

**Nelson Goodman's 'Theory of Symbols':
an Exposition and Critique**

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Nelson Goodman's 'Theory of Symbols': an Exposition and Critique¹

1. Opening remarks:
2. Novel status of Goodman among philosophical peers:
 - A. Philosophers are specialists (philosophers of science, for example, or logicians, aestheticians, philosophers of language, philosophers of mathematics and so on); yet Goodman has published in journals ranging from *the Journal of Symbolic Logic* to *the Journal of Aesthetics*; has had reviews of his work in specialized journals of science, mathematics, art and critical studies; and has been invited to give the John Locke lectures at Oxford and the 1st Kant lectures at Stanford.
 - B. Peers are specialists; proceed as if Goodman had not lived, thought or written; yet the best of them admit that their only genuine antagonist is Goodman. How so? During the early part of his career, Goodman managed to construct within many parts of philosophy contradictions and paradoxes that not only rendered all current work suspect but seemed to promise that all future work would be suspect as well. The only choice, in many of these fields, was to plow ahead as if he didn't exist, or to stop working!
3. Examples of prior (and devastating) critical work:
 - A. Inductive Logic (and therewith all of confirmation and falsification theory and hence all of the philosophy of science): the 'grue' paradox;
 - B. Philosophy of Language:
 1. Absence of synonymy twixt any two terms ('On Likeness of Meaning'; 'On difference of Meaning'); hence neither analyticity nor necessity, and hence little chance for a philosophy of language;

¹ "An Approach to a Theory of Symbols" is the subtitle of Nelson Goodman's *Languages of Art* (Indianapolis, Indiana: Bobbs-Merrill Company, 1968). The book was based upon his John Locke lectures of 1960-61 at Oxford University. When citing passages below, I shall give page references to the second edition (Indianapolis, Indiana: Hackett Publishing Company, 1976). [referred to hereafter as LA.]

(Synonymy: Two terms, A and B, are synonymous, Goodman believes, if and only if they are:

(a) co extensive; and

(b) no word compound exists whose A extension is different from its B extension but for which at least one C extension and D extension are different.

But then no two words are synonymous, for adequately different word compounds may always be constructed.)

2. absence of the 'given'; hence no language independent criterion for truth possible; hence no useful criterion for truth possible either;
3. demolition of Chomsky's epistemological pretensions concerning innate grammatical structures (and therewith the epistemological import of 'transformational linguistics')

(Chomsky holds that a second language need not be innately constrained (it need not, that is, be tied to 'deep' innate ideas). But a child, as Goodman pointed out, is already adept at deciphering and creating non spoken 'signals' by the time 'language', in Chomsky's perverted sense, commences: the child simply learns to generate spoken signals itself as a second language!

C. Philosophy of Science:

1. no criterion of 'simplicity' for rival theories possible, for all extralogical postulates of every theory can be eliminated nontrivially. (Paper co-authored with Quine.)
2. paradoxes of contrafactual conditionals ('If Caesar were Napoleon, he would both wear a toga and not wear a toga': contradiction!)

D. Philosophy of Mathematics: no paradox but the persistent claim that the word 'set' has neither extension nor meaning; that nominalism is the only proper technique; and hence that the axioms of set theory are ultimately ineffectual (and Cohen's proof seems right on target!)

All of the above positions are essentially critical achievements advanced within the standard traditions and tools of philosophical inquiry. Goodman then began the constructive work that culminated in the "theory of Symbols" of *Languages of Art* – an endeavour that, in contradistinction to the above, has failed to receive either general approval or even admitted relevance. Why not? More of that anon.

4. Introduction to Goodman's overall philosophical position: there are many, incompatible, equally right (or true) world descriptions; hence we have no more reason to deny the existence of many worlds corresponding to them than we have to affirm the existence of any world at all.

A. Contrast Goodman's position with single world proponents (materialists or idealists, for example, or even most possible world theorists). Why does Goodman believe they are incorrect?

B: There are many equally consistent but incompatible world descriptions couched in incompatible languages: for example, physicalist; phenomenalist; mentalist; various artistic symbol systems. Were there only one world and were it knowable to be the only one, we should be able to determine which of the world descriptions as couched in its language is true. But one cannot define 'is true' within a language, for contradiction ensues, nor can one define 'is true' for a language within another language without either begging the question or regressing infinitely. Hence, the predicate 'is true' is useless for distinguishing between world descriptions. (As is the predicate 'is a world', for we cannot within a language predicate it of anything. But that renders the predicate useless within a world description. But then how could we ever know that a world existed, since we cannot say it?)

C: Why, then, does Goodman persist in speaking of 'truth', if not useless, as being often only of secondary importance to 'rightness', 'fit', etc.?

1. Because although the predicate 'is true' may have little use, the two place predicate 'is truer than' is useful indeed!

(Compare: to know that 'A is faster than B', I need not know what 'A is fast' or 'B is fast' might mean. Indeed, to say 'A is fast' would be to say that 'A is faster than most comparable things'. Similarly with 'A is greater than B' with the positive and negative integers. But 'is truer than' is, in Goodman's view, in an identical position.

Goodman's goal, in a sense, is to construct world descriptions in which useless predicates like 'is true', 'is simple', 'is confirmed', 'represents', 'is aesthetically good', etc., are replaced with useful comparative two place predicates such as 'is truer than', 'is simpler than', 'is better confirmed than', 'better represents than', 'is aesthetically better than', etc.

2. A world, then, becomes a system for progressive testing of what is truer than what, what is righter than what or what fits better than what and hence for the *remaking* of that world itself. Goodman even speaks favorably of Peirce's dictum that 'rightness' (and hence truth) is 'ultimate acceptability', but we have no guarantee that anything satisfies the predicate.

"The many stuffs ... that worlds are made of are made along with the worlds. But made from what? Not from nothing, but from other worlds. Worldmaking as we know it always starts from worlds already on hand; the making is a remaking."²

Hence, not only is truth relative to a world description but relative within it as well (WWM, page 123): truth is what our tests within a world relatively measure (WWM, page 122), an 'operational' account of truth. In general, all 'stable properties' such as 'is true', 'is aesthetic', 'is fast', 'is large' and so forth must be defined in terms of 'ephemeral function', not the reverse. (WWM, page 70)

(We are never faced, for example, with a choice twixt using 'green' or 'grue'. Rather, we are habituated to using 'green' and should have to have a good reason within our world to switch to 'grue', but we shan't have one.)

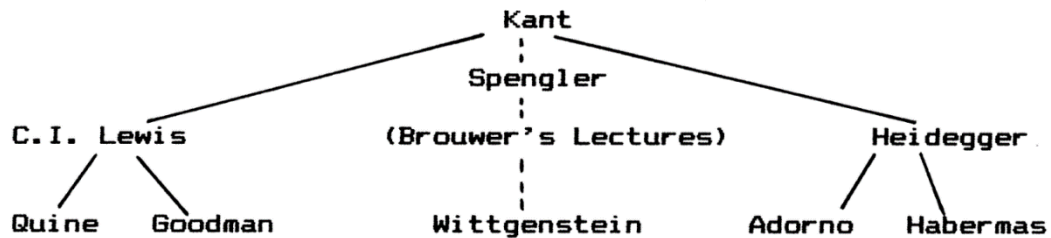
3. "Knowing cannot be exclusively or even primarily a matter of determining what is true. Discovery often amounts, as when I place a piece in a jigsaw puzzle, not to arrival at a proposition for declaration or defense, but to finding a fit." (WWM, page 121)

² *Ways of Worldmaking* (Indianapolis, Indiana: Hackett Publishing Company, 1978), page 129. [Referred to hereafter as WWM]

"The distinction between true and false falls far short of marking the general distinction twixt right and wrong versions." (WWM, page 109): compare with Heidegger.)

"...truth cannot be the only consideration in choosing among statements or versions ... even where there is no conflict, truth is far from sufficient. Some truths are trivial, irrelevant, unintelligible, or redundant; too broad, too narrow, too boring, too bizarre, too complicated ..." (WWM, pages 120 and 121)

5. Introduction to Goodman's comparative position in history of philosophy since Kant:



A. Kant: the important presuppositions of judging truly:

- (a) are themselves judgments;
- (b) are synthetic a priori;
- (c) are unchangeable; and
- (d) can be known by considering the constraints on how we may and may not judge;

B. Heidegger: agrees with Kant that judging truly entails a prior presuppositions but insists that the constraints on judging truly are only one among the many constraints that constrain us, for we do many things other than judge (we build things, for example, use tools, engage in political activities and so forth). Hence, the presuppositions of human being (Dasein):

- (a) are broader than judgments (including all presuppositions of authentic being, whether judging, hammering, campaigning, etc.);
- (b) are thus called 'existentials';
- (c) are knowable a priori; and
- (d) are unchangeable;

C. Habermas: concerned predominantly with the presuppositions of social and political action. Believes that all authentic social and political deliberation presupposes a common unitary presupposition:

- (a) a necessary (albeit imagined) context of free and rational discourse (result: akin to Rawls' observer); that
- (b) is unchangeable (identical, that is, for all deliberators at any time in history);

D. Adorno: same concerns as Habermas and agrees that all social and political discourse has presuppositions that are a priori; crucially, however,

- (a) the presuppositions of authentic social and political deliberation are unique to each historical situation; hence
- (b) they are historically and culturally relativized and can only be discovered through an investigation directed from within an individual social group.

(Compare later with Goodman!)

E. C.I. Lewis: agrees with Kant that the presuppositions of judging truly are themselves judgments; however, he believes (contra Kant) that they:

- (a) are analytic (hence shift of emphasis from truth to meaning);
- (b) are common to any scientifically adequate language at any moment in history; but,

(c) being dependent on the concepts involved (that may lose their meaningfulness over time as our experiences change), may be exchanged for incompatible analytic judgments based within an alternative conceptual scheme;

F. Quine: agrees with Kant that presuppositions exist and are judgmental (read: propositional); but such presuppositions

(a) are simply less revisable than other judgments (hence predicates like 'is more analytic than' are fine, while predicates like 'is analytic' are garbage);

(b) may therefore change in truth-value over time; but

(c) at any one moment in history, only one set of theories (with their graded presuppositions) can be scientifically adequate and hence only one set has, at that moment, any claim to truth;

G. Goodman: agrees with Quine's (a) and (b) but believes (c) is false! There many incompatible but equally right 'worlds' (autonomous sets of theories and conjectures that are equivalently 'right' or 'true'), for no one world description, however scientific, can serve all the purposes for which we need world descriptions.

H. Spengler: agrees that all human actions (including judging truly) have presuppositions, but those presuppositions:

(a) are unique to each culture;

(b) cannot be understood by anyone outside the culture and may not even be fully comprehensible within it; and hence

(c) require a new method ('comparative morphology') to identify from within a culture aspects of another. (No general theory of cultural signification is possible.)

I. Wittgenstein: after hearing Brouwer's lectures, embarked on a newly conceived venture, using a novel method that, he said, was the method of Spengler! He concluded, in effect, that all discourse occurs within language games, and all games accessible to an individual player occur within a shared but unique 'form of life'. The presuppositions of discourse (its 'grammar')

- (a) are unique to the language game being played within the 'form of life';
- (b) cannot be stated but can only be shown (that is, made manifest) by comparing examples; and hence
- (c) no theory of grammar is possible (that is, no 'theory of symbols', in Goodman's sense, can be constructed even for the language game within which one speaks).

6. Two key questions:

A. In what sense and to what degree are contrasting world descriptions autonomous to Goodman? That is,

1. He seems often to maintain that at least some world versions are radically distinct from one another; they quantify over different objects, or lack equivalents to logical connectives. ("The difference between juxtaposing and conjoining two statements has no evident analogue for two pictures or for a picture and a statement." (WWM, page 3))
2. But on other occasions he seems to maintain that at least parts of a world version may be common to another world version, and some even to all (WWM, page 120); but then it is difficult to see how world versions could be kept autonomous. ("A poem, a painting, and a piano sonata may literally and metaphorically exemplify some of the same features... They all interpenetrate in making a world." (WWM, page 106))

(See below for open questions: are alternative world versions media differentiable? Are they historically differentiable?)

B. If at least some world versions are autonomous, what method, if any, could be appropriate to their description, comparison, identification and so forth?

1. Goodman seems to believe not only that autonomous world descriptions are possible (with Wittgenstein) but that one can, from within one of them, describe the symbolic features of another (contrary to Wittgenstein, who believes not only that one cannot describe within a

language game the symbolic features of another language game for the sentences of language games are meaningful only as used within the language game, but also that one cannot even describe the symbolic features of a language game from within itself: one may push and shove within a world description and thus cause it to show how it is symbolically constrained, but the latter cannot be said either within or without the game.)

2. Goodman seems therefore to suggest that theorizing about diverse world descriptions and their symbol systems is not only possible but the proper way to ultimate understanding: "... unity is to be sought not in an ambivalent or neutral something i.e., 'the world' beneath these versions but in an overall organization embracing them. ...In neither case should a unique result be anticipated; universes of worlds as well as worlds themselves may be built in many ways." (WWM, page 5)

3. But this raises an obvious question: can there, on Goodman's account, be any such thing as a "theory of symbols" (WWM, page 67)? By admitting that some world descriptions are autonomous, and that theorizing can only occur within some world description or another, isn't Goodman constrained to admit that no theory can describe the semantics of all world descriptions, and hence no "theory of symbols" is possible?

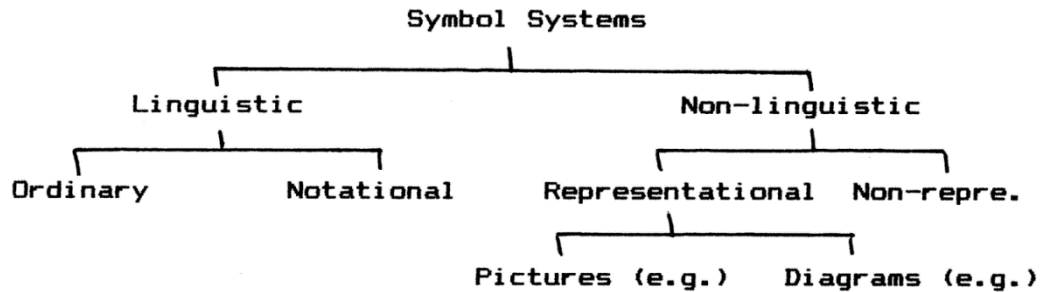
But Goodman also claims that his "theory of symbols" has no "truth-value" – he's not theorizing at all! (WWW, page 129) Clearly, we shall have to return to this question later (see page 20 below).

7. Sketch of Goodman's "theory of symbols":

A. Tentative definitions of 'symbol', 'sign' and 'signal':

1. A is a symbol if and only if A causes one to attend to some B;
2. A is a sign if and only if A is a symbol, and A is not identical to B;
3. A is a signal if and only if A is a sign such that (a) the relative temporal status of A and B is important; and (b) A has temporal sentential force (is equivalent, for example, to the sentence 'B is coming')

B. Outline of categories of symbol systems:



C. Necessary conditions for a symbol system being notational:

Syntactical conditions:

1. characters must be disjoint: no mark may belong to more than one character; and
2. characters must be articulated (or finitely differentiated): no character may belong to more than one mark.

(A set of characters and marks meeting the above conditions qualifies as a 'notational scheme'.)

Semantical conditions:

1. characters must be unambiguous (the marks of a character must have the same referents);
2. referents must be disjoint: no two characters may have a referent in common; and
3. referents must be articulated (or finitely differentiated): no two referents may have a character in common.

(A notational scheme for which the semantical conditions hold as well qualifies as a 'notational system'.)

D. 'Representation', 'exemplification' and 'expression':

1. "Representation & description relate a symbol to things it applies to." (LA, page 92)

"K is represented as a soandso by a picture p if and only if p is or contains a picture that as a whole both represents K and is a soandso picture." (LA, pages 28 and 29)

2. "Exemplification relates a symbol to the label that denotes it, and hence indirectly to the things (including the symbol itself) in the range of that label." (LA, page 92)

3. "Expression relates the symbol to a label that metaphorically denotes it, and hence indirectly not only to the given metaphorical but also to the literal range of that label." (LA, page 92)

"...if a expresses b, then: (1) a possesses or is denoted by b, (2) this possession or denotation is metaphorical; and (3) a refers to b." (LA, page 95)

E. Symptoms of the aesthetic: Goodman 'suggests' that the following symptoms are "disjunctively necessary and conjunctively sufficient" for a symbol system being aesthetic (WWM, pages 67 and 68; note: item 5 amends LA):

1. *syntactic density* ("where the finest differences in certain respects constitute a difference between symbols"): the difference, for example, between an ungraduated and a digital thermometer;

2. *semantic density* ("where symbols are provided for things distinguished by the finest differences in certain respects"): an ungraduated thermometer, for example, or the symbol system constituting our ordinary English language even though it is not syntactically dense;

3. *relative repleteness* ("where comparatively many aspects of a symbol are significant"): for example, a painting versus a graph;

4. *exemplification* ("where a symbol, whether or not it denotes, symbolizes by serving as a sample of properties it literally or metaphorically possesses"); and

5. *multiple and complex reference* ("where a symbol performs several integrated and interacting referential functions, some direct and some mediated through other symbols").
- F. Miscellaneous: "A property ... counts as stylistic only when it associates a work with one rather than another artist, period, region, school, etc... the style consists of those features of the symbolic functioning of a work that are characteristic of author, period, place, or school." (WWM, pages 34 and 35)
8. Survey of Problems within Goodman's "theory of symbols":
- A. *Representation*: Goodman assumes without shred of argument that "denotation is the core of representation" (LA, page 5).³ But what then are we to make of his bad arguments attempting to sever representation from resemblance (Chapter I of LA, for example, summarized on pages 57 and 63 of WWM)?

Goodman seems to be arguing that:

1. A represents B if and only if either
 - a. A is a symbol within a symbol system such that A conventionally denotes B; or
 - b. A denotes B by resembling or being otherwise perceptually like, B;
2. A can never denote B by resembling or being otherwise perceptually like, B; therefore
3. A represent B only if A is a symbol within a symbol system such that A conventionally denotes B.

Goodman suggests that "to represent is surely to refer to" (WWM, page 58) and suggests further that to refer to is to "focus... attention upon" (WWM, page 105). We may therefore presume that to focus attention upon something is at least a necessary condition of representing.

³ A decade later even he was to be struck by how he could possibly have "made so crucial a declaration without argument" (WWM, page 129). See pages 9 and 13 below.

But then the arguments of Chapter I become either question begging or hardly intelligible. Goodman cannot be relying on our 'ordinary use' of language as a criterion for his claims, but nothing else is given. (His later astonishing admission within *Ways of Worldmaking* of the lack of 'truth-value' for his claim that denotation is the core of representation is therefore perhaps doubly accurate (WWW 129). (See page 20 below).

Goodman's chief problem, however, is that he simply fails to note that

1. It is perfectly consistent to hold that 'representational' pictures, photographs, paintings, movies, etc., may focus our attention upon objects, may be distinct from the objects upon which they focus our attention and yet neither refer to, denote, or symbolize those objects in any way whatever, for seeing the 'representing' object may simply be a sufficient cause for seeing the object 'represented'. ('Represent', therefore, is a word best avoided; 'presented', as when translating Kant, would be much less misleading.).

Under such a construal, identity of stimuli is perhaps a sufficient condition for seeing an A as identical to a B, but it is surely not necessary no more than it is when perceiving identical objects in ordinary life.

2. Even if we wish to hold that seeing an object entails referring (in some sense) to the object seen, and hence that the object is in some sense a symbol, that does not entail that the symbol need be part of a symbol system to refer to itself. Referring to itself hardly requires a conventional system.

(The way out of many of Goodman's classic puzzles, incidentally – diversity of worlds, for example, or contrafactual conditionals – is simply to acknowledge that identity claims never entail contradictions! Note for consideration WWM, pages 117f, quotation on page 119, and page 132)

B. *Exemplification*: Goodman denies that, if a predicate is true of an object, then the object necessarily exemplifies it. But the pertinent question is rather: if we notice that a predicate is true of an object, does it not then exemplify the predicate? Or better put, avoiding platonistic words like 'predicate' and using an example, if our attention is drawn to a chair as being a red chair, does not the chair then exemplify that it is red?

If I say 'Look at the red chair' and you do so, attending to the chair as being red, all that exists (as Quine would insist) are my sounds and the red chair. There is nothing else for the chair to exemplify (no 'label') other than the chair as red: you have attended neither to my sounds nor to anything other than the red chair. (This does not imply that the chair does not exemplify thereby. The chair may well, at the moment of my utterance, exemplify itself as a red. But it does not do so by referring to anything other than itself if it refers at all.)

Either Goodman illicitly reifies predicates and hence symbol systems, contrary to what I would have thought would be his nominalistic inclinations, thus enabling him to appear to construe exemplifying and expressing as referring relations; or his argument is specious. (And, in this case, I doubt that nominalistic correction is possible.)

It seems, therefore, that if Goodman is right that objects symbolize as they do only on occasions of correct attention (though correct attention is not a sufficient cause of their symbolizing), then it seems that exemplification reduces to noticed predication. (Hence sampling reduces to noticed predication as well, contrary to the argument on pages 64 and 65 of LA).

(Note for later consideration: Goodman identifies "exemplifying" with "showing" (WWM, pages 12 and 18); and also remarks that exemplifying entails 'projection' (WWM, page 136).)

C. *Expression*: Goodman insists that expression entails "metaphoric" rather than "literal" possession (LA, page 92), for, "strictly speaking", predicates like 'gay', 'sombre', etc., cannot be applied to anything but "sentient beings or events" (LA, page 50).

1. But Goodman offers no argument for the latter claim, much less an adequate one. Why can't a picture be literally gay or sombre? (I may consistently identify any A with any B; hence I may consistently identify myself with a picture and hence ask, were I identical to the picture, would I be gay, or sombre or anything else; but since the picture is identical to me, it too is gay or sombre.)

2. Goodman's use of adverbs like possessing "metaphorically" rather than "literally", or being "literally" rather than "figuratively" true seems to me to involve an unfortunate logical precedent that, if avoided, renders his claims about metaphoric possession unintelligible. An adverb, it seems to me, can modify (that is, restrict) the extension of a verb to which it is appended, hence

making its extension more precise; but it cannot *deny* the extension of the verb to which it is applied without talking nonsense. Yet that is exactly what Goodman does! Goodman denies that, "strictly speaking", the predicates 'is gay' or 'is sombre' are true of pictures; yet he maintains that the predicates 'is metaphorically gay' or 'is metaphorically sombre' may be truly predicated of pictures. But if no picture falls within the extension of 'is gay' or 'is sombre', it seems illogical to me that an adverbial qualification of the predicate can apply to any picture. (This, indeed, is exactly the illogical move that Goodman himself condemns when he persistently chastises 'possible world' advocates for saying that possible worlds exist, but not actually.

D. *Replication*: Goodman suggests, for example, that a word inscription such as 'tree' replicates all other tree word inscriptions, and that the tree character is the class of all tree word inscriptions, nominalistically rephased. He says furthermore that replication depends only on identity of "spelling" (WWM, page 48). Hence, for example, books on library shelves of the same literary work replicate each other, for they are spelled identically, whereas two performances of a Haydn string quartet cannot replicate each other, for we have no criterion of "correct spelling". Only compliance with a correctly spelled score gives a criterion of identity for musical performances. But

1. Isn't correct spelling a matter of degree? Are two typescripts of ten pages, one containing three words spelled contrarily to the other, replications of each other or not? What if eight words are spelled contrarily? Goodman assumes, of course, that we can determine whether one letter inscription is a replica of another by direct inspection: they are either 'similar' enough or not. But then what prohibits us from taking two performances of a Haydn string quartet as replicas of one another, despite scattered differences in sounded notes? If one is matter of degree (and requires no criterion beyond perceivable similarity), surely the other is also.

2. Goodman seems to imply that speaking a sentence and writing it cannot be essentially different symbolically, for they, he says, may be considered to be replicas of one another within a common linguistic symbol system (WWM, page 55). But surely a spoken sentence is "relatively replete" when compared to its written counterpart by Goodman's own definition; hence they must be symbols within different symbol systems.

E. *Cognition*: Goodman insists that appreciating works of art is a cognitive activity, and thus our feelings when encountering such works assist in cognition – indeed, that's their function!. (See LA, Chapter VI, especially sections 4 and 7.)

But if, when encountering works of art, we come to *know* things, what is it that we come to know? Is it the objects themselves with their subtle similarities and differences, as Goodman seems to suggest? Is it the symbol system within which the works are symbols? Is it the world of objects in which the inscriptions exist?

In any case, the crucial question becomes: why, if we wish to learn about this or any world, is not the method of science our chief tool? Either Goodman is claiming that works of art present us with new material to be learned (but then science would seem to be our chief trustworthy tool to do that), or else that they are themselves a non-scientific learning tool. Otherwise they seem cognitively empty (and Goodman surely does not indicate what a non-scientific learning tool would be like except in passing comments about art being like puzzles, a matter of fit; see above and below).

9. Curious difficulties encountered by Howard Gardner and David Perkins, for example, in attempting to understand and find testable consequences of Goodman's "theory of symbols". Though claiming to be offering a review of experimental findings that support it, Gardner and Perkins persist in blurring (and perhaps misconstruing) the fundamental distinction upon which it rests..

"Our logical analysis has raised the possibility that different psychological processes may be involved in working with systems that are essentially 'linguistic' and with systems that are dense, replete and 'non-linguistic'. In an effort to test this hypothesis, the literature of psychology and education was reviewed, and some support in favor of the division between linguistic and non-linguistic systems was gathered from an unexpected area: study of the effects of brain damage."⁴

A. But Goodman never suggested that differences between "linguistic" and "non-linguistic" systems needed reaffirming. As the very title of his book indicates (*Languages of Art*), he wished rather to persuade readers that painting, for example, is as much a *language* as is ordinary English, for both are symbol

⁴ Howard Gardner and David Perkins, *Art, Mind, and Education: Research from Project Zero* (Champaign, Illinois: University of Illinois Press, 1969), pages 38 and 39. [Referred to hereafter as GP]

systems despite the former, unlike the latter, being dense, replete and "non-linguistic" rather than semantically dense and "linguistic".

B. Rightly or wrongly, what was revolutionary in Goodman's "theory of symbols" was the unwitting hint, contra Gardiner and Perkins, that, if both linguistic and non-linguistic systems are "languages", we might well be processing the "symbols" within them *similarly* rather distinctly.

1. Small wonder, then, that they misrepresent, for example, the implications of James Gibson's position contra Goodman's (GP, page 35). Gibson believes that pictures inform, and that the information is a dispositional property of the pictures, but we must as "actively interpret" them to register the information as we do when learning from any objects or events of the world. To contrast Goodman and Gibson as supporting "active" versus "passive" encounters is to misread Gibson.⁵

2. Small wonder, as well, that they fail to notice that the experiments that they review – to the extent that they confirm differences in the ways in which we process linguistic and non-linguistic objects – support those who would claim, contra Goodman, that the latter are unlikely to be "symbols" at all.

The experimental results cited by Gardiner and Perkins are compatible one and all with the falsity (or testable irrelevance) of Goodman's chief contention that non-linguistic objects and events are elements of "symbol" systems.

C. Experiments discriminating Goodman's view from others would have to show that the processing of non-linguistic events is symbolic processing rather than the kind of activity in which we engage when we process events that Goodman would admit to be paradigmatically non-symbolic (seeing trees, for example, or hearing train whistles). Gibson assimilates non-linguistic processing to the latter; Goodman seems to claim that it ought rather to be assimilated to linguistic processing and hence distinguished from the latter in testable ways.

How might one try to test experimentally whether Goodman or Gibson is right? One would have to note something true of linguistic processing (for example,

⁵ Gibson's work was a recurring provocation to Goodman. See, for example, pages 10ff. of LA and footnote 10 on page 11 wherein two of Gibson's works in particular are cited: "Pictures, Perspective, and Perception", *Daedalus* (Winter, 1960) and *The Senses Considered as Perceptual Systems* (Boston, Massachusetts: Houghton Mifflin Company, 1966).

that processing events within complex linguistic symbol systems can be performed only after long acculturation to the linguistic system) and then test to see if it holds true of non-linguistic event processing as well.

1. One might, for example, take a child who is learning a linguistic symbol system (English, for example), deprive the child of the opportunity to learn a particular non-linguistic system (pictures or drawings, for example), and then – at the moment when the child has achieved reasonably competence in using linguistic symbols to refer to objects – present it with pictures and drawings of objects and see if the child readily identifies the objects represented in the pictures and drawings, or whether the child requires a period of enculturation to the new objects qualitatively equivalent to that required for accurate use of the linguistic system.

2. Alternatively, one might find a group of linguistically adept human beings (African bushmen, for example) who have remained inadvertently unacquainted with a non-linguistic system (photographs, for example, or movies), present them with photographs or movies, and see if the photographs or movies are readily processible, or whether the people require a period of enculturation qualitatively equivalent to that required for accurate use of their language.

If the time required to achieve minimal competence in any reasonably complex language is measured in years, while the time required to achieve minimal competence in processing ordinary pictures, drawings, photographs or movies is measured in hours, one would have good evidence that the latter learning period has been shortened through prior acquisition of a usable competence. But what could that competence be other than the admittedly non-symbolic processing of ordinary non-linguistic events? But then the processing itself is essentially non-symbolic.

The above experiments, of course, have already been conducted: the former notably by Hochberg; the latter by others, among them James Wilson.⁶ The results have uniformly supported Gibson's contention, contra Goodman, that non-linguistic events are processed non-symbolically. *Seeing* differs from the *reading!*, despite the wilful misreading of the anthropological evidence in particular by readers with axes to grind.⁷

10. Curious nature of the status of the "theory of symbols" within Goodman's own accounts of it.

A. Goodman claims to be offering a "theory of symbols" applicable to any symbol system. (Yet, as we have noted, he provides no argument for the "truth-value" of the essential claim upon which it rests (see page 20 below), and the theory, if it is a theory, seems amply refuted by the available evidence.)

B. Goodman claims at times that world versions are autonomous: they quantify over different objects, and thus the objects to which they refer cannot be denoted by the names and predicates in other world versions that quantify over radically different objects. (Yet he seems to hold, at other times, that many world versions that we might think to be radically distinct - a poem, for example, or a painting or piano sonata - "may literally and metaphorically exemplify some of the same features ... they all interpenetrate in making a world" (WWM, page 106)

What can we make of this? If world descriptions can "interpenetrate in making a world", then it seems that we would have no reason whatever not to combine them into one world description, for by virtue of their interpenetration, they are related and hence sentences relating them can be devised. We might then hope to encounter a genuine

⁶ "Film Literacy in Africa", *Canadian Communications*, Vol. 1, No. 4, Summer (1961), pages 7-14. Marshall McLuhan's See

⁷ Both Wilson and Marshall McLuhan, who discusses Wilson's article at length and accepts the core of its conclusions, fail to register the most salient point of the 'experiment' that Wilson describes, namely that the filmically-nonliterate members of his African audience were able to recognise and attend to the everyday objects and events that he showed them by means of a film *immediately* upon their getting over the shock of being able to see anything by peering at the illuminated screen before them, in obvious contradistinction to the time it would have taken them to learn how to register 'symbols' for them. They, indeed, recognised and attended to things (a chicken passing quickly across a corner of the screen) that *Wilson* had beforehand failed to see! See Marshall McLuhan, *The Gutenberg Galaxy: the Making of Typographic Man* (Toronto, Ontario: The University of Toronto Press, 1980 [reprint of 1962]), pages 36-39.

"theory of symbols" somewhere at sometime, however inadequate Goodman's particular attempt might be. (But see below).

If, however, at least two world descriptions are radically autonomous, then it seems obvious that no "theory of symbols" could cover both of them, for a such a theory would either on the one hand have to describe both the syntactic and the semantic features of both world descriptions and hence possess predicates capable of quantifying over the objects of both world descriptions (but then the world descriptions would not be radically autonomous anymore, for there would be a set of predicates that suffices to denote all their objects in common), or it would on the other hand be unable to describe the semantic features of at least one of the world descriptions, hence failing to be a 'theory' fitting over both of them.

It seems, therefore, that we must take Goodman seriously when he denies that the essential claim upon which his "theory" rests has any "truth-value" (WWW, 129), being rather a part of a "categorization or scheme of organization" that he is "selling" but for which he could not be "arguing". That surely takes care of the badness of the arguments offered, but it also then falsifies the suggestion that he has offered us a "theory" in any sense at all.

11. Key Question of Method.

If Goodman is not offering us a theory but rather a "scheme of organization" or "categorization", the key question becomes: can there be such a thing as a "scheme of organization" adequate to encompass all world descriptions?

A scheme of inscriptions (that is, syntactical relations) seems possible, for world descriptions would seem to be describable in the predicates of the physical-language world description. But for exactly the reasons given above, a scheme of semantical relations seems impossible if Goodman is committed to the existence of radically autonomous world descriptions, which seems to be the case.

What, then, might be a useful method for deriving interesting schemes of categorization if radically autonomous but equally adequate world descriptions exist? Clearly it cannot be a method of 'theorizing' for the reasons given above. But are there non-theoretical cognitive methods? Let's glance momentarily at several thinkers who have behaved as if there are non-theoretical cognitive methods and see what light they can throw on what Goodman has done and perhaps ought to have done.

12. Sketch of the approaches to cognition of the Frankfurt School (Habermas; but Adorno in particular), of Wittgenstein and Spengler and of Innis and McLuhan:

- A. The approach of the Frankfurt School may be sketched as follows:
1. Acting rationally (that is, with cognitive justification) cannot be exhausted by the theoretical methods of the sciences, for deciding how to act is indistinguishable from deciding how one 'ought' to act (including how one 'ought' to speak, which only sometimes is decidable by citing truth conditions). [Distinction between science and ethics of Werner von Braun, as drawn by Tom Lehrer!]
 2. An adequate method, therefore, might well be hypothetico-deductive, but the 'ought' hypotheses cannot ultimately be confirmed or disconfirmed by empirical evidence. Such a method, therefore, would have to be:
 - a. self reflexive (the activity of using the method usefully would itself be the sole empirical evidence justifying the method); and
 - b. the non reflexive method of science would be encompassed as a subset and used in its application.
 3. The goal of the method is to construct an *Ideologiekritik* within an autonomous political world description ('autonomous' to Adorno; Habermas believes, to the contrary, that autonomy can be overcome):
 - a. to show to a social group that it possesses ethical presuppositions (commitments) of differing depth;
 - b. to show that the group has illicitly legitimized its own repression by another group through failing to notice that the superficial ethical beliefs through which it legitimates its own repression are inconsistent with deeper ethical presuppositions;
 - c. to show that were the superficial beliefs to be replaced by beliefs consistent with the deeper presuppositions, action would be permitted (indeed, demanded) that would assist in changing the world into a less repressive one as measured against *the groups own presupposed ethical standards*; and hence

- d. to show, consequently, that by the group's own cognitive standards it would more *rational* to act thusly rather than otherwise.
4. The method as considered by the Frankfort thinkers is now evident.
 - a. The *communication channels* open to a repressed social group have been subverted by the repressing group to reinforce the repression; the political world description (the language game, that is) through which the repressed group understands the events they encounter is structured so as to misdirect the attention of those repressed from their own repression and the cause of its persistence; namely, the unnoticed discrepancy twixt deep ethical presuppositions and the world in which they exist.
 - b. What one must do is to change the weighting (in Goodman's sense) of the elements of world description to re-describe (in Wittgenstein's sense) the world through a re vision of the language game, so that the attention of the members of the group is now drawn to the inconsistency twixt their deep and their superficial ethical beliefs. Or, in order,
 1. to render their *ethical* beliefs as intuitively, simply and accurately as before;
 2. to render their *world* as intuitively, simply and accurately as before (all scientific and socially scientific results, that is, must remain and useful and applicable as before); but
 3. the repressive power structure is brought into sharp focus whereas before it had passed unattended, through the now obvious lens of the inherent inconsistency twixt the group's superficial legitimizing beliefs and its deep ethical presuppositions.

(The method is somewhat akin to re-photographing a room through a colored filter and causing one to see the same room differently; or replacing a coordinating mathematical structure with another that renders previously unnoticed patterns of objects obvious.)

Note, secondly, how *empirical* the method is, if construed effectively. Scientific evidence can and indeed must be brought to bear, in accordance with the methods of the social sciences, to enable accurate predictions to be made at each stage of the investigation. Well-tested evidence is required to confirm that:

the proposed social changes will likely lead to a society that can be supported by the present forces of production if redeveloped (and are, indeed, more likely to do so than alternative proposals), and that they may be effected by making specific changes in the present social institutions;

the present social situation involves conflicting ethical claims by the group in question, and that, were the new social order to be implemented, the conflicts would vanish (or at least be ameliorated) in favor of the claims that are more deeply held;

the need for the transition can be made comprehensible and agreeable to the present members of the social group, regardless of the present degree of social immunization and distortion of the communication channels available to them; and lastly

the transition from the present social situation to the new one can only be made if the *Ideologiekritik* is known, understood and acted upon by the social group.)

5. The method, therefore, amounts to juxtaposing events within a political world description that have not been juxtaposed before and simply asking members of the social group to notice – using exactly the same tools they were accustomed to using before – how similar (or how distinct) the events are, and hence how they ought to be classified differently from classifications previously assumed through inattention to hold.

B. The similarity between the method of the Frankfort School and that of the latter Wittgenstein is apparent.

1. Wittgenstein derived his method, or so he said, from Oswald Spengler's method of "comparative morphology";
2. The method consists of juxtaposing events within a language game but in a way previously not done (or previously thought to be innocuous), and then asking users of the language game simply to see for themselves;
3. The method is not a theorizing activity but rather a technique for compelling reclassification. As Wittgenstein insisted, therefore,
 - a. one cannot theorize about the proper use of a language; for to do so would require that one step outside of the language and use a language foreign to it; but the terms of the language have meaning only as used within it. What one can do within the language game, however, is to clean it up – not by stepping outside of it but rather by juxtaposing within it examples that conflict with previously assumed ways of using the language, compelling one by means of other deeper habits of the game to revise the way in which one construes those examples and therewith the tools of the game that one is using.
 - b. when one is finished, the world (as described within the scientific or historical portion of the world description) remains exactly as before; what has changed is one's propensity to use the language in a certain way.
4. Note, as well, the similarity to Quine's metaphor of Neurath's boat: we must repair it while travelling in it, and can't step out of it to do so.

C. Suggestion: Innis and thereafter McLuhan were speaking sensibly when claiming (at best):

1. to be doing something that is neither scientific nor historical (although evidence acquired from both scientific and historical testing can be brought within the scope of their method) and that neither scientific nor historical conjecturing or testing can duplicate;
2. to be yet doing something that is nevertheless cognitive, rational and (at best) essential; and indeed,
3. to be doing something that, if right, can redirect usefully our scientific or historical theorizing and experimenting.

(Note: inconsistencies previously unweighted are but passing anomalies, even in science or history. This is why anomalous experimental results appear as 'crucial experiments' only in hindsight when a new theory has forced us to reclassify the world. (The Michelson-Morley experiment after 1917, for example. Physicists forsook Newton's theory after 1917 in favour of Einstein's, even though Newton's remained unfalsified.)

13. Conclusion: we may now comprehend Goodman's uncharacteristic failure in *Languages of Art* – why, that is, the book and therewith indeed the entire semiotic enterprise, in so far as it purports to provide a "theory of symbols", has proven so uninteresting to most productive and careful theorists, experimenters, historians, artists, philosophers, or other shifters of vision.

A. If Goodman's "theory of symbols" is indeed a theory at all, then it appears to be unconvincingly argued, empirically refuted at best and impossible at worst (for if autonomous world descriptions are possible, then it seems that no theory could adequately describe the *semantic* features of any radically distinct world description);

B. If his "theory of symbols" is rather a "scheme of reorganization", then the proposed reorientation seems remarkably ineffectual:

1. it exposes no necessary inconsistencies in previous classifications;
2. it answers no old questions unequivocally better than previous classifications (and many less well);

3. it fails to redirect our theoretical, experimental and historical enquiries onto any useful paths, as the work of Gardner and Perkins unwittingly confirms. (Goodman's "theory of symbols" fails to resolve any of the problems of aesthetics, theoretically or historically, the puzzles remaining as perplexing as they were before.)

C. Only a method akin to that of Spengler – a comparative morphology within a world description, like Adorno's, Wittgenstein's or Innis's – might enable us to reorient effectively our ponderings about art and aesthetics. Had Goodman been clearer about the methodological scope and limits of his conjectures with respect to them, he might have done it, as he did with respect to so many other of the disciplines within philosophy. Within *Languages of Art*, however, he failed to do so.