actions it signifies, it is called to signify symptomatically, it functions as an index; if not, it signifies symbolically. In case of verbal symptomatic sign-actions the relation of word and object remains external, e.g. causal, it has not yet become internal or symbolic. The same idea of explaining how verbal sign-actions signify at first symptomatically, then symbolically, can be used to explain how ordinary actions function as (nonverbal) sign-actions. In this case an even more elementary level of signification occurs, namely when action and sign-action is not yet separated: the action as a semiotic entity functions as an icon of that same action as a pragmatic entity, i.e. the action as a sign-action exemplifies the action as an action.

As a conclusion, you may say that to know an object is the same as treating this object as a sign of its distinctions, i.e. the ones you are able to make which means nothing else but to treat an object as a sign of its internal structure, a structure which gets exhibited in an open-ended sign process. Applying this idea to the previous discussion of perceptual and conceptual knowledge in Broch and Goodman, the basic ambiguity concerning the status of verbal representations has found an explanation. Verbal representations may act as perceptions, i.e. as icons, and as conceptions, i.e. as symbols, indexical signification being the link between these two functions. Perceptually, language is used as a way of presenting an object — a case of object-competence — whereas, conceptually, you are referring back with language to other signs functioning perceptually — a case of meta-competence. There is always a natural *and* a conventional relation between words and objects. And I venture to add that in such cases where the same verbal expression when used conceptually with respect to one type of objects is also used perceptually with respect to another type of objects, we call the conceptual usage to be based on a metaphor. Metaphors are links with which we connect the use of signs as icons and their use as symbols; hence, their relation with indexical signification has still to be investigated, even though the contextual means that serve to indicate metaphorical use of signs has already received countless perceptual and conceptual investigations.

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