THE EFFECTS OF NELSON GOODMAN'S NOMINALISM ON HIS EPISTEMOLOGY AND AESTHETICS

by

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A dissertation to the Graduate Faculty in Philosophy in partial fulfillment of the requirements for the degree of Doctor of Philosophy, The City University of New York

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Abstract

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by

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This dissertation asserts that Nelson Goodman's aesthetics cannot be adequately understood without prior knowledge of both his epistemology and his ontology. The dissertation is divided into three sections: The Metaphysics, The Epistemology, The Aesthetics. At the end of each section, the consequent limitations imposed on his terms and concepts available to him are explicated, such that, by the end of the dissertation, I am able to delineate the constraints imposed upon the aesthetics by both the metaphysics and the epistemology.

Goodman's aesthetics is a semantic account of reference, and within that format it forbids intensions, properties, fictive entities, non-semantic meaning, natural symbols, a central role for emotion, and any notion of a universal or empirical truth. None of this can be understood without the prior analysis of his epistemology, which argues for relativism, pluralism, and worldmaking. These

latter commitments involve denials of universal/objective truth, natural kinds, the autonomous object, and univocal human responses.

But Goodman's epistemology cannot be adequately understood apart from his ontology for it is in his "calculus of individuals" that he defines *qualia* (presentation of color, time, and space) as the phenomenal basic units - entities that satisfy the basic adequacy criterion for systems in general, and it is from these basic primitives that the constructionalism can, with a limited set of terms and operations, be used to build an ontological or epistemological system. Goodman is, more than anything else, a nominalist, granting only entities of the lowest ontological kind, necessitating, for example, a definition of "property" as the typically repeated pattern of *qualia* exhibited by an object, instead of an essentialist trait. Goodman's nominalism has the consequences of forbidding not only (platonist) properties, but also abstract objects, meaning accounts, classes, and fictive reference, as well. All of these constraints are directly translated into his epistemology, wherein empiricism is denied and coherentism embraced, objective reality is denied and replaced by relativistic worldmaking, and induction and the projection of predicates is given the central role in the formation of all knowledge systems. Central, also, to all of Goodman's philosophy is reference: we understand by correctly ascertaining the relation between a symbol and the thing symbolized. This is true for both art and science in that we understand both by sorting the symbols. Hence, Goodman's aesthetic symbols refer in ways that can only be understood within the general framework of the rest of his philosophy.

Foreward

This dissertation would not have been accomplished without the extraordinarily generous help given by several people. I want to thank not only my advisor, Frederick Purnell, whose careful attention to detail was as invaluable as his moral support and his willingness to (repeatedly) take on this task, but also Emily Michael, who, before Prof. Purnell, served for many months in the role of advisor and without whose guidance and intellectual rigor this dissertation would absolutely not have been possible. Her general philosophical insight and her particular knowledge of Goodman were both invaluable. I want to thank also Fred Michael, who helped me enormously (and only out of the goodness of his heart) with the section on Bertrand Russell. I am also grateful to my other readers, Frank Kirkland (who also generously served on the prospectus) and Steven Grover; they both graciously devoted much time and energy to this project. And last, but certainly not least, I want to thank Virginia Held for her support, her careful (and time-consuming) proofreading, her service on both prospectus and dissertation committees, and – most importantly – her continual presence as a role model. I am grateful to all of these people.

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SECTION I. THE METAPHYSICS

Chapter I. The Basic Problem

1.1 General Terms

Generality is arguably an essential feature of our experience of particular objects. The fact that a general, apparently stable term such as ‘red’ exhibits itself as varyingly as a red shoe, a red car, a red flower, a red suit, etc., gives rise to the question regarding the ontological character of the general term “red” and in what way it is different from the objects to which it is applied. Since this generality is reflected in both thought and language, we must ask how the mental concepts reflecting this generality are formed, and how is it that we come by these general concepts when the experiences from which they are formed are only particular.

Let us take as an aesthetic example, the concept “The Beautiful”. We experience diverse particular things as beautiful, e.g. “the boy is beautiful”, or “the flower is beautiful”, or “the car is beautiful”. In ways the realist must make clear, the attribute or quality called “beauty” has successfully been attributed to these different objects, in seemingly the same way that the color red had been attributed to them in the prior example. The general attribute “beautiful”, like the general attribute “red”, is commonly contrasted with the numerically unique and spatially discreet particulars or objects to which it is said to apply.

1.2 Universals: The Realists

Those who find this linguistic distinction between the general and the particular reflective of the ontological facts of the world identify these generalities as universals, and give them the status of mind-independent entities, so that, even if there were no cognizing minds to perceive the general in the particular, the realist would say these universals would still exist. Thus the common attribute "man" is a single reality that is instantiated in both Socrates and in my father, and in all other men. It is the universal in all the particulars.

And while that entity called "man" is included in every particular judgment where upon we have seen a particular male, it is not *from* ordinary sense experience by which we learn of its existence. For the realist who argues for universals, we are aware of universals not by sense itself but by reason - through the process of recognizing that the same 'red' which is being applied to the object "car", is identical with the "red" which is being applied to the object "flower".

The universals are a type of entity, e.g., "the one", which can simultaneously manifest itself in different instances of the other class of entity, e.g., the particulars – "the many". Given that there are two very different kinds of entities, then, which make up the composition of the world - on this view - it is the realist, having structured this view, who takes the existence of universals to be true, for if all the individual objects called by the same name, for example, 'red', had nothing in common but being called 'red', no reason could be given why just they and no other objects had that name. In other words, in the absence of universals as an explanation, no reason could be given for deciding whether or not to include an object in the category of things for which the attribute red applies.

1.3 Particulars: The Nominalists

The nominalist, on the other hand, argues that to ask for an account of how it is that we get general terms which are distinct from individual terms, is to presuppose the existence of that very thing, e.g., universals, which one is trying to prove. The nominalist argues that two things are similar by reason of each individual in itself, not because there is some common nature which is instantiated in both. It is a distinction between two terms of language, not between things denoted by the terms in the statements. For the realists to claim that universals exist, but do not exist in a place or time, is to make the notion of "existence" inexplicable and mysterious. To say "the universal exists", and "the particular exists", is to use the word "exist" in two different and mutually exclusive ways.

The nominalist refuses to construe abstract terms as names of entities distinct from the individual things. The so-called universals are terms or signs standing for or referring to individual objects and sets of objects, but they themselves cannot be said to exist as mind-independent entities. Therefore, to summarize, the first problem with universals for the nominalist is that no sense can be made of what exactly these universals *are*; their existence can't be accounted for in the way that something is normally said to exist in space and time. Secondly, the exact way that they come to participate in the separate entity of the participating particular is likewise inexplicable, the account usually remaining on the metaphorical level with the use of words such as 'instantiating', 'inhering in', 'partaking in', etc. None of these terms are descriptions of the *mechanism* of the relationship between the two different ontological entities; they are not explanations, but merely attempts at analogies.

Generality is, therefore, for the nominalist, not an ontological distinction between two different levels of reality. While there are predicates that are general terms, they are not common natures that are then individuated. Particulars are just particulars. The problem is a logical one of showing how general terms used in propositions refer to individuals signified by them, and that the general terms do not refer to independent entities that are general.

How is it, then, that the nominalist explains the generality of 'red' across the individual objects of 'red shoe', 'red car', 'red flower', etc.? The answer to this is often given in the domain of epistemology, where the question is re-framed as: how is it that we are able to know diverse instances of red (or any other attribute) objects? An epistemological answer to that question is generally found in an empiricist account of knowledge acquisition, so that sense perception gives rise to memory, and memory conditions affect subsequent perceptions, so that the current perceptions are not only perceptions but they are also recognized as similar to past perceptions. Given this view, a kind of resemblance theory usually accompanies the nominalist account. An empiricist's view of knowledge acquisition fits nicely with the nominalist's commitment to a tidy ontology.

For all nominalists, the motive for avoiding commitments to universals is the simplicity requirement: when deciding what actually exists, one should never posit entities which cannot be readily proved. The dictum against the unnecessary multiplication of entities and the concern that 'imaginary' entities are never to be countenanced, was of course embraced by Goodman, but, as we shall see, his nominalism is of an extreme variety.

While the debate between those who maintained the existence of mind-independent universals and those who argued against such entities presented itself from the earliest of pre-Socratic philosophy - framed as the One and the Many - and while this continued throughout ancient Greek writings in the examples of both Plato and Aristotle, it is in two other separate time periods that this issue comes to dominate much of philosophical writing: in the medieval period and in the mid-twentieth century, the latter being of course Nelson Goodman's own era. It is, therefore, necessary to first explicate the debate during the twentieth century, as it will then be more evident how Nelson Goodman's position is structured as an avoidance of what were to him intolerable alternative ontological commitments, placing both his nominalism and the consequences of his nominalism within a historical perspective.

1.4 The Twentieth Century Debate

1.4i. Bertrand Russell

In order to understand Nelson Goodman it is first necessary to generally understand twentieth-century analytic philosophy, which, in turn, cannot be done without a brief review of Bertrand Russell, who is generally credited as one of the originators of that tradition. There are four strands of Russell's thought that are pertinent to an examination of Goodman:

1. Russell's arguments against the British idealists, such as F.H. Bradley, who were followers of Hegel.
2. Russell's theory of description.

3. Russell's referential theory of meaning.
4. Russell's phenomenalism.

I will explain each of these in order.

Russell's arguments against the British idealists

Russell's very early philosophical position was aligned with his fellow British idealists; a position he was soon to abandon and against which he was to repeatedly argue. The British idealists maintained that our knowledge of the world is fundamentally an awareness of the internal relations between things construed such that whenever *x* and *y* are related, each term "enters into the nature" of the other. Therefore, to be aware of *x* was to be aware of how it related to *y* in such a way that *x* and *y* could not be seen as autonomous and separate, from which it also followed that -- because everything was ultimately connected to everything else – one was aware of the entirety of reality. Hence, Hegel's 'Absolute'. As Russell states it in "Logic as the Essence of Philosophy":

> Mr. Bradley has worked out a theory according to which, in all judgment, we are ascribing a predicate to Reality as a whole; and this theory is derived from Hegel. Now the traditional logic holds that every proposition ascribes a predicate to a subject, and from this it easily follows that there can be only one subject, the Absolute, for if there were two, the proposition that there were two would not ascribe a predicate to either. Thus Hegel's doctrine, that philosophical propositions must be of the form, 'the Absolute is such-and-such,' depends upon the traditional belief in the universality of the subject-predicate form.[1]

[1]Bertrand Russell, "Logic as the Essence of Philosophy" in *Twentieth-century philosophy: The Analytic Tradition*,. ed. Morris Weitz (New York: Free Press, 1966), 131.

'The Absolute' was rejected by Russell because it seemed evident to him that, contrary to the idealists, one is as immediately aware of the objects so related as one is aware of their internal relation itself; and furthermore, mathematics presupposes that we are aware of each entity as an entity *before* we are aware of the comparative relation between the two, thus making us also aware of the relation between those two entities as an external relation. Therefore, in rejecting British/German idealism he formulated the doctrine of "external relations" – e.g., that the relation between the objects is a fundamental relation not to be subsumed by the whole, and that relation does not enter into the definition of the terms related.

Concomitant with the idealist notion that reality is a seamless whole was the notion that the sensible world is unreal, for all distinctions – on this idealist account – merely mask the true reality of their internal relations, and are, therefore, mere illusion and not reality. This, Russell argues, is mistaken and can be conclusively proven wrong by the proper logical analysis of the language used to describe experience; namely, instead of adopting the traditional logic that only accepts propositions in subject-predicate form, which can lead to the fallacious idealist conclusion that all objects are related to their properties in such a way that objects are not separable from the whole, one instead adopts modern logic that sees relations as ultimate. This logic, embracing the point that Frege and Peano both made when they argued that "Socrates is mortal" is not of the same form as "All men are mortal", recognizes that terms are related differently to one another depending on the form of the proposition. Therefore, modern logic also grants asymmetrical relations, symmetrical relations, non-symmetrical relations,

transitive relations, non-transitive relations, and intransitive relations. Because all of these relations would be condemned by the sort of traditional logic (as employed by the idealists) as mere appearance, it is the logic that generates the false belief that reality is not to be found in the physical world. This happens when the traditional logic makes it impossible to give an analysis of serial order, and it therefore renders such things as temporal relations - and space and time in general - as unnecessarily mystical. As he explains:

> And in fact there is no reason except prejudice, so far as I can discover, for denying the reality of relations. When once their reality is admitted, all logical grounds for supposing the world of sense to be illusory disappear.[1]

Russell's enduring point against the idealists was that reality could be comprehended through an analysis of the parts and, thus, it was not the case that only the whole could be understood; it was not the case that individual facts could not be ascertained as autonomous units. This point of view culminated in his logical atomism theory.

Russell's theory of description (and his arguments against Meinong and Frege)

Prior to 1905, Bertrand Russell had maintained that all denoting phrases denote objects. But the consequences of this position became evident in the writings of Alexis Meinong and Gottlob Frege, whose positions were ultimately unacceptable to Russell as the objects denoted in both philosophies were, in

[1]Bertrand Russell, "Logic as the Essence of Philosophy" in *Twentieth-century Philosophy: The Analytic Tradition,*.ed. Morris Weitz (New York: Free Press, 1966), 137.

Russell's words, "unreal". Meinong argued that there was the content and the object of a thought, and he divided objects into three groups: 1) existing objects like chairs and other ordinary objects; 2) things that subsist in ordinary objects e.g., a color such as green, the difference between red and green, etc., and 3) objects that neither exist nor subsist, which he called *Aussersien*. The latter include possible objects of thought such as the round square, an even prime number other than 2, Hamlet, and other fictional objects.

Frege, well known for his distinction between sense and reference, also differentiated between mental and non-mental entities, but yet in a way where there was "no clear distinction between individual things on the one hand and properties and relations on the other".[1] Frege argues that the sentence, therefore, is that which is uttered or written, and accompanying that is the mental idea, and thirdly, there is the proposition that the sentence expresses, which proposition is the content of the mental act and is an abstract object. As he states, "The thought, in itself immaterial, clothes itself in the material garment of a sentence and thereby becomes comprehensible to us. We say a sentence expresses a thought."[2] In cases where the denotation seems to be absent, Frege would argue that the reference is to the null set, and furthermore, all true sentences denote 'The True', and all false sentences denote 'The False'.

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[1]Reinhardt Grossmann,. *Reflections on Frege's Philosophy* (Evanston, Ill: Northwestern University Press, 1969), 4.
[2]E.D. Klemke, ed. *Essays on Frege* (Urbana, Chicago, London: University of Illinois Press, 1968), 511.

Russell objected to both positions' ontological commitments to untenable entities, which, Russell maintained, resulted from the notion that all phrases denote. Denoting, defined broadly as the meaning of a sentence understood in terms of the way the words stand for things, was divided by Russell, in the 1905 paper entitled "On Denoting", into two distinct categories that could obviate the difficulty of asserting non-entities: a) acquaintance and b) knowledge about. The former included those things of which we have direct presentations, such as, firstly, objects in perception and, secondly, those objects in thought that are of a more abstract logical character. The category 'knowledge about' is the category to which all other knowledge belongs, and that knowledge is of things we know about but with which we have not had direct acquaintance, such as "the objects denoted by phrases composed of words with whose meanings we are acquainted".[1] Yet, Russell notes, all knowledge starts with acquaintance, and any instance of 'knowledge about' can be ultimately traced back in experience to an instance(s) in direct acquaintance.

Russell argues that Meinong claims "that the existent present King of France exists, and also does not exist; that the round square is round, and also not round", which, for Russell, contravenes the law of contradiction.[2] His analysis of Frege's problems is more complex:

> The above breach of the law of contradiction is avoided by Frege's theory. He distinguishes, in a denoting phrase, two elements, which we may call the *meaning* and the *denotation*. Thus 'the center of the mass of

[1]A.P. Martinich and David Sosa, ed., *Analytic Philosophy: An Anthology* (Malden,Mass. and Oxford, UK: Blackwell Publishers, 2001), 32.
[2]*Ibid.,* 34.

> the solar system at the beginning of the twentieth century' is highly complex in *meaning*, but the *denotation* is a certain point, which is simple.[1]

Before I complete the analysis of Russell's criticism of Frege, it is necessary to note that Russell is arguing that – on this account just described in the quote - we must have knowledge about the many constituent terms in the phrase in order to understand its meaning, but the denotation is an exact and simple physical point in the universe and has no constituent parts at all. Russell notes that this distinction between sense and meaning had led him previously to assert that the 'is' in the statement 'Scott is the author of Waverley' is the 'is' of identity and therefore there is a sameness of denotation but a difference in meaning between the two phrases. He then states, "I shall, however, not repeat the grounds in favor of this theory, as I have urged its claims elsewhere, and am now concerned to dispute those claims."[2]

What is the main difficulty with his previous view? If we believe that denoting phrases both denote and mean, then we are at odds to explain how, in his often-repeated example, 'the present King of France' has meaning e.g., how can we understand the sentence that seems to have no denotation as there is no king of France? In essence Russell is asking: how can a phrase, which denotes nothing, be called 'false' and not 'nonsense'? How is it that we understand it?

The choices are two: 1) we either provide a denotation e.g., an 'unreal' object, or 2) we abandon the view "that the denotation is what is concerned in propositions which contain denoting phrases." It is the latter that he pursues, as

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[1]A.P. Martinich and David Sosa, ed., *Analytic Philosophy: An Anthology* (Malden,Mass. and Oxford, UK: Blackwell Publishers, 2001), 34.
[2]*Ibid.*

the former is the solution for Meinong and also for Frege, the latter of whom argues a view, as Russell states it, "though it may not lead to actual logical error, is plainly artificial, and does not give an exact analysis of the matter."[1] It is, therefore, this that is Russell's objection to Frege: the notion of 'The True', 'The False', and the denotation of the null set seemed to Russell contrived and, hence, failed to give satisfactory answers to the problems.

Russell reasons that the problem lies in the analysis of language, i.e., in assuming that denoting phrases denote apart from the propositions in which they are found. Alternately, Russell is arguing that denoting phrases never have meaning in themselves - the meaning is attributed to the propositions in which the denoting phrases occur. On Russell's account, then, the proposition 'the present King of France' properly becomes: 'there is one and only one entity x which is the King of France, and that entity x exists'. Presented thus, the proposition is false since it does not denote an entity. In any proposition we can "make a denoting phrase, which denotes an entity if the proposition is true, but does not denote an entity if the proposition if false…. The whole realm of non-entities….do not denote anything."[2] In the case of a statement such as, 'Scott is the author of Waverley', it should properly be seen to be a truncated version of the more complete statement that is not an identity relationship between 'Scott' and 'the author of Waverley'. In its complete analysis there are several different claims: 1) it must be stated that the author of Waverley actually existed, 2) that

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[1]A.P. Martinich and David Sosa, ed., *Analytic Philosophy: An Anthology* (Malden,Mass. and Oxford, UK: Blackwell Publishers, 2001), 35.
[2]*Ibid.,* 38.

that author was only one person, and 3) that that author is identical to Scott, e.g. "Scott wrote Waverely, and it is always true of y that if y wrote Waverley, y is identical with Scott".

His arguments in "Descriptions", written thirteen years after "On Denoting", develop his stand against 'unreal' objects, and in this he argues that 'I met a unicorn' is false, significant, does not contain the constituent 'unicorn', but does contain the concept 'unicorn'. 'A unicorn' is an indefinite description that describes nothing, but the concept itself is meaningful. A phrase such as 'a unicorn' is an ambiguous (or indefinite) description, which is contrasted with both 'the unicorn', which is a definite description, and is also contrasted with a name. When the latter occurs in a proposition it assumes existence, for a name functions lexically as it is used when one has direct acquaintance, which presupposes existence, and therefore the proposition is true if there is one instance that is denoted. We can, for example, "inquire significantly whether Homer existed, which we could not do if 'Homer' were a name."[1] And 'Homer' is not a name since we do not have direct acquaintance with Homer. But if it is not a name then it is a description, either definite or indefinite, and in that case existence is not necessarily asserted.

The advantage to this theory is, as Russell points out, that he, unlike Meinong, does not assume that these objects must have some kind of logical being in order to be meaningful, for: "Logic, I should maintain, must no more

[1]Bertrand Russell, *Introduction to Mathematical Philosophy* (London & New York : Routledge, 1993), 178.

admit a unicorn than zoology can."[1] In other words, Russell is arguing that one can, through the analysis of descriptions, rightly analyze a proposition such that it is not the case that it contain any constituent representative of a phrase which might seem to denote an 'unreal' object. By separating out an attributive clause, i.e., there is an *x*, from the unique clause i.e., the claim that there is only one *x*, from the identity clause, i.e., the claim that states that any *y* that might have the property in question is equivalent to the *x* in question, we are able to meaningfully discuss terms that do not denote an object. Applying Ockham's razor, Russell, who first attempted to reduce mathematics to logic in Principia Mathematica, is now eliminating the denotations of separate phrases and therefore of non-denoting terms. The problem, Russell was arguing, was with the grammar; rightly analyzed we do not have the paradoxes.

Russell's referential theory of meaning

As noted earlier, Frege had divided sense from meaning. Russell rejected this bifurcation, as it necessitated that phrases refer, thus presenting the problems of referring to non-entities and of explaining how it is we understand that the meaning of "The present King of France is bald" is false instead of claiming it is nonsense. As we also saw in the preceding discussion, 'a unicorn' is an indefinite description that describes nothing, which means that it does not refer, and Russell wants to argue that in order for a linguistic phrase to have meaning it must refer to something or stand for something. This, of course, does not preclude that the

[1]Bertrand Russell, *Introduction to Mathematical Philosophy* (London & New York : Routledge, 1993), 169.

concept ‘unicorn’ expressed by the phrase ‘a unicorn’ is meaningful within that proposition, but the phrase itself need not denote an entity. Hence Russell is to distinguish ‘meaning’, ‘reference’, and ‘meaningful’ in ways distinct from Frege.

As expressed in “The Relation of Sense-data to Physics” (1914) Russell’s dictum, “Whenever possible, logical constructions are to be substituted for inferred entities”, is applied to these notions of how words refer, and he develops in several different writings his notion of reference, especially so developed in his “The Philosophy of Logical Atomism” (1918). Russell had come to believe that our knowledge claims cannot be adequately justified if we commit ourselves to the existence of entities for which we are unable to demonstrate any factual foundation. His solution was to replace these with entities that were more simple and undeniable; hence, the reductionisms. The first was in Principia Mathematica and was the reduction of mathematics to logic; then came the theory of descriptions, which was the elimination of empty terms; then the argument that the basic terms in physics such as ‘points’, ‘instants’, and ‘particles’ can be reduced to equivalent statements about empirical entities; and ultimately Russell argued for the elimination of classes. It is Ockham’s razor which is being applied: Russell is interested in describing reality in the simplest and, hence, most verifiable terms.

Thus the relationship between a sentence and what the sentence refers to is what makes the sentence true or false. A fact is a thing that makes a proposition true or false, and that is divided into particular facts such as ‘this is white’ and general facts, such as ‘all men are mortal’. Language functions symbolically and

as Russell states, “A proposition is just a symbol”, and he warns that “unless you are fairly self aware of the relation of the symbol to what it symbolizes, you will find yourself attributing to the thing properties which only belong to the symbol.”[1] Meaning, then, is something that results from correctly understanding the relationship between the symbol and the thing to which the symbol refers:

> When I speak of a symbol I simply mean something that ‘means’ something else, and as to what I mean by ‘meaning’ I am not prepared to tell you….I think that the notion of meaning is always more or less psychological, and that it is not possible to get a pure logical theory of meaning, nor therefore of symbolism….As to what one means by the ‘meaning’, I will give a few illustrations. For instance, the word ‘Socrates’, you will say, means a certain man; the word ‘mortal’ means a certain quality; and the sentence ‘Socrates is mortal’ means a certain fact. But these three sorts of meaning are entirely distinct, and you will get into the most hopeless contradictions if you think the word ‘meaning’ has the same meaning in each of these three cases. It is very important not to suppose that there is just one thing which is meant by ‘meaning’, and that therefore there is just one sort of relation of the symbol to what is symbolized.[2]

In a perfect language, all of our words in a proposition would have a one-to-one correspondence with the components of the corresponding fact, but because much of our language is ambiguous, words do not so clearly correspond. It is the job, Russell is arguing, of philosophy to clarify where possible, and to make explicit the relationship between language and the things referred to, and there are several different kinds of relations. But it is important to understand the limits of this enterprise:

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[1]Bertrand Russell, "Logic as the Essence of Philosophy" in *Twentieth-century philosophy: The Analytic Tradition*, ed. Morris Weitz (New York: Free Press, 1966), 185.
[2]*Ibid.,* 186-7.

> People speak of 'understanding the universe' and so on. But, of course, the only thing you can really understand (in the strict sense of the word) is a symbol, and to understand a symbol is to know what it stands for.[1]

Therefore, understanding is knowing the relationship between the symbol and that to which the symbol refers. There is no meaning separate from reference. This reduction of meaning to reference was, as we shall see, adopted by other philosophers of the century, most notably W.V. Quine and Nelson Goodman.

Russell's phenomenalism

In "Logic is the Essence of Philosophy", Russell argues against traditional empiricism by pointing out the flaws in the inductive method that leave us with the difficulty that a general proposition, such as 'all men are mortal', cannot be known by inference from atomic propositions, which only give empirical evidence of particular truths, since that would not give us the experience necessary to justify the inductive generalization. This conclusion he sees as a refutation of the older empiricism, which maintained that all knowledge was ultimately derivable from empirical sense experience, always an argument against *a priori* knowledge.

Thus Russell's commitment to knowledge based ultimately on direct acquaintance must not be conflated with a commitment to traditional empiricism that precludes the *a priori* nor can it be conflated with the sort of empiricism that

[1]Bertrand Russell, "Logic as the Essence of Philosophy" in *Twentieth-century philosophy: The Analytic Tradition*, ed. Morris Weitz (New York: Free Press, 1966), 204-205.

maintains that direct acquaintance is with physical objects. Russell's epistemology, at least during the period from 1905 until 1920, which is the period of time we are examining, was based on a phenomenalism that was not completely tied to the demands of traditional empiricism. The pertinent point to his phenomenalism is that it was an attempt to give an account of knowledge based on direct acquaintance that could lead to publicly verifiable objects, thereby reducing statements about inferred entities, which cannot be ascertained by empirical evidence, to statements about entities that cannot be reasonably doubted. The reality of physical objects, which had been problematic to many philosophers including Descartes, could be reduced to simpler and less deniable entities: for Russell, the colors, sounds, shapes, etc., of which we are directly aware in perception. It is one of Russell's reductionisms, and is described by Russell as: "Wherever possible, logical constructions are to be substituted for inferred entities." This reductionism was the method he applied to various terms that lacked verifiability, as seen also in his view that classes need not be construed as a metaphysical reality but as "symbolically constructed fictions."

In his "The Relation of Sense-data to Physics", written in 1914, Russell provides a way to avoid positing inferred entities, such as "points", "instants", and particles", by translating propositions in which they occur into statements about empirical entities. In order to do this he must first distinguish between "sensibilia" and "sense-data", where the latter is, for example, the particular patch of color or particular noise experienced in the moment and singled out for attention, and the former, i.e., "sensibilia", is the name given to those objects

which "have the same metaphysical and physical status as sense-data, without necessarily being data to any mind."[1] In other words, sense-data and sensibilia are two related versions of phenomena: sense-data are the single instances of phenomena given to us in momentary experience and are all that we can directly know, whereas the sensibilia are the objects existing independent of the momentary perceptions by us or, as Russell states it, "a sensibile becomes a sense-datum by entering into the relation of acquaintance."[2]

Russell emphasizes that sense-data are physical despite the fact that they do not persist unchanged after ceasing to be perceived; for their non-persistence is not due to a logical impossibility (for the sense-datum does not contain part of the subject such that the removal of the subject would necessitate the non-continuation of the object), but that they continue unchanged but only because empirical causal laws show us that it is improbable that they so continue. The fallacious view that sense-data are mental (he is perhaps thinking of Berkeley here) is not only because of "their physiological subjectivity" but also because of philosophers' failure to distinguish between sense-data and 'sensations', where the latter is defined as the subject's awareness of the sense-datum:

> Thus a sensation is a complex of which the subject is a constituent and which therefore is mental. The sense-datum, on the other hand, stands over against the subject as that external object of which in sensation the subject is aware…So soon, therefore, as sense-data are clearly distinguished from sensations, and as their subjectivity is recognized to be physiological not

[1]Bertrand Russell, "Logic as the Essence of Philosophy" in *Twentieth-century philosophy: The Analytic Tradition*, ed. Morris Weitz (New York: Free Press, 1966), 159.
[2]*Ibid.*

> psychical, the chief obstacles in the way of regarding them as physical are removed.[1] [3]

Russell's notion that the thing is the class of all the presentations of the sense-data as seen by various perceivers must be recognized as an argument against a certain kind of idealism that posits the essence of the thing as an entity separate from its existence:

> Since the 'thing' cannot, without indefensible partiality, be identified with any single one of its appearances, it came to be thought of as something distinct from all of them and underlying them. But by the principle of Occam's razor, …we should identify the thing with the class of its appearances.[2]

'Place' takes on significance with Russell, as he notes that perception is dictated both by the place *at* which the object is and also *from* which it is perceived. In other words, each perception has two independent variables that can affect that perception, thus making no sensibile a datum to two people at once, as no two points of view are identical. But the similarities are enough to discount ultimate solipsism, and to gain the intersubjective agreement necessary for public objects of discourse, making the thing a public neutral object that is identified as the entire class of its appearances.

As 'true' and 'false' can only be applied to propositions, they cannot be applied to data. Thus, he states, "Given any datum x, it is meaningless either to assert or to deny that x 'exists'."[3] For while we can say that our present

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[1]Bertrand Russell, "Logic as the Essence of Philosophy" in *Twentieth-century philosophy: The Analytic Tradition*, ed. Morris Weitz (New York: Free Press, 1966), 162.
[2]*Ibid.,*163.
[3]*Ibid.,* 177.

perception is of a particular x, and we can say that our present sense data exist, what we are saying in the latter instance is merely that we are, in fact, in the act of perception; e.g., the 'existence' in question refers to our sensation and not to the external object in question. As he states it, "To say 'My present sense-datum exists' is to say (roughly): 'There is an object of which 'my present sense-datum' is a description." But we cannot say "There is an object of which 'x' is a description,' because 'x' is….a name, not a description."[1] In conclusion, Russell emphasizes both the public nature of objects and also their logical atomism, allowing us to give a factual foundation for our existence claims.

1.5ii Willard Van Orman Quine

There are many parts of Quine's philosophy that have gained recognition: the rejection of the analytic-synthetic distinction, the indeterminacy of translation, naturalized epistemology, the theory of reference, confirmation holism, and relativity. It is only the last three of these that will be of focus in this short section as these are most pertinent to the dissertation. The texts I will draw most heavily on are "On What There Is" and "The Two Dogmas of Empiricism", as these are relevant to the topics and written at the time during which he and Goodman were collaborating.

The Theory of Reference

While I will not explicate the great amount of work Quine did in philosophy of mathematics or in logic, it is necessary to begin Quine's treatment of reference as he does

[1]Bertrand Russell, "Logic as the Essence of Philosophy" in *Twentieth-century philosophy: The Analytic Tradition*, ed. Morris Weitz (New York: Free Press, 1966), 177.

in his influential article "On What There Is", by delineating the differences in the philosophy of mathematics:

> Formalism, associated with the name of Hilbert, echoes intuitionism in deploring the logicist's unbridled recourse to universals. But formalism also finds intuitionism unsatisfactory. This could happen for either of two opposite reasons. The formalist might, like the logicist, object to the crippling of classical mathematics; or he might, like the nominalists of old, object to admitting abstract entities at all, even in the restrained sense of mind-made entities.[1]

Abstract entities involve an existential commitment to something that cannot be empirically verified and cannot be readily claimed as an individual, in that, they are often abhorrent to those committed only to particulars. While not identical to universals, abstract entities are not concrete particulars, so that an acceptance of them would force a nominalist into the difficult position of having to explain the acceptance of these entities while simultaneously disavowing universals. Quine and Goodman, in their co-authored 1947 paper entitled "Steps Toward a Constructive Nominalism", maintained the stance of the consistent nominalist and adamantly disavowed any belief in abstract objects. Quine was later to retract that position though Goodman held fast to a consistent position, the effects of which are the main topic of this dissertation.

Quine's article "On What There Is" appeared originally in journal form in 1948 and was therefore of the same time period as his co-authored article with Goodman; thus, Quine's own position can be characterized as initially belonging to the formalist camp, though ultimately his later philosophy, where he identifies himself as a "reluctant Platonist", could be classified as ontologically closer to the medieval realist position. But

[1]W.V Quine, *From A Logical Point of View,* 3rd ed. (Cambridge, Mass: Harvard University Press, 1980), 15.

in the late 1940s, Quine's position was still similar to the medieval nominalist who strictly maintained that there are only individuals. It is the Quine of these early years that is particularly relevant to an investigation into Goodman.

The avoidance of abstract entities is a smaller instance of the larger problem of "the riddle of nonbeing": speaking of things that, in fact, do not exist and then, mistakenly, granting the referential terms existential legitimacy. In Quine's example in "On What There Is", the entity to which the word "Pegasus" refers is confusedly named, by those who believe in universals, "the mental-Pengasus." For Quine, predicates are not things that name entities but are certain linguistic expressions that are part of sentences. In other words, they refer but they do not name. Quine is arguing that the metaphysical realist is making the mistake of confusing the linguistically referring expression with both necessarily having to name an object and, then, to being committed to the essentialist meaning of the word; and Quine is at pains to differentiate the last two: "there is a gulf between meaning and naming even in the case of a singular term".[1] This is Frege's 'Sinn und Bedeutung': the 'evening star' and the 'morning star' *name* (Bedeutung = a pointing to, giving significance) the same entity but do not *mean* (Sinn = a mental sense of something) the same thing. A proposition about one does not necessarily entail a proposition about the other. The mistake begins by thinking that they do.

In addition, 'meaning' is too often involved with essentialist notions of the mental referent for a word, which exists (for the realist) on a different logical plane than does the individual object for which the singular word stands. For example, if we say, "One dog is white", we need not commit ourselves to an existence claim about what can

[1]W.V Quine, *From A Logical Point of View,* 3rd ed. (Cambridge, Mass: Harvard University Press, 1980), 9.

be characterized as either the abstract entity 'whiteness' or the universal 'whiteness'. Quine avoids these commitments by drawing attention to the function of bound variables of quantification – e.g., names like 'something', 'nothing', 'everything', which delimit objects. (Of course, 'everything' causes problems for the strict nominalist who instead gives up classes and infinity, a position Goodman defiantly embraced. This point is discussed more fully below and in §II.) Bound variables can best be explained with a small detour into set theory, where a bounded set has what is called upper bound numbers and lower bound numbers such that any number that is equal to or greater than every number of the set would be an upper bound number and any number that is less than or equal to any member of the set would be called a lower bound number. For example, the infinite set {1,1/2,1/3,1/4…1/n} has 2 as one of its upper bound numbers and –1/2 as one of the lower bound numbers. This mathematical example sheds light on the logical and semantic usage of the term 'bound' as it clarifies both the delimiting (non-infinite) function and it also clarifies Quine's famous dictum, "To be is to be the value of a variable." If the variable (x) is to be assigned a value - and that requirement is obviously one of existential quantification - the variables in the statement "some dogs are white" are existentially quantified over, i.e., we can list the dogs. The value of the variable is automatically not unbounded. Or, as Quine states it: "a theory is committed to those and only those entities to which the bound variables of the theory must be capable of referring in order that the affirmations made in the theory be true."[1]

The game, of course, is to avoid using names in ways that can mistakenly lead us to meanings:

[1]W.V Quine, *From A Logical Point of View,* 3rd ed. (Cambridge, Mass: Harvard University Press, 1980), 13-14.

> Names are, in fact, altogether immaterial to the ontological issue, for I have shown, in connection with 'Pegasus' and 'pegasize', that names can be converted to descriptions, and Russell has shown that descriptions can be eliminated. Whatever we say with the help of names can be said in a language which shuns names altogether. To be assumed as an entity is, purely and simply, to be reckoned as the value of a variable.[1]

The theory of reference is to be preferred to the theory of meaning for the reason just developed, i.e., that to assume a term has meaning is to assume that the term names an entity, which will lead one into the riddle of non-being, or "Plato's beard". But Quine also argues that reference is preferable, as meaning assumes the synthetic/analytic distinction since meaning assumes synonymy, which cannot be established. Since the latter point is less pertinent to Goodman's philosophy, I will allocate no further space to it.

Confirmation holism

Citing the influence of Pierre Duhem, an early twentieth century philosopher of science and physicist, Quine developed his theory in "Two Dogmas of Empiricism" that no isolated sentence in a language could be empirically verified. Here Quine is arguing against the belief that an isolated sentence could be empirically verified by tracing back the origins of the statement to its direct sources in experience identified as the 'given', which is the point of view of the logical positivists and an analysis Quine deems as fallacious "reductionism". He states this fallacious position as: "The belief that each meaningful statement is equivalent to some logical construct upon terms which refer to

[1]W.V Quine, *From A Logical Point of View,* 3rd ed. (Cambridge, Mass: Harvard University Press, 1980), 13.

immediate experience."[1] The verification theory of meaning was the cornerstone of empiricism since the time of Hume, (though Quine claims it only from Pierce onward), and it is this he feels makes impossible any accurate comprehension of reality. It is the role of the statement that is at issue. He asks, What is the nature of the relation between a statement and the experiences which contribute to or detract from its confirmation? and Is there such a thing as a direct report of immediate experience? If so, he further asks, In what form might that be?, for there is an ambiguity between sense data as sensory events and sense data as sensory qualities. Do we report the experience in the language of the recognition of an object or in the recognition of our sensory stimuli? In other words, are we talking about an 'apple' or a 'red, round patch'?

While Hume and Locke saw the correspondence between experience and linguistic description to be encoded in individual words, it was, according to Quine, Bentham and Frege who altered the primary vehicle of meaning from the single term into the statement. And it was Carnap's *Aufbau* project that "set itself the task of specifying a sense-datum language and showing how to translate the rest of significant discourse, statement by statement, into it."[2] hile Carnap abandoned this enterprise, "The notion lingers that to each statement, or each synthetic statement, there is associated a unique range of possible sensory events such that the occurrence of any of them would add to the likelihood of truth of the statement."[3] Thus, he concludes,

> The dogma of reductionism survives in the supposition that each statement, taken in isolation from its fellows, can admit of confirmation or information at all. My countersuggestion, issuing essentially from Carnap's doctrine of the physical

[1]W.V Quine, *From A Logical Point of View,* 3rd ed. (Cambridge, Mass: Harvard University Press, 1980), 20.
[2]*Ibid.,* 39.
[3]*Ibid., 40.*

> world in the Aufbau, is that our statements about the external world face the tribunal of sense experience not individually but only as a corporate body.[1]

The empiricist's assumption is that each fact has a linguistic component and an extralinguistic component, and the latter must "boil down to a range of confirmatory experiences." This one-to-one correspondence is denied by Quine. Thus, the statement can certainly be seen as an advance on the term, but even the statement is too limited a range for Quine. He is arguing that the unit of empirical significance is the whole of science - the whole of a language that operates within a certain set of conventions.

In order to understand this latter point it is helpful to remember how logic distinguishes between three kinds of definitions – e.g., a lexical definition (one that eliminates ambiguity), a stipulative definition (one that introduces a word and assigns a meaning) or a theoretical definition (one that explains the nature of things to which the definiendum normally applies). The latter definition is pertinent to Quine's approach to language, as a theoretical definition applies to the class of things over which the term ranges, and is set out for the purpose of giving a scientifically useful account of a term defined specific to the context. For example, a theoretical definition of "heat" would explain it in terms of a form of energy characterized by a rapid excitement of the molecules; it is a different definition than what is used by the weather reporter. In other words, *this definition is relative to the context and meaningful only within that context*. Likewise, for Quine, statements are to be understood only within the scientific sphere in which they are embedded; they can never be understood in isolation. There is, therefore, no singular experience to trace back to: there is only the body of language within which

[11]W.V Quine, *From A Logical Point of View,* 3rd ed. (Cambridge, Mass: Harvard University Press, 1980), 41.

the statement makes sense, or in the phrase of the title of his last book, there is only the "Web of Belief". There is only holism.

Relativism

> Our acceptance of an ontology is, I think, similar in principle to our acceptance of a scientific theory…we adopt the simplest conceptual scheme into which the disordered fragments of raw experience can be fitted and arranged…But simplicity, as a guiding principle in constructing conceptual schemes, is not a clear and unambiguous standard; and it is quite capable of presenting a double or multiple standard.[1]

What makes the 'fact' true, therefore, is its role in that system; a position argued by Carnap in his *Aufbau* with its distinction between the "framework" and statements relative to the chosen framework. Quine has adopted a system similar to Carnap's as a consequence of two positions: firstly, he argues that there are no *a priori* analytic statements and instead all statements are synthetic and inductively arrived at, making all our knowledge of any individual statement provisional at best; secondly, his holism further increases the lack of certainty attributable to any asserted fact, as that fact's legitimacy is ultimately dependent upon the legitimacy of the whole fabric that serves as the framework for the entire science of which that 'fact' is only a small part. This holistic empiricism allows him to view non-empirical subjects such as mathematics as a whole object of empirical data, much in the (naturalistic) way we are used to treating the theoretical versions of the hard sciences using the criterion: does this cohere with the rest of our data? In other words, the correspondence is between the new sentence and the

[1]W.V Quine, *From A Logical Point of View,* 3rd ed. (Cambridge, Mass: Harvard University Press, 1980), 17.

body of antecedently accepted propositions, not between a sentence and an empirically verifiable 'given'.

This is both an epistemological relativism and an ontological relativism, as it would countenance competing ontologies, the latter kind of relativism being more properly defined as ontological pluralism. Quine does not embrace the latter consequence of this relativism as enthusiastically as does Goodman (seen in §II in Goodman's refusal to completely choose between a phenomenalist approach and a physicalist approach), though, as we saw in the quote that began this section, Quine recognizes the ontological relativism. Quine knows that there are "double or multiple" standards with which we decide our ontological scheme, making the decision less than univocal.

But Quine is reluctant to address this question in the way that seeks to justify the existence of the external world or in ways that would make contentious issues of ontology. For him, my knowledge of the world is not seen in a non-sensory ideal mode such as that posited by such foundationalists as Descartes, but in the mode whereby I start with the sensory inputs as bodily facts, e.g., tactile realities as the air striking my skin, visual realities as the light waves striking my retinas, etc. This is the starting point. And the holophrastic sentence captures that neural input as the epistemological starting point. The ontology question is, in its micro form, easily answered: the neural input is real. This somewhat avoids the physicalist/phenomenalist debate, as the point of the neural input is ultimately epistemological. Quine's concerns are: how do we understand a sentence? And how does it become meaningful? The question is then the mechanics behind our adoption of certain terms and the values of those terms within the context of their application. What obviously follows from such holism is that "no statement is

immune to revision."[1] Involved in this is the public nature of understanding language; we agree on the definition of symbols and then change the definition when the need arises. While Quine's emphasis was on the linguistic analysis of language acquisition, Goodman's was on the structural analysis of semantics; they are two sides of the same coin. And for both, relativism was an essential part of that analysis as meanings were non-essentialist and constructed.

A final note on twentieth century nominalism is in order before I examine Goodman's nominalism in detail. This branch of philosophy is sometimes divided into five different kinds:

- Predicate nominalism: 'a' has the property, 'F', if and only if a falls under the predicate 'F'.
- Concept nominalism: 'a' has the property, F', if and only if a falls under the concept 'F'.
- Class nominalism: 'a' has the property, F', if and only if a falls under the class 'F'.
- Mereological nominalism: 'a' has the property, F', if and only if a falls under the aggregate (heap) of the 'Fs'.
- Resemblance nominalism: 'a' has the property, F', if and only if suitable resembles the paradigm case(s) of an 'F'.[2]

[1]W.V Quine, *From A Logical Point of View,* 3rd ed. (Cambridge, Mass: Harvard University Press, 1980), 43.
[2]D.M.. Armstrong, *A Theory of Universals: Universals and Scientific Realism,* Vol. II. (Cambridge/London/New York/Melbourne: Cambridge University Press, 1978), 1-2.

Neither Quine nor Goodman assigned themselves to any of these categories. If one would have to be assigned, I would choose predicate nominalism for both philosophers, as the notion of a predicate, on both Goodman's semantic account and on Quine's holophrastic account, are constructed and therefore non-essentialist notions keeping both of their ontologies far from countenancing universals. But this designation is not completely clear. As we shall see when we examine Goodman's analysis of qualia and property, a descriptive term is assigned to a subject on the basis of whether or not that term typically applies in the numerically greater number of instances. This is more the mereological case as the notion of "paradigm" can carry with it essentialist connotations, as seen in a distinction between the words "sample" and "token"; Goodman repeatedly disavows the use of the word "token" for this reason, i.e., that it carries with it notions of paradigm which in turn have nested within it a relationship between a universal and its particulars. But our designation of Goodman's membership within a particular twentieth century branch of nominalism is not particularly crucial to the dissertation, which examines the effects of Goodman's nominalism on his epistemology, and then the effects of these two on his aesthetics. We now turn to a complete analysis of Goodman's main work describing his ontology, *The Structure of Appearance.*

Chapter II. Goodman's Nominalism.

2.1 Abstract Concepts.

Goodman's major references to abstract entities are in The Structure of Appearance (originally published in 1951); in the article entitled "A World of Individuals" (published originally in 1956 in the book entitled The Problem of Universals and later reprinted in Goodman's own book, Problems and Projects, in 1972); and in the paper written by Goodman and Quine, entitled "Steps Toward a Constructive Nominalism" (published in 1947). The latter has the following bold statement in its first paragraph: "But we cannot use variables that call for abstract objects as values."[1] While they recognize that such a repudiation of abstract objects would include "the unlimited universe of numbers, functions, and other classes claimed as values of the variable of classical mathematics" their reason for the move is because of the "paradoxes that result" when one does assume such variables. These paradoxes, of course, would include the fundamental difficulty of referring to entities whose existence has not been established.

While discarding much that is fundamental to mathematics might seem problematic, the authors argue that infinity cannot be an essential part of mathematics since there is no general principle supported by physicists that "there are more than finitely many physical objects in all space-time."[2] Since we are finite creatures and the physical world is composed of finite objects, there is no reason that our mathematics cannot explain the world in terms that are consistent with the existents of that world, and the issue of explaining instances such as the ancestral relation (which involves recursion

[1]Nelson Goodman and Willard Van Orman Quine, "Steps toward a Constructive Nominalism", *Journal of Symbolic Logic* 12 (1947): 105.
[2]*Ibid*., 106.

into infinity) can be seen as only a problem requiring a translation into a logical notation that does not use variables other than individuals. In other words, it is an issue of clarity. And Goodman and Quine, in a footnote to their article, note that their nominalism is just that - an insistence on clarity: "It might be supposed that the nominalist must regard as unclear any predicate of individuals for which there is no explanation that does not involve commitment to abstract entities."[1]

This often, then, becomes a matter of mere translation. In one of the first examples provided by Goodman and Quine, e.g., the statement "Class A is included in Class B", can be rephrased as "Everything that is in an A is a B."[2] While this problem is fairly easily solved, it is more problematic to solve the ancestral (infinity) problem, e.g., 'b' is an ancestor of 'c'. Frege's method of defining the ancestral relation, accepted by Whitehead and Russell, seems to be unsatisfactory since it will also "involve a class-variable even more essentially." In notation, Frege's logical notation of this is:

$b \neq c \bullet (x) \{c \in x \bullet (y)(z)(z \in x \bullet \text{Parent } yz \bullet\supset \bullet y \in x) \bullet\supset\bullet b \in x\}$.[3]

Goodman's and Quine's way of resolving this is to replace 'class' by 'individual' and 'member' by 'part', and to "stipulate that *b* be a parent and *c* have a parent. This added stipulation insures that *b* and *c* be single whole organisms, rather than fragments or sums of organisms."[1] In their notation:

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[1]Nelson Goodman and Willard Van Orman Quine, "Steps toward a Constructive Nominalism", *Journal of Symbolic Logic* 12 (1947): footnote 107.
[2]*Ibid*., 107.
[3]*Ibid*., 108.

b ≠ c • (∃u) Parent *bu* • (∃w) Parent *wc* • (x){Part *cx* • (y)(z)(Part*zx* •Parent *yz* •⊃ Part*yx*) •⊃ Part *bx*}.[1]

But the problem of translating sentences that assume infinity or other abstract entities as variables is not yet solved, for as they note later in the article, "But our syntax language must itself be purely nominalistic; it must make no use of terms or devices which involve commitment to abstract entities. It might seem that this program could be carried out without any difficulty once we have specified that we are dealing with concrete marks; but actually classical syntax has depended so heavily upon platonistic devices in constructing its definitions that the nominalist is faced with the necessity of finding new means of definition at almost every step."[2] In other words, it is not always easily possible to substitute every class of individuals with a scattered individual and to reconstrue 'member' as 'part'. A simple statement such as "there are more cats than dogs" would require a very long enumeration of the instances, and though they note in discussing this and other similar examples that "we shall try to develop a syntax language that will treat mathematical expressions as concrete objects – as actual strings of physical marks",[3] it seems obvious that a 'more than' relation is clearly not one of the most platonistic of entities. Again, the more difficult challenge is in something like an ancestral relation. In an attempt to devise a general system for translation of abstract concepts into nominalist concepts, the authors devise a syntax language composed of

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[11]Nelson Goodman and Willard Van Orman Quine, "Steps toward a Constructive Nominalism", *Journal of Symbolic Logic* 12 (1947): 108.
[2]*Ibid*., 111.
[3]*Ibid*.

nine predicates, which along with variables, quantifiers, and truth-functional notations, can then give us the following two modes of description: 1) a 'character', i.e., any concrete object that is one of the variables, and 2) an "inscription", i.e., an object composed of characters. (We will see these two definitions again in the aesthetics section of the dissertation.) Together with two rules of inference, the syntax language is intended to translate sentences so that all variables are bound, but the following problem arises with substitution cases:

> We have to find a way within nominalist syntax of defining 'Subst *wxyz,*' meaning that*the formula w is like the formula z except for having free variables like x wherever z contains free variables like y*. Our method of definition depends upon the fact that the condition in the foregoing italics is equivalent to the following one: *What remains when all free variables like y are omitted from the formula z is like what remains when some free variables like x are omitted from the formula w.*[1]

A variable is said to be free in a *wff* (well-formed formula) if it is not preceded by a quantifier, and the resulting open sentence is neither true nor false. Free variables cannot be substituted for bound variables, for a bounded formula is where every occurrence of a variable is bounded by either an upper and/or lower limit. Ridding the system, (at least at one level) of unbounded or free variables is, of course, to open the possibility of having only existential quantification, as unbounded variables are not tied to concrete instances and can be infinitely quantified over. The authors, in their concluding remarks, assess it thus:

"In our earlier sections we studied the problem of translating into nominalistic language certain nonsyntactical sentences which had appeared to be explicable only in Platonist terms. In §5-10 we have been concerned with giving such a translation for syntax. This syntax enables us to describe and deal with many formulas (of the object language) for which we have no direct nominalistic translation. For example, the formula which is the

[1]Nelson Goodman and Willard Van Orman Quine, "Steps toward a Constructive Nominalism", *Journal of Symbolic Logic* 12 (1947): 118.

full explanation in our object language of '(n)(n + n = 2n)' will contain variables calling for abstract entities as values; and if it cannot be translated into nominalistic language, it will in one sense be meaningless for us. But, taking that formula as a string of marks, we can determine whether it is indeed a proper formula of our object language, and what consequence-relationships it has to other formulas. We can thus handle much of classical logic and mathematics without in any further sense understanding, or granting the truth of, the formulas we are dealing with.

The gains which seem to have accrued to natural science from the use of mathematical formulas do not imply that those formulas are true statements. No one, not even the hardiest pragmatist, is likely to regard the beads of an abacus as true; and our position is that the formulas of platonistic mathematics are, like the beads of an abacus, convenient computational aids which need involve no question of truth. What is meaningful and true in the case of platonistic mathematics as in the case of the abacus is not the apparatus itself, but only the description of it: the rules by which it is constructed and run. These rules we do understand, in the strict sense that we can express them in purely nominalistic language. The idea that classical mathematics can be regarded as mere apparatus is not a novel one among nominalistically minded thinkers; but it can be maintained only if one can produce, as we have attempted to above, a syntax which is itself free from platonistic commitments.

At the same time, every advance we can make in finding direct translations for familiar strings of marks will increase the range of the meaningful language at our command."[1]

The question ought to be asked whether or not his reasons for prohibiting abstract entities in his jointly authored "Steps Toward a Constructive Nominalism" are consistent with his other writings or whether his other writings, while rejecting classes, do not reject abstract entities. For example, in "A World of Individuals", he discusses the oft-debated sentence from "Steps Toward a Constructive Nominalism", and states that if he were to write it now, "My own change [as opposed to Quine's stated change of wording] would be not from the categorical to the hypothetical, but from the vaguely general to the more specific. I do not look upon abstractness as either a necessary or a sufficient test of incomprehensibility; and indeed the line between what is ordinarily called "abstract" and

[1]Nelson Goodman and Willard Van Orman Quine, "Steps toward a Constructive Nominalism", *Journal of Symbolic Logic* 12 (1947): 122.

what is ordinarily called "concrete" seems to me vague and capricious. Nominalism for me consists specifically in the refusal to recognize classes."[1] Shortly after in the same text, Goodman says "Nominalism as I conceive it (and I am not here speaking for Quine) does not involve excluding abstract entities, spirits, intimations of immortality, or anything of the sort; but requires only that whatever is admitted as an entity at all be construed as an individual."[2] In The Structure of Appearance, he says much the same thing:

> The nominalistic philosopher like myself will not willingly use apparatus that peoples his world with a host of ethereal, platonic, pseudo entities. As a result, he will so far as he can, avoid all use of the calculus of classes, and every other reference to nonindividuals, in constructing a system.[3]

It is not pertinent to the dissertation to decide this point regarding whether or not his nominalism necessarily precluded abstract entities, or whether his objections to abstract entities were extraneous to the demands of his nominalist system, but suffice it to say that, while the SA was published in 1951 (three years after the article written with Quine), the book itself had essentially been written long before, as it was an extension of his dissertation granted in 1941. So it could not be concluded that the article written jointly with Quine preceded his The Structure of Appearance and thus represents an earlier opinion.

In addition, while it is true that The Structure of Appearance has, at least in part, a phenomenalist foundation, it is not vague or abstract. Goodman's qualia are very

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[1]Nelson Goodman, "A World of Individuals" in *Problems and Projects* (Indianapolis & NY: The Bobbs-Merrill Company, Inc., 1972), 156.
[2]*Ibid*., 157.
[3]Nelson Goodman, *The Structure of Appearance*, 3rd ed., (Boston: Reidel, 1977), 26.

concrete countable entities, and not one confused with vaguely defined sense-data or sensory experience in a way that could lead one to posit abstract entities as necessarily a part of the ontology. As he explains it in The Structure of Appearance:

> An object, or the totality of its presentations, is an event with a relatively long temporal dimension; and parts of it that differ spatially or temporally from one another may differ in other respects as well…..
> Roughly, then, to say that a thing looks green is to make a statement concerning a presented quality, a color quality of some presentation of the thing, while to say that a thing is green is to make a more complex statement concerning the color qualities exhibited by various presentations of the thing. Obviously, the color names are thus used in two different ways in ordinary language: in the one case for presented characters, which I shall hereafter call qualia; in the other, for properties of things.[1]

The 'presented character' – or qualia – is an entity, however phenomenal, that is an individual and can be, at least in theory, located as an entity discreet from other entities. This distinctness of qualia confirms what Goodman himself has characterized as a position of 'super-extensionalism', and it is to that which we now turn.

2.2 Extensionalism

Though a simple statement such as "there are more cats than dogs" would require a very long enumeration of the instances in order to adhere to the syntax set forth in "Steps Toward A Constructive Nominalism", it should be obvious that this kind of enumeration is extensionalist in form. We are actually listing each of the dogs and each of the cats. This is consistent with Goodman's form of extensionalism, which only counts as entities those singular individuals at the lowest level, where any identity of content means an identity of entities.

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[1]Nelson Goodman, "A World of Individuals" in *Problems and Projects* (Indianapolis & NY: The Bobbs-Merrill Company, Inc., 1972), 95.

The traditional form of extensionalism discriminates identity in a slightly different way. He explains traditional extensionalism in "A World of Individuals" as follows. If there are four constituents {a,b,c,d} of a system and there are two classes {K,L} made up of those four entities such that K has the two pairs {a,c} and {b,d} and L has the two pairs {a,b} and {c,d}, systems K and L would not be different. Traditional extensionalism allows this. But this has the consequence, which Goodman was frequently repeating, of increasing the world's entities by two more classes: an increase owed not to the existence of genuinely new entities. Goodman would argue, on the other hand, that there are not the eight entities consisting of the four atoms and the four classes of pairs of them; there are just four entities i.e., the four atomic units. Period. Individuals are such only if they are discreet from other entities; thus, any identity of content means an identity of entities, and the two classes K and L have the same content. This, then, explains his self-proclaimed epithet of "super-extensionalist".

It is perhaps helpful to contrast extensionalism with its opposite, for therein one can find many of the reasons for Goodman's positions not only in regard to extensionalism but also in regard to abstract entities, classes, and properties. Extensionalism is in contradistinction to intentionality, which refers to the having of thoughts, beliefs, desires, or other intentional attitudes. Many of the theorists propounding such a position argue, as did Brentano, for the "inexistence" of the object of those mental attitudes:

> Every mental phenomenon is characterized by what the scholastics of the Middle Ages called the intentional (and also mental) inexistence of an object, and what we would call, although not in entirely unambiguous terms, the reference to a content,

> a direction upon an object (by which we are not to understand a reality…), or an immanent objectivity.[1]

The intentionalist will obviously assert mental contents and abstract objects as entities, and anyone, such as Goodman, who values a sparse and tidy ordering of the ontological universe will abhor such profligate populating strategies. Intentional objects are impossible to precisely describe or clearly delineate. They are impossible to quantify and do not, even in theory, subscribe to ostensive definitions. A nominalist clearly will not want intentional objects or contexts. As he explains the connection:

> This discloses the relationship between nominalism and extensionalism, which springs from a common aversion to the unwonted multiplication of entities. Extensionalism precludes the composition of more than one entity out of exactly the same entities by membership; nominalism goes further, precluding the composition of more than one entity out of the same entities by any chains of membership. For the extensionalist, two entities are identical if they break down into the same members; for the nominalist, two entities are identical if they break down in any way into the same entities. The extensionalist's restriction upon the generation of entities is a special case of the nominalist's more thoroughgoing restriction.[2]

This also explains why, in the article jointly authored with Henry S. Leonard and entitled "The Calculus of Individuals and Its Uses", they analogize their constructional system with Lesniewski's at least partially because that logician also avoided the null set. As they state, "Lesniewski's purpose, quite different from ours, was to establish a general theory of manifolds that would not be subject to Russell's paradox; but since he excludes the notion of a null class, his formal system is virtually the same as that which we interpret as a calculus of individuals."[3]

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[1]Franz Clemens Brentano, *Psychologie vom empirischen Standpunkt*. 3 v. (Hamburg, Germany: F. Meiner, 1974), vol. I. book II, chapt. I.
[2]Nelson Goodman, *Problems and Projects* (Indianapolis & NY: The Bobbs-Merrill Company, Inc., 1972), 159.
[3]Nelson Goodman,"The Calculus of Individuals and Its Uses" *Journal of*

In addition, in analogizing their system to the Boolean algebra of classes, they note that the one difference is in their exclusion of the null set:

> It differs from the Boolean analogue in ways consequent upon the refusal to postulate a null element, although the primitive relation of "discreteness" may be correlated with the Boolean function 'x . y = 0'…..when in the Boolean proposition every expression of the form 'x / y = 0' is replaced by an expression of the form 'x is discrete from y', no reference to the null element remains and every product and negation is either deducibly unequal to the null element or else is conditionally affirmed to be unequal to it.[1]

A null set is at odds with both Goodmanian nominalism and extensionalism as it is literally 'a nothing'. In contradistinction, an entity is a *thing*; thus, to posit something as vaporous as a nothing-set is anathema to the concrete demands of extensionalism.

This restriction on the null set in turn is a restriction on reference and exemplification, for to claim that a symbol is referring to a non-existent entity is as suspect as referring to a null class, for neither has any extension. As he states in his 1984 book entitled Of Mind and Other Matters,

> Exemplification is never fictive – the features or labels exemplified cannot be null or vacuous – for an exemplified feature is present in, and an exemplified label denotes, at least the sample itself.[2]

It is impossible to exemplify something that does not exist. For to understand is to understand the relation between the exemplifying symbol – whether verbal or nonverbal – and that to which the symbol refers. In other words, we understand the world by understanding the reference relationship between words and the objects for which they stand. In order for an object to be in a referencing relation with a word, the object must be

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Symbolic Logic 5 (1940): 46.

[1]Nelson Goodman,"The Calculus of Individuals and Its Uses" *Journal of Symbolic Logic* 5 (1940): 46.

[2]Nelson Goodman,*Of Mind and Other Matters* (Cambridge: Harvard University Press, 1984), 60.

real. One cannot refer to something that does not exist, just as one cannot point to an imaginary creature. This has posed a problem for various philosophers, but Goodman's solution is consistent with the rest of his philosophy. If one is given a fictional or pictorial account of an object that has never existed, Goodman posits the unbroken predicate: 'the-unicorn-picture'. In this unbroken one-place predicate the fictive object 'unicorn' becomes the real object the 'unicorn-picture' and is thus a satisfactory subject for a referential relation. (More will be said about this later in the aesthetics part of the dissertation.)

Clearly, this one-place predicate involves a rejection of fictive objects but it also involves a rejection of meaning accounts of knowledge acquisition. Goodman's epistemology (and his aesthetics) is based on a referential and semantic account. This is an account that rejects the intentional object, since the intentional object is not subject to extensional referencing. Seen historically, semantics developed as a movement in philosophy primarily in the 1930s and 1940s, and was part of a more general attempt to give non-intensionalist accounts of reality, as a concomitant move away from the perceived vagueness of metaphysics. As Roger Scruton has characterized this:

> The semantics approach takes its inspiration from Frege, and in fact seems to move away from the theory of meaning to what Quine has called the theory or reference: that is, its main tendency is to replace questions about meaning with questions about truth[1]

This followed the parallel historical separation of meaning from reference, and was an attempt by Goodman and others to give truth conditions that would not be undermined by the existence of intensional contexts for which we possess no rules of replacement. Meaning was unquantifiable and could give no intersubjective verification; and since it is

[1]Roger Scruton, *Art in Imagination* (South Bend, Indiana: St. Augustine's Press, 1998), 59.

intersubjective verification that gives science its claim to factual truth, it was thought that philosophy ought to extract no less from its discipline. Since meaning, with its intentional contexts, could claim no such validity, it was clear that meaning could be abandoned. But language, on the other hand, is bound by logic; language is bound by truth and it was therefore toward semantics that many philosophers turned. The commitment thus was to reference not meaning, making reference a narrower claim of extentionalism.

Since truth is given by accurate referencing relations, the identity of the object which is referred to is important to clearly delineate. This not only means, as has been shown, forbidding the null set, fictive entities, intentional objects, and meaning contexts, but it also means that any identity of content between two or more entities means an identity of entities. In other words, only a distinction in content gives a distinction in entities. It is now pertinent to move onto a discussion of Goodman's definition of individuals, which is one of the central features of his ontology.

2.3 Individuals

Since common properties are repeatable and independent entities are the foundation for Platonism, any use of variables that have common properties as values commits one to agreeing that those common properties exist and therefore Goodman wants to avoid such variables. But while any variety of nominalism would give him that, what it can't give him is a guarantee that the values of all variables will be of the lowest ontological kind, and that through no logical operations would any of the ontological kinds in the system be anything other than individuals. Goodman needs this as he maintains that since we understand the world through symbols, the philosopher – in determining which symbols to use – must strictly adhere to using symbols in such a way

that does not make ontological commitments to non-existent entities. The only way to do this is to treat all entities as individuals that are distinct in their content but not distinct in their ontological hierarchy, for once any hierarchical ontological distinctions are made there is no way of preventing the profligate growth into the realm of the non-entity, and the nominalist has now (however reluctantly) become a Platonist. (This would be Goodman's criticism of Quine.) It is, as it were, the nominalist's slippery slope argument. But Goodman's position is clear in this respect, as he demonstrates in the following passages from "A World of Individuals":

> The nominalism I have described demands only that all entities admitted, no matter what they are, be treated as individuals. Just what this means, I shall explain in the following sections; but for the moment we may suppose that to treat entities as individuals for a system is to take them as values of the variables of lowest type in the system.[1]

> Let us suppose, for example, that a nominalist and a Platonist start with the same minimal, atomic elements for their systems; merely for comparative purposes take the number of these atoms as 5. The nominalist admits also all wholes or individual sums comprised of these, and so has universe of 2(5) – 1, or 31, entities. He cannot concoct anymore; for whatever individuals among the 31 are added together, the result is another individual among those 31. Our platonist, we may suppose, admits no sums of atoms but admits all classes of them. This, not counting the null and unit classes, gives him also 31 entities. But he further admits all classes of classes of atoms; and by this single step he welcomes into his universe 2(31) – 1, or over two billion, additional entities. And he has no thought of stopping there. He also admits all classes of classes of classes of atoms, and so on ad infinitum, climbing up through an explosively expanding universe towards a prodigiously teeming Platonic Heaven.[2]

Goodman avoids this and defines nominalism, in "A World of Individuals", in the following way: "Nominalism for me consists specifically in the refusal to recognize classes." This of course encompasses the run-of-the-mill definition of nominalism that

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[1]Nelson Goodman, *Problems and Projects* (Indianapolis & NY: The Bobbs-Merrill Company, Inc., 1972), 157.
[2]*Ibid.,* 158-9.

refutes the Platonist who believes that there are two kinds of entities, e.g., individuals and universals, as the nominalist takes it to be true that there is only one kind, e.g., an individual. But Goodman differs with other nominalists in how he defines 'individual'. What he wants to avoid is having multiple entities whose content is not distinct; that is, he wants to avoid saying that two different entities can be made up of the same content. For instance, in the case of a class and its members, which would both be composed of the same entities - there is clearly a distinction of entities without a distinction in content. This is forbidden by Goodman for the purposes of parsimony but it is also for the purposes of clarity, as an ontology that has multiple entities of identical content is contradictory - entities should not be identified as distinct when in fact they are not. In the oft repeated example from The Structure of Appearance:

> If no two distinct entities whatever have the same content, then a class (e.g., that of the counties of Utah) is different neither from the single individual (the whole state of Utah) that exactly contains its members nor from any other class (e.g., that of acres of Utah) whose members exactly exhaust this same whole. The platonist may distinguish these entities by venturing into a new dimension of Pure Form, but the nominalist recognizes no distinction of entities without a distinction of content.[1]

Goodman gives his clearest explication of his notion of individuals in "Calculus of Individuals and its Uses" (published in 1940 but an elaboration of a paper read before the Association for Symbolic Logic and the American Philosophical Association in December of 1936), "A World of Individuals" (published originally in 1956 and reissued in Problems and Projects in 1972), The Structure of Appearance (first published in 1951, with a second printing in 1966 and a third printing in 1977), and "The Way the World Is" (1960). In the latter

[1]Nelson Goodman, *The Structure of Appearance*, 3rd ed. (Boston: Reidel, 1977), 26.

Goodman responds to his critics, who have had more than a decade to reflect on his unusual nominalism, and he defends his definition of nominalism by appealing to the analogous distinction between the ordinary usage of the term 'class' and the logical usage of the term, wherein the ordinary usage assumes that things in the class are alike – for instance, children in a classroom - whereas the logical use allows anything to be in the class – like "Plato and this sheet of paper and the Taj Mahal". In other words, the logician uses 'class' (or 'set') to apply to members chosen not on the basis of any common property, and while this is obviously at odds with the "layman's prelogical usage" it is the precise and rational way to organize the data. Analogously, Goodman's use of the term 'individual' does not correspond to the "layman's prelogical usage"; a menial category Goodman seems to implicitly extend to the (non-Goodmanian) ontologist's usage:

> The contention that a genuine whole or individual cannot consist of widely scattered and very unlike parts misses the point as completely as would the contention that a genuine class cannot consist of widely scattered and very unlike members.[1]

Goodman recognizes that his use diverges from the ordinary, but that, as in so much else in his philosophy, is hardly a deterrent. Thus, a broken plate (to use one of Goodman's favorite examples) is still an individual plate though it be spatially dispersed. His very detailed discussion of this matter is to be found in "The Calculus of Individuals and Its Uses", and in that he explains the consequences of structuring a symbolic system with its primitives as individuals or with its primitives as both individuals and classes, for in neither case is it true

[1]Nelson Goodman, *Problems and Projects* (Indianapolis & NY: The Bobbs-Merrill Company, Inc., 1972), 155-6.

that ‘class’ and ‘individual’ are *a priori* metaphysical distinctions that we are forced to recognize. We construct our systems and we choose our primitives based upon 1) the ability of the constructional system to represent the discourse, and b) the metaphysical and ontological commitments attendant upon such language. In regard to the latter, a system that conceives a particular segment as an individual does not necessitate a definite scheme of subdivision or hierarchy, whereas to conceive a segment as a class “imposes a definite scheme of subdivision - into subclasses and members.” This *a priori* systematization, in addition to committing one to a dubious ontology, has additional logical problems such as those that confronted in Carnap’s Aufbau, seen in his inability to define a “quality-class”, and also seen in the ‘met with’ problem, i.e., that three or more people meet together. In that problem Goodman argues that a traditional logistic is unable to represent the ordinary meaning of the proposition, for the ordinary logistic is unable to distinguish between all of them meeting together or pairs of them meeting separately. Goodman gives other examples of the problem, the first exemplified in the question “What is the relation of the class of windows to the class of buildings?” The problem that a class analysis gives us is that no member of either class is a member of the other, and yet they clearly have a relationship to one another even though the logic cannot represent that. This is, again, a failure of the constructional system to represent the discourse.

Part of his solution is to express this relation as a part/whole relation between individuals instead of accepting the restriction imposed by the ordinary logic, which defines individuals only in terms of identity and diversity, and gives

only a class/members construction. But in order to explain this it is necessary to fully explicate Goodman's position as it is developed in "The Calculus of Individuals and Its Uses", and in order to do so I will first introduce his terminology as he presents it in "Steps toward a Constructive Nominalism".

1. discreetness
    - defined as: individuals which have no part in common
    - two discrete entities "have not only to be spatially discrete, but also temporally discrete, discrete in color, etc."
    - symbolized as: $a \perp b$
2. part/whole
    - defined as: one thing is part of another if whatever is discreet from the latter is also discrete from the former
    - parts and common parts need not be spatial parts
    - the part-whole relation is transitive, reflexive, and non-symmetrical
    - symbolized as: $x < y =_{Df} \bullet z \perp y \supset z \perp x$
3. proper part
    - defined as: Parts less than the whole are said to be proper parts
    - unlike part/whole, proper part is asymmetrical, irreflexive, and transitive
    - symbolized as: $x << y =_{Df} x < y \bullet x \neq y$
4. overlapping
    - defined as: two things overlap if they have a part in common

- the notion of overlapping is equivalent to the denial of the primitive discreteness
- symbolized as: $x \mathbf{O} y =_{Df} (\exists z) \bullet z < x \bullet z < y$

5. fusion
   - defined as: individuals can be summed into a class relation, when each individual is discreet from every other individual
   - symbolized as: $x \text{ Fu } \alpha =_{Df} z \sqsubset x \bullet \equiv_z \bullet y \in \alpha \supset_y z \sqsubset y$

6. nucleus
   - defined as: one individual is a common part of every member of the class, and no class has more than one nucleus
   - symbolized as: $x \text{ Nu } \alpha =_{Df} z < x \bullet \equiv_z \bullet y \in \alpha \supset_y z < y$
   - both fusion and nucleus are "heterogeneous, relating concepts of one type with those of the next higher type. They correspond to the sums and products of classes defined in Principia Mathematica (40.01 & 40.02) But even though PC is applicable to classes, these two notions are applicable only to individuals.

7. negation: defined in the usual terms.
8. the universal element: defined in the usual terms.

Of these primitives, the dyadic relation of discreteness is perhaps the most fundamental as from this comes the part/whole relation and - as more entities are considered - the fusion function, with both part/whole and fusion analogous to class-inclusion. Since the part-whole relation is more stipulative than a class

relation that could (to the layman or to the lax ontologist) rely on common properties, what is conceived as a class in Goodman's system (or more properly, a "whole") and what is conceived as an individual depends solely upon the discourse in which the terms appear. Many distinct classes may have the same fusion: i.e., tables, table-tops, table legs. They share no members, yet they isolate the same part of the total universe. They differ only in "the manner of subdivision that they prescribe for that part". Hence discreteness is relative to the discourse.

Goodman argues that there are several advantages to his system as it is articulated in the "Calculus". (In the subsection **3.5 Qualia**, I will discuss these issues as Goodman presents them in The Structure of Appearance.) First of all, the calculus of the lowest type solves the 'met with' problem. If it is stated that 3 or more people meet, it can be shown in Goodman's logic either that they all meet together or that every pair met. The relation, in other words, can be dyadic, triadic, etc. This 'mutigrade' relation is one having at least two different degrees, whereas a unigrade relation is one of any one degree.

Goodman argues that it is in this example where the problem can ensue, for customary logic cannot treat multigrade relations, since multigrade relations presuppose that an exhaustive classification of specific relations can be devised in terms of each of the definite degrees. Assuming this presupposition, there are two ways multigrade relations can be introduced into the system by the constructionalist: they can be treated either: 1) as a series of relations, with the successive members having successively higher degrees, or 2) construed as predicates taking classes of various magnitudes for their arguments. But whether

one chooses (1) or (2) in introducing multigrade relations, neither the given degree in the series of relations nor the predicates can – by the use of the common logical devices – be reduced to its lower degrees. This is a problem, for the constructionalist must now reject as primitives any predicate a) taking anything other than individuals as arguments, b) any whole hierarchy of relations, and c) any uppermost member of the hierarchy when the identification of the uppermost member of the hierarchy would require that the development of the formal system be postponed until that "investigation of contingent matters of fact" i.e., what the uppermost limit is. (Remember the demands for a bounded variable.)

So now the constructionalist is confronted with two unsatisfactory choices:

1) To use the standard logic of relations, which are developed in terms of a classification of relations according to degree, and are thus inapplicable to multigrade relations that are admitted without interpretation.
2) If multigrade relations are admitted with either interpretation given above (as a series of relations, or construed as predicates), then those multigrade relations cannot be reduced to acceptable primitives. In other words, they seem very much like entities of a higher order than individuals.

The calculus of individuals can help in that it can simplify the primitives needed, it can display the connection between the different degrees of the (a) relation or (b) predicate, and it can now fully express the distinction in meaning between saying that 3 men met together or that 2 met severally.

The key to the solution for the latter problem is the summation of individuals, which is turn, becomes an individual in its own right. The symbol "xSy+z" means that x has a relation to the sum of y and z. In this, the sum of y and z is an individual, so that S takes as relata not merely atomic elements, but the sums of these elements. This same process can be seen in the 'met with' problem. For example, if Smith met with Jones and Brown together, then it means that Smith met with an entity which is the sum of the two. "The sum will not be a person, of course, but is a definable though discontinuous whole." (Much like the broken plate.) In this, $a + b$ is of the same logical type as a or as b, and the fusion of a class is of the same logical type as the members.

All of this is accomplished by using the primitive of discreteness; there is no need to adopt the predicate of classes. To reiterate a point made at the beginning of this section: we construct our systems and we choose our primitives based upon 1) the ability of the constructional system to represent the discourse, and 2) the metaphysical and ontological commitments attendant upon such language. Goodman can now argue that they have solved the 'met with' problem – an instance of 1) and he can argue that the logical concept of the individual is now divorced from the metaphysical and practical "prejudices" of the individual – an instance of 2). Classes can be replaced by wholes, and all the concepts of logic are available as neutral tools. And the disputes between the realist and the nominalist are seen to be matters of "interpretative convenience rather than metaphysical necessity."

From this explication of "The Calculus of Individuals" it should be clear how Goodman takes anything to be an individual. For him, entities differ not in whether they are formed by several (former) individuals or whether they are, so to speak, insoluble, but they differ only insofar as their content differs. Discreteness is the only measurement, and that is not an *a priori* determination but determined by the constructionalist for the purposes of that particular system. This is exactly what we saw in "Steps" when the translation of Frege's ancestral relation into the Goodman/Quine logical syntax resulted in a definition of 'individual' that "may be spatio-temporally scattered, or discontinuous. It presupposes that continuity is not necessary for concreteness."[1] A thing can be scattered and still be a singular individual; a broken plate might be of many pieces but it is still a singular plate, or Jones and Brown may merge. As he states in "A World of Individuals", the constructionalism decides what entities we are willing to recognize, what terms are denoting, and what terms are syncategorematic. Nominalism does not decide those things and, while nominalism is not enough to make a system acceptable, Platonism is enough to make it unacceptable.

Goodman answers his critics in "A World of Individuals" in a series of question/answer scenarios. In answer to those who claim that the "nominalism described is not really nominalism in the traditional sense", he states the following: "Doubtless a good many different theses are equally legitimate descendants of earlier nominalism. I claim no more than that the principle I have set forth is one reasonable formulation of the traditional injunction against undue

[1]Nelson Goodman and Willard Van Orman Quine,"Steps toward a Constructive Nominalism" *Journal of Symbolic Logic* 12 (1947): 109.

multiplication of entities."[2] Later in the same article, he defends his position against the objection that nominalism is not a sufficient guarantee for soundness:

> Nominalism is a necessary rather than a sufficient condition for an acceptable philosophic system. To build well we must also exercise the most scrupulous care in choosing our raw materials….Nominalism does not protect us from starting with ridiculous atoms. It does protect us from manufacturing gimcracks out of sound atoms by the popular devices of Platonism.[1]

He also addresses the criticisms against his very distinct nominalism that posits wholes as a substitute for classes, because it is "forcing the imagination" to accept as single units something that is scattered or a heterogeneous conglomeration. Clearly, the critics claim, this goes against common sense.

Of course Goodman is often wont to go against common sense and is never apologetic for it. To quote J.S. Mill: "unnatural merely means unaccustomed". It is not, in other words, twisting the ontological identity of 'individual' beyond the bounds of reason; it is merely introducing a something to which readers might not be accustomed. "A class for Boole need not have social cohesion; and an individual for me need not have personal integration."[2] Boole is using his definition of "class" as a theoretical definition, which exists within a system of thought and with relation to other definitions. In perhaps a similar move, Goodman is providing a stipulative definition of 'individual' that will then be integrated into larger theoretical definitions. The fact that it does not at all

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[1]Nelson Goodman, "A World of Individuals" in *Problems and Projects* (Indianapolis & NY: The Bobbs-Merrill Company, Inc., 1972), 165.
[2]*Ibid*., 156.

function synonymously with all other philosophers' notions of "individual" does of course not derail Goodman. We ought, he suggests, be less constrained by our presystematic usage of terminology and instead use symbols precisely within a constructed system. "The terminology of a system is irrelevant to the classification of the system as nominalistic or platonistic by the criterion I have explained. So long as a system admits no two distinct entities having exactly the same atoms, it is nominalistic no matter whether its generating relation is called 'E' or '<<' or just 'R', and no matter whether the values of its variable are called 'classes' or 'individuals' or just 'entities'."[1] The only thing that matters is whether two entities have the same content. His system, which stipulates wholes as sums of individuals, keeps those wholes on the same ontological plane as the atoms: e.g., as individuals. Thus, anything can be an individual.

2.4 Classes

In many places Goodman reiterates two main points regarding his nominalism: 1) that it allows anything to be an individual and 2) that it strictly forbids classes. The latter is necessary, for as we have seen in the passage quoted on pages 38-39 (among other places) classes violate the rule that entities differ only if their content differs, and if one were to allow identity without distinction of content then one would no longer have a ontology composed only of individuals. We have also seen that consistent with that position he constructs an axiomatic system - a shell available for interpretation - composed only of individuals; an axiomatic system which certainly rules out classes as

[1]Nelson Goodman,"A World of Individuals" in *Problems and Projects* (Indianapolis & NY: The Bobbs-Merrill Company, Inc., 1972), 166.

an original primitive but, Goodman argues, would be available for the Platonist even though the constructionalism itself is conceived in its simplest and therefore nominalist form.

But the consequences of arguing that anything can be construed as an individual would seem to include the possibility that even classes could be construed as individuals. Goodman confronts this in "A World of Individuals", where he writes: "If the nominalist is free to construe anything he pleases as an individual, can't he even construe a class as an individual?"[1] His initial answer to that question is: "Whatever can be construed as a class can indeed be construed as an individual, and yet a class cannot be construed as an individual."[2]

What this means is somewhat difficult to explicate. He tries to explain it in parable form by telling a story about a game where a man can put any card he wants on his left and on his right, but of course, by definition, if the card presently on the right is moved to the left than it becomes a left-hand card. He gives us the moral of the story by saying, "And whether the Great Dipper is an individual or a class of stars depends upon the system we are using. We can construe anything as an individual (and aside from nominalist scruples we can construe anything as a class): but we can no more construe a class as an individual than we can get a left-hand card on the right-hand side."[3]

What he plausibly seems to be saying is the following. The phrase "Whatever can be construed as a class can indeed by construed as an individual" means that - at a

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[1]Nelson Goodman,"A World of Individuals" in *Problems and Projects* (Indianapolis & NY: The Bobbs-Merrill Company, Inc., 1972), 157.
[2]*Ibid*.
[3]*Ibid*., 158.

presystematic level - before the constructional system has had its definitions determined and its primitives and syncategorematic terms assigned, any of those entities that *might* be construed as a class (say, in a platonic system) *can*, in this particular nominalistic system, be assigned as an individual. The phrase, "yet a class cannot be construed as an individual" refers to those things in an extant platonic system that are already designated as a class. Clearly once something has been designated a class in a Platonic system, it is senseless to rename it an individual. He is making two points: 1) that the difference between individuals and classes (universals) is not a mere difference in terminology - when he says that anything can be an individual he is not merely claiming to stipulatively rename entities; and 2) the difference between whether something is an individual or a class is dependent upon the chosen system; the identity of an entity is not *a priori*.

Has he completely answered his question? Goodman is clear that a nominalist can't construe anything as a class. Presumably, this takes 'class' in all of the three ways he succinctly lists in the beginning of "A World of Individuals": in the 'layman's prelogical' sense as representing a group of things that all share a common property; in the mathematical sense that designates a constructed grouping where similarity is not required; and in the platonic sense that explicitly claims the ontological common property for a group of individuals. So what do we do with classes, thought of as any or all of those definitions?

Goodman seems to treat the term 'class' in two different ways. When designating primitives in the constructionalism, he refuses to recognize the term or allow it to reference an ontological entity. This much seems evident by the previous discussion

regarding his nominalism. But in speaking 'nonsystematically' he often uses the term. What does he mean in these contexts? As he explains in The Structure of Appearance,

> I shall use platonistic language freely in extrasystematic contexts so long as a nominalistic translation is available. For example, "Some couple belonging to the relation R has the same individual as first component as some couple belonging to the relation S" is unobjectionable since it can be readily construed as "There is an x, a y, and a z, such that R x,y and Sx,z" where "R" and "S" are two-place predicates of individuals. I may even make some extrasystematic use of platonistic language I cannot yet translate; but in actual systematic constructions, I shall use nominalistic language exclusively.[1]

This statement is representative of his methodology. He's claiming that platonistic language is translatable into non-platonistic language, and hence it is acceptable to use platonistic language since that use is only provisional. Does this seem sound? In other words, he is trying to argue that there are no classes and that all language referring to classes can be translated into non-class language, and that therefore he will freely use the term 'class' as that usage could be replaced with nominalistic terminology. But in trying to argue for the conclusion that all Platonist language can be translated into nominalist language, he does, though, assume the truth of that proposition in his general discourse. Of course, in order for this practice to be acceptable it would have to be proven that all instances that appeal to classes *can*, in fact, be translated into nominalist language, and that is an *empirical* claim. Without the empirical proof, using Platonist language with the claim that it could – in theory – be translated into acceptable nominalist terms is a promissory note that is not likely to convince anyone except those who are already convinced.

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[1]Nelson Goodman, *The Structure of Appearance*, 3rd ed. (Boston: Reidel, 1977), 32.

But Goodman does provide some examples of translations, as in the statement "there are more cats than dogs". While it would be possible to give an extensional definition (see §I, Chapter II, subsection 2.1) in order to translate a statement affirming a numerical comparison into nominalist language, this is true only insofar as one is willing to introduce as many primitive predicates as needed. But he argues in The Structure of Appearance that an easier approach is to use the one-place predicate of "has more cats than dogs as parts" – which is an individual - along with the two-place predicate "is part of", thereby giving us: "Everything of which every cat and every dog is a part has more cats than dogs as parts" or symbolically as:

$(x)\{(y)(Cy \vee Dy \bullet \supset Pty,x) \supset Hx\}$[1]

But, Goodman concedes, this is also not a satisfactory answer because now we have the predicate "H", which will be needed for every two kinds of things that are numerically compared. But though this solution is not elegant or economical, our problem is now, he argues, no longer whether or not Platonist language (in this instance) can be translated into nominalist language, but whether or not it can be done economically. Clearly, that is a less insidious problem.

A different problem gives a different solution, as in the case of translating a sentence such as "Every species of dog is exhibited". In this Goodman resorts to speaking of wholes rather than classes and the dog's species is conceived as a discontinuous whole composed of dogs. He writes, "Then the sentence may be

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[1]Nelson Goodman, *The Structure of Appearance*, 3rd ed. (Boston: Reidel, 1977), 30.
[2]*Ibid*., 29.

rendered: 'For every x, if x is a species of dog then some y is a dog and is part of x and is exhibited.'"[2] This, too, Goodman notes, is not completely satisfactory, for this solution is not always optional as in those cases where "several classes under consideration correspond to the same whole."[1]

Goodman is arguing that avoidance of the language of classes can be successful if one provides a satisfactory translation into a language of particulars. If one consistently avoids variables that have non-individuals as their values, then the disclaimer of commitment to entities that cannot be proven to exist will be successful. But the question presents itself: How likely is this? Goodman's approach seems much like the approach of scientists trying to find the cure for cancer: one day, hopefully, all this work will be accomplished. He concedes that the task is, at best, daunting:

> But if we can solve the problem of framing such a syntax within the language of individuals, we can similarly solve many of our problems directly within this language, and the devious device of setting up and managing an additional and meaningless language recommends itself only where, as in the case of some parts of mathematics, direct translation is so difficult as to seem hopeless.[2]

It was of course in mathematics – the most contentious of all cases - that Goodman continued to insist classes could be denied while his former collaborator, W.V. Quine, ultimately accepted the designation of a "reluctant Platonist" as Quine felt forced to concede the necessity of such entities for

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[1]Nelson Goodman, *The Structure of Appearance*, 3rd ed. (Boston: Reidel, 1977), 29.
[2]Ibid., 24-25.

mathematical purposes. Goodman's suggestion that the problem is solved by quantifying all terms existentially and determining the referential use of the terms within the proposition, is one he believed would give us only individuals and avoid classes, even in the case of mathematics, which, for him, did not require infinity. Hence the nominalist could always restrict the domain of reference of terms to individuals.

A difficulty for the reader, though, remains: how does one parse his frequent (though 'presystematic') usage of the term 'class'? When he frequently uses 'class' in his 'presystematic' writings, in which way is the reader parsing that term? Goodman does address the issue, as in the following:

> May a nominalistic language contain even so platonistic sounding a predicate of individuals as 'belongs to some classes satisfying the function F"? If we use such a predicate and regard as true some sentences applying it, are we not acknowledging that there are classes? Strangely enough we are not- so long as we take this string of words as a single predicate of individuals. For then the words in the predicate are no more separable units of the language than are the letters in the words, and we cannot take the predicate apart and operate on a sentence containing it so as to derive such a consequence as "there are some classes satisfying the function F". ….The distinction between nominalism and Platonism thus depends not upon what predicates of individuals are employed but upon what values are admitted for the variables.[1]

The linguistic string of words can be made an 'unbreakable' single predicate, making the variable an individual whose value is the function it describes. Since terms function referentially, the unbreakable predicate has replaced the whole string of words, and the troublesome word 'classes' – no longer isolated - is now not referring to a universal.

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[1]Nelson Goodman, *The Structure of Appearance*, 3rd ed. (Boston: Reidel, 1977), 27.

This device of the unbreakable predicate (which we will see again in the aesthetics section) can solve a referring problem for a phrase that describes a mathematical procedure, for then that procedure can be the function to which that phrase is referring. The situation is slightly different when 'class' is used in a less mathematically descriptive way. Goodman recognizes the problem:

> Translation is often very difficult and no one knows yet just how far it can be carried out. Accordingly, one who uses the calculus of classes is seldom in a position to show in this way he is not thereby conceding that there are classes….
>
> Thus when one uses and is unable to dispense with variables taking classes as values, one cannot disclaim the ontological commitment.[1]

His argument is that since the project of translation is an on going project, one does not give up the commitment for a 'cure' just because the endeavor necessitates a long-term labor. In other words, he does not need to claim that he is *unable* to dispense with variables taking anything other than individuals just because in practice he and others have *so far* been unable to do so. But if the platonistic term is only used provisionally prior to proper translation into the syntax of the calculus of individuals, how is the reader to referentially use the term - *as it is being currently used in the given (presystematic) sentence?* In other words, what does 'class' *mean* in a Goodmanian sentence? If the term is literally vacuous in Goodman's scheme, and if we are to understand that is only being used temporarily as a place-holder until a proper translation has been developed, it seems conceptually odd for the reader as words are – again, in the Goodmanian system – used referentially. What exactly is the word 'class' referring to? It is

[1]Nelson Goodman, *The Structure of Appearance*, 3rd ed. (Boston: Reidel, 1977), 25.

not referring to the non-individual platonic entity, since that is denied. Is it referring to 'an-entity-that-will-someday-be-identified-when-proper-syntactic-translation-has-been-provided-and-that entity-will-be-an-individual'? Perhaps, but if that is the sort of theoretical entity that is the reference of the term 'class' in a Goodmanian sentence then it seems not only promissory but ontologically vague.

In addition, it is open for question whether or not that is how the term is, in fact, parsed. Language use is an accrued skill and the meaning of words relies on the translation of those terms based on the past usage. It is worth remembering how he delineates the various uses of the term 'class' in "A World of Individuals": in the 'layman's prelogical' sense as representing a group of things that all share a common property, in the platonic sense that explicitly claims the common property for a group of individuals, and in the mathematical sense that designates a constructed grouping. It is questionable whether the term 'class' can be read without platonic ontological meaning, except in those instances that explicitly refer to the strictest mathematical usage.

Unfortunately, it is an empirical matter if it is possible to read the word 'class' and not interpret it platonically, and it therefore devolves into a question of the psychology of the reader; not a satisfactory locale for settling a philosophical point. It also remains a matter of mere speculation whether or not Goodman was surreptitiously importing Platonist meaning in contexts that would have been strained on a strictly Goodmanian nominalist account. For example, does the

following usage, taken from Fact, Fiction, and Forecast, of the term 'classes' depend on a Platonist interpretation?

> Our treatment of projectibility holds some promise in other directions. It may give us a way of distinguishing 'genuine' from merely 'artificial' kinds, or more genuine from less genuine kinds, and thus enable us to interpret ordinary statements affirming that certain things are or are not of the same kind, or are more akin than certain other things. For surely the entrenchment* of *classes* [italics mine] is some measure of their genuineness as kinds; roughly speaking, two things are the more akin according as there is a more specific and better entrenched predicate that applies to both.[1]

How could this sentence be translated such that it did not appeal to the meaning embedded in the universal 'classes'? It thus remains an open question how such sentences are, in fact, parsed by the reader and it is also an open question how the term itself was intended, by Goodman, to be read.

2.5 Qualia

Goodman's early writings, particularly The Structure of Appearance, were concerned with establishing the constructional parameters of a logical system of discourse. In such an endeavor it is not pertinent to specify all the component entities or to define their ontological status, "any more than we need to know just what business transactions are done before we set up a system of double-entry bookkeeping for them."[2] Nevertheless, it is vital to establish the role that the most

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*Entrenchment is discussed in Section II, Chapter III, subsection 3.2 "Worldmaking".

[1]Nelson Goodman, *Fact, Fiction, and Forecst*, 4th ed. (Cambridge: Harvard University Press, 1983), 122-3.

[2]Nelson Goodman, *The Structure of Appearance*, 3rd ed. (Boston: Reidel, 1977), 34.

basic entity has in the system and to explain its function as that definition establishes the fundamental mechanism by which the system itself operates. Goodman's is a calculus of individuals, and the universe thus constituted then defines individuals as those entities that satisfy the predicate "overlaps", but the "O" is to be interpreted only as syncategorematic. The ontological primitives of the system – the individuals that satisfy the value of the variables that are then operated on by the function of "O" – he defines as "qualia": the presented particular quality specifying color, place, and time – a definition Goodman credits (in a footnote on page 95 of 1977 edition of SA) to C.I. Lewis' *Mind and the World Order*.

The argument by which he arrives at the position of positing "qualia" as the primitive of the system is an argument not dissimilar to Bertrand Russell's in his "Problems of Philosophy". In Chapter IV of The Structure of Appearance, entitled "Approach to the Problems", Goodman takes us through the discussion regarding the distinction between the real and the apparent presentations of an object. While this discussion is often a prelude to idealism, and was reiterated by Russell as the paradigm of the fallacious reasoning of the idealist, Goodman, like Russell, opts for a phenomenal solution to the age-old question of how it is that an object can remain the same while its appearances change. For the idealist, of course, it means that the real thing must be metaphysically distinct from the multiple appearances, but Goodman, by counting temporal specificity as something which is able to give distinguishing content, gives a different interpretation: "To say that the same thing is twice presented is to say that two

presentations –two phenomenal events – are together embraced within a single totality of the sort we call a thing or object."[1] Since Goodman's nominalism defines individuals as differing only when their content differs, then for a (seemingly identical) quale to be presented at two different moments gives us two different qualia. The green of the grass at time T_1 is not the same entity as the green of the grass as time T_2. They are two distinct qualia.

We are, Goodman reminds us, unnecessarily confused by temporal distinctions: "We do not make such a mistake with spatial distinctions for when we discuss the table as an entity composed of its compound parts of legs, a top, etc., we do not feel the need to hypostatize an underlying core of individuality to explain how a leg and a top, which differ so drastically, can belong to one table. Yet when we consider the table at different moments, we are sometimes told that we must inquire what it is that persists through these temporally different cross sections."[2] There is, in other words, no logical reason why we ought to reason one way with respect to differences in spatial identity while reasoning another way with respect to differences in temporal identity. The solution should be identical: distinctions give us a different content, which gives us a different entity. The fact that we might perform a summation of some of these distinct entities thereby making a new individual is a separate move in the game and should not be confused with the creation of a different ontological kind; there is no such thing a the 'real' table independent of the appearances. The leg, top, and

[1]Nelson Goodman, *The Structure of Appearance*, 3rd ed. (Boston: Reidel, 1977), 93.
[2]*Ibid*.

feet are summed and the new individual is the table; likewise the brown square quale at T_1 is summed with the brown square quale at T_2 forming the table as it is identified as an object composed of several phenomenal instances and enduring through time. Thus, an ordinary thing is a sum of various qualia. As Goodman states the problem: "I simply want to emphasize the point that the identity of a thing at different moments is the identity of a totality embracing different elements."[1] The distinction that Goodman makes between the sums that are ordinary things from the sums that are not is given by the function of the primitive predicate "W" , read "with", and defined as:

$Cm(x) = (y)\,(x)\,(y + z < x \bullet y \sqsubset z) \bullet\supset W\ y,z)$[2]

Though this distinction between what constitutes a sum that is an ordinary object and a sum that is not is perhaps less than unproblematic, this difficulty does not concern us for the purposes at hand, as the relevant point is that summations are made irrespective of whether the distinctions are either temporal or spatial, thereby invalidating an idealist interpretation that posits a separate metaphysical entity of a different ontological order. The only existents in the system are qualia and their sums, both of which are ontological individuals.

The fact that qualia are clearly a phenomenal and not a physical entity is a position that must be seen as consequent to the problems experienced by Goodman and his contemporaries with the notion of direct observation. It is also an early formulation of Goodman's coherence theory of knowledge, which will be

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[1]Nelson Goodman, *The Structure of Appearance*, 3rd ed. (Boston: Reidel, 1977), 94.

[2]*Ibid*., 180.

more fully developed in Section II, "The Epistemology". But I shall briefly address each of these in turn at this juncture as it assists in the understanding of both his qualia and in understanding the final subchapter of this section, e.g., properties.

Likeness of presentations of qualia raise the issue of how to characterize the problem of the transitivity of identity through time. If I say that the grass at time T1 is the same color as the grass at time T2, am I not committing myself to construing "green" as a separate entity apart from the grass? No, says Goodman, and refers back to Lewis' treatment of the issue, which distinguishes between the quale – e.g., the momentary and immediate presentation of qualities – and the property e.g., the complete pattern of qualia exhibited in standard conditions. The issue of Goodman's definition of property is dealt with in 2.6 of this chapter, but suffice it for present purposes that the testing of similarity between separate instances of qualia is, for Goodman, close to impossible. I can claim that the green is the same green from a moment ago, but on the basis of what do I make that claim? I cannot hold up the past experience for verification of simultaneous viewing. And there is no standard swatch of color that we harbor in our minds to which comparisons are made.

If the phenomenal unit comprises all the content of the immediate experience and thus is an epistemological reduction of the operative predicates to their most elemental form, then the phenomenal unit is as direct and immediate as is possible to conceive. This Humean version of reality gives us experienced reality in nucleic bits, but it presents the additional problem of confirmation and

intersubjective agreement. I now am confronted with two problems: 1) how can I guarantee that my previous experience was identical to this experience, and 2) how do I know that my phenomenal experience is like yours?

But this line of thinking presupposes that if we were to have the two instances presented simultaneously instead of in temporally distinct moments that we would be able to solve the problem. But, Goodman asks, would we?

It is here that the physicalist enters, countering that only a physically grounded theory that posits objects as the 'raw' experience is available for objective verification necessary for public consensus. The physicalist argues that experimentation and data gathering is done not with phenomena but with objects and it is they that are the subject of experience. Since a phenomenalist account of reality is, by definition, subjective experience, it cannot give an adequate account of *objective* reality. Therefore, the physicalist maintains that only by countenancing objects as the basis for intersubjective facts can we hope to give an account of *knowledge*, defined as that which has a relationship to objective truth.

But the problem relating to the notion of direct observation is far from solved. As Goodman explains the problem:

> The physicalist's charge that phenomenalistic bases are essentially inadequate for a universal language rests chiefly on the admittedly grave difficulties of defining physical things in terms of phenomena. But the physicalist has not proved the problem insoluble…Nor has the physicalist constructed, or shown that he can construct, the comprehensive system he claims is possible on his basis. The physicalist is normally unwilling to accept as primitive such predicates of physics as "(is an) electron"; what distinguishes his program from that of physics itself is that he insists upon beginning with 'observation statements'. Yet if he takes as primitives only predicates that apply to perceptible individuals, and if his claim of

> universality is to be made good, he will have to explain in terms of these the multitudinous imperceptible particles that the physicist discusses.[1]

The physicalist is unable, in other words, to discuss the subatomic reality discussed by physicists; a severe limitation for a theory claiming the objectivity of science. If the primitives of the system are only those things that are perceptible, then the imperceptible (at least to the naked eye) of quantum physics and relativity is left outside the domain of knowable reality. In other words, the so-called scientific basis of physicalism only encompasses the science that is pre-nineteenth century before the crucial years when Ernst Mach was making his discoveries that rejected the idea of an absolute frame of reference for spacetime and the years in the beginning of the twentieth century when Albert Einstein developed his general theory of relativity based on Mach's point of view. A physicalist, Goodman is essentially arguing, would have to abdicate much of contemporary physics to the domain of the phenomenalist.

Direct observation is parasitic on the language used to describe the object or situation and it is doubtful that any description of experience can represent it without conceptualization, inference, analysis, or interpretation. The 'raw' data is illusive. Goodman asks, "What I saw a moment ago might be described as a moving patch of red, as a cardinal bird, or as the 37th bird in the tree this morning; and all these descriptions may be true."[2] Of course the phenomenalist describes it as a moving red patch while the physicalist describes it as a cardinal, but which

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[1]Nelson Goodman, *The Structure of Appearance*, 3rd ed. (Boston: Reidel, 1977), 100-101.
[2]*Ibid.*

of these is the 'raw' data? The question remains: do we see physical objects or do we infer their existence? In conclusion, Goodman argues that neither the phenomenal nor the physical arguments have proven epistemological priority over the other, and that the choice of system then remains the choice of the theorist, whose genuine constraint is only how well-constructed is the system itself and not whether or not it is phenomenalist or physicalist.

It is now that we can address the second issue at hand, namely, how the definition of qualia is part of Goodman's early formulation of his coherence theory of knowledge. Goodman's phenomenalist account of reality has the seeming consequence that likeness of qualia presentation judgements seem to be made by fiat and thus are capricious and without foundation. To use Goodman's example, how do I know that the color of the grass presented now is identical to the color of grass presented an hour ago? This is particularly difficult to assess since the claim is not falsifiable. But if it is not falsifiable when then do we sometimes change our mind and reverse our decision about such matters? His explanation in The Structure of Appearance is slightly different than it is in his later writings, but the embryonic core of his coherence theory is evident:

> Any judgment that a quale of one presentation is the same as a quale of another is open to pertinent criticism that may cause it to be abandoned. If it survives because it is psychologically satisfactory and workable, and because it is compatible with the body of other accepted statements, it may be said to be well verified. Indeed, one may question whether this sort of verification can be sharply distinguished from some more direct process; for, as we shall see in a moment, the notion of 'direct' observation is far from clear.[1]

[1]Nelson Goodman, *The Structure of Appearance*, 3rd ed. (Boston: Reidel, 1977), 99.

Since the notion of direct observation fails to give us raw experience without interpretation the hoped-for epistemological certainty is abandoned. Completely satisfactory verification is impossible since there is not even agreement on *what* it is that constitutes the most basic unit of experience, and also since any characterization of that experience in some way sorts, classifies, and delineates the experience – transforming the unadulterated experience into a translated format. It is impossible to isolate and describe any 'pure' experience, and the objective fact is as illusive as the given.

Therefore, "objective" becomes "intersubjective" and *that* becomes amenable to revision. We call something "objective" when we have (or enough of us have) agreed that it is a fact; intersubjective agreement is the mechanism by which we establish (read: construct) objectivity. But we are often forced to change our minds. We make correlations and posit identity conditions but these can be, and often are, revised either because new information arises or because it is no longer "psychologically satisfactory". In his later writings, especially in Fact, Fiction, and Forecast, Goodman refers to this process as "projection of predicates" and it is there that he more clearly formulates his relativism; a topic thoroughly discussed in Section II of the dissertation.

2.6 Properties

For Goodman, "property" is merely the typically repeated pattern of qualia exhibited by an object. As he states when discussing the usual definition of property, "A better theory has been propsed by C.I. Lewis. He holds that to ascribe a certain property to an object is in effect to describe the complete pattern

of qualia (of the kind in question) exhibited under all sorts of conditions."[1] Goodman basically adopts this definition but with the additional parameter that doesn't take as tokens all the instances but only those instances that "are regarded as critical or standard." It is, in other words, not the union of the set, but only those instances that are deemed typical. Of course, this allows the definition of "property" to be tied into the epistemological notion of the projection of the predicate, but it also allows property to remain as a purely constructed phenomenon. Property is then not seen as the essentialist traits of a thing, or as an entity that is identical and repeatable in various different objects.

In wanting to avoid the definition of 'property' that gives it universal status, Goodman sees property as a quality that is noticeable because it has been often associated with a particular object. For example, if the grass looks green on repeated instances, the metaphysical catalog of the event would be, where C= color, P= place, T= time: {C1, P1, T1}, {C1,P1, T2}, {C1, P1, T3}, {C1, P1, T4}, {C2, P1, T5}. If we view the grass five different times over a period of two hours at the end of the day, the last viewing instance (T5) could give us a slightly different color of the grass due to the setting of the sun; the grass might look more like dark blue-green than like viridian green. But, we would not call the grass "dark blue-green" since that is not the typical color, i.e., it is not the color most frequently presented when the object is in the optimal conditions. We call the grass "green" because that is the color quality most often presented and we

[1]Nelson Goodman, *The Structure of Appearance*, 3rd ed. (Boston: Reidel, 1977), 96.

therefore say the grass has the property of being green. The relationship between qualia and property is thus a relationship of repeated patterns:

"My purpose has been simply to suggest something of the relation between a property of a thing and the qualia of presentations, and to emphasize the difference between the two. It is enough to recognize that to ascribe a property to a thing is in effect to affirm that the qualia it presents under different conditions conform to some more or less fully prescribed pattern."[1]

The idealist construes the predicate "red" as designating a repeatable quality - an entity that exists independently of objects. Goodman, of course, is unable to construe repeatable qualities e.g., property, as universals but he is also unwilling to construe them as individuals. As he explains it:

"To regard the color carmine as an individual is not to regard has-the-color-carmine as an individual; for even if both carmine and a particular that is carmine in color are taken as individuals, the statement that the particular has the color carmine requires use of a two-place predicate in addition to the names of the individuals."[2]

In other words, if we have two individuals defined as follows:

Individual 1 = carmine

Individual 2 = P is carmine

The latter poses two problems: 1) of determining the designata of the predicate, and 2) locating the mechanism by which the entity 'carmine' is related to the entity 'P'. In other words, the question is easily construed to be: how does the universal come to be in the particular?

The solution is: carmine is a quale, not a property. Goodman's view is that by using qualia as the individual unit of the metaphysical system one avoids

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[1]Nelson Goodman, *The Structure of Appearance*, 3rd ed. (Boston: Reidel, 1977), 96.
[2]*Ibid.,* 105.

the problem. The phenomenal unit is the basic sense-data with which one is presented, including the color, time, shape, etc. They are each individuals in and of themselves, and bundled together, they sum to be a new individual as found in the delineated object. Hence, he argues that it avoids the problem of accounting for how the general term "red" comes to be in the specific object. It is a relation of individuals to individuals, organized horizontally not laterally. The property is only the generally repeated pattern of the qualia, and the quale are each the individual. A property is not, though, itself a particular, and it certainly is not a universal. It is just our recognition of a generally repeated pattern of qualia.

Chapter III. The Consequences of Goodman's Nominalism for His Terminology

3.1 Introduction

In many places Goodman reiterates two main points regarding his nominalism: 1) that it allows anything to be an individual and 2) that it strictly forbids classes. He also admits that we construct our systems and choose our primitives based upon the ability of the constructional system to represent the discourse within the constraints of the metaphysical and ontological commitments attendant upon such language. The task is now to examine the immediate effects that Goodman's nominalism has on the kinds of terms available to him in the rest of his philosophy. This constraint will be particularly evident with Nelson Goodman as he, unlike many other philosophers, was always at great pains to remain consistent in his positions. This chapter, which closes Section I of the dissertation, will only introduce the terms and schematically characterize them strictly in relation to his nominalism. The same methodology will be repeated at the end of Section II in relation to how his epistemological constructs further delimit his terminology. Finally, the accrued effects of these constraints will be addressed in the final section, which analyzes the kind of aesthetic theory that is possible for him given his antecedent theories. The ultimate question, of course, is whether the metaphysical and ontological commitments attendant upon Goodman's language do, in fact, sufficiently represent the discourse.

3.2 No Properties

Properties, normally construed, are a kind of intentional object and are, therefore, presumably not concrete individuals. For those maintaining this traditional notion of property, it is identified as being a characteristic such as being human, which is then said to inhere in all individual humans; it is, as such, an essentialist characteristic and therefore is eliminated on Goodman's theory. Properties, as abiding characteristics of individuals, are suspect on a nominalist account. While Russell denied that continuants were ontologically elemental and could instead be reduced to events, he also continued to accept that continuants were real; consequently he also accepted properties and sets. Quine denied continuants as they failed an extentionalist (non-intensional) criterion, and though he ultimately and 'relunctantly' accepted classes, he did not accept properties. Goodman's extentionalism went even further than Quine's, (remember: he called himself a "super-extensionalist") thus making classes, properties, universals, and abstract objects unacceptable. This would mean, strictly speaking, that there are no natural kinds. Any grouping which might exist, say, even of humans, is grouped together by decree, as it were, and not as a consequence that the categorizer correctly ascertained the shared characteristic or property "humanity".

Goodman sees properties as like continuants and continuants as like universals – a slippery slope for the nominalist. Arguing like Ockham, Goodman will say that our faculties are able to discern only individuals as only they are evident to the senses. The rational mind has the capacity to abstract one from the other but this abstraction should not be confused with the correct identification of an independent existent, construed either mentally or nonmentally. Goodman therefore denies properties as either existents

that are separate from the individual and come to reside therein at the moment of existence, and he also rejects the more Aristotelian version of properties such as what Russell, at one point, posited. He also disclaims properties as a genuine source of meaning as those who would claim (e.g., like the medieval Abelard) that they have the very important function of signifying by functioning as the names of things; in other words, Goodman will also not say they are real by virtue of being "in the mind".

They are, to reiterate the analysis made in the subsection of §I, Chapter II, subsection "Properties", only the name that we give to the most frequently repeated qualia in an object. Hence, grass is only called "green" not because it is always in every single instance green but merely because, looked at extensionally, it is so in the vast majority of the cases. For Goodman, "property" is merely the most frequently repeated pattern of qualia exhibited by an object. In the case of grass it just merely happens to be green. This is an extension of a theory proposed by C.I. Lewis, who held that to ascribe a certain property to an object is to describe the complete pattern of qualia exhibited under all sorts of conditions. Goodman changes the parameters such that he doesn't take into consideration *all* the instances but only those instances that "are regarded as critical or standard", where standard is determined quantitatively. It is, in other words, not the union of the set – it doesn't have to be univocal - but only those instances that are deemed *typical*. Of course, this allows the definition of "property" to be tied into the epistemic notion of the projection of the predicate (examined in §II), but, in addition, it also allows property to remain as a purely constructed phenomenon. Property is then not seen as the essentialist traits of a thing, or as an entity that is identical and repeatable in various different objects; he avoids the definition of 'property' that gives it universal status.

But, as we shall see, the example of properties and classes are difficult to assess, because, as I discussed in the subsection of §I Chapter II, subsection "Classes", though Goodman's theory refuses these terms in their traditional usage, the fact that he continues to use the terms leaves the reader with some difficulty regarding their function within the context. The problem as previously pointed out is: how does one parse his frequent (though 'presystematic') usage of the term 'property'? Though he wants a guarantee that the values of all variables will be of the lowest ontological kind, and that through no logical operations would any of the ontological kinds in the system be anything other than individuals, it is difficult to understand his use of the term outside its application in The Structure of Appearance. In his later writings on language and epistemology (e.g., Ways of Worldmaking, Problems and Projects, Fact, Fiction, and Forecast, and Of Mind and Other Matters) we will find some difficulties parsing such terms, but the problem becomes genuinely evident in Language of Art, where the practical applications of terms so defined become strained. Sections II and III are, of course, devoted to these issues.

3.3 No Abstract Objects

As a more general category, abstract objects would include not only the specific one just discussed, e.g., properties, but also several different kinds of things objectionable to Goodman: propositions, tokens, and intentional acts. As something construed by the mind, an abstract object is often thought of as independent of space and time. It should be obvious that such an entity would

have no foundation within a Goodmanian system constructed around phenomenal qualia as the basic unit of experience given within a specific time and place, but it is necessary to explain more fully why Goodman would be unable to accept these entities and why he constructs both his epistemology and his aesthetics with those exclusions in mind. (Classes, counted by some as abstract properties, and the closely related notion of tokens, are discussed in the subsection entitled "Classes". In this section I will discuss propositions and the related notion of intensional objects.)

Propositions, as a type of intensional object, are thought to be timeless complexes of terms, applying either to intentionality of consciousness or to the theory of meaning, whereby the naming of the object is the meaning of an expression, and are therefore a kind of abstract object. In other words, propositions can be either the intention of a mental act (this is Frege's use of the term) or they can be the meaning of the sentence, which is the intensional (with an "s") use of the term. It is important to look at these two possibilities separately as Goodman's disavowal of each is distinct. Therefore, this section will deal with the rejection of the object of an intentional act and its concomitant rejection of abstract objects; the following subsection entitled "Reference Not Meaning" will examine his rejection of the theory of meaning and, hence, of an intensional object.

Franz Brentano is, of course, the proponent of the theory that claimed all acts of consciousness have as their correlate a propositional object. This postulates the propositions as objective and independent of the objects to which the propositions

refer. But it is probably even more important to consider Gottlob Frege's positions, as it is in response to his theories that Russell developed his own point of view, and it was responding to Russell that motivated both Goodman and Quine in their thoughts. Frege claimed that the meaning of a sentence is a semi-Platonic proposition, for it was the attempt to formulate positions against this Fregean idealism that Russell, and many of those who followed him, were motivated in the development of their own philosophies. Frege distinguished between (1) the sentence as written or spoken, (2) the mental idea accompanying that sentence, and (3) the thought – or proposition – that the sentence expresses. The latter, as independent of the thought of a particular speaker, is not subjective or possessed only by that speaker, and has an identity not dissimilar to that of numbers and classes. It is a timeless realm independent of both our mental thoughts and our physical acts. Thus, when we understand a sentence we understand the proposition expressed by that sentence. That's why "This is snow" and "Dies ist schnee" are synonymous. This is the Sinn and Bedeutung distinction, the former being the meaning and the latter being the denotation or reference, with all true sentences having the same referent, e.g., the True, and all false sentences having also the same referent, e.g., the False. Since this propositional object is non-extensional, again, our nominalist must ask: "Just what sort of entity is 'the True'?" There was, of course, no answer satisfactory for the nominalist.

So, for the very early Russell, who accepted this point of view, false propositions as well as true ones are granted existence. This of course brings up

the question, “What is the object of a false proposition?”, which soon forced Russell to adopt the position that propositional acts are a multiple relation having the constituents of: 1) a judging mind, 2) the thing judged, and 3) the two arranged in a certain order. But even this adaptation Quine would claim as an example of an “overcrowded slum”, and, therefore, both Quine and Goodman choose to separate themselves from both Brentano’s notion of propositions as acts of consciousness directed toward an object and from Russell’s multiple relation notion, which still reifies such intentional acts as ‘believing’, ‘thinking’, or ‘judging’.

The nominalist’s obvious question for those who argued for the existence of the object of the intention of a mental act was: ‘What, for example, exactly *is* the object of a judgement?’ The question thus phrased has no answer that, for the nominalist, is not merely a metaphorical answer. A description that would give the constituent parts of the object or somehow describe it in terms that would be satisfactory for those allied to an extensionalist reading of an ontology are, of course, not available. It was argued, therefore, that the theory of intentionality and the abstract objects it posits are both based on the misleading grammatical analysis that relates such verbs as “judge”, “think”, “believe” to terms designating physiological functions such as “see”, “hear”, etc. The two kinds of terms are not, it is argued, analogous. The latter require accusative objects – for example, “I see the ball” - whereas the former do not. It is, therefore, a very simple *de dicto* (in the word) and *de re* (in the thing) distinction – the verb “see” requires an

accusative *de re* whereas the verb "believe" only requires an accusative *de dicto* - in word - only.

The twentieth century move relative to this debate, adopted by Carnap and others, distinguishes intension from extension whereby the intension is the proposition expressed and the extension is the truth-value. (Note the difference between the words "intension" and "intention". The former is generally used in logical contexts and is replaceable with non-extensional. The latter is generally used in philosophy of mind contexts and is identified either with the psychological thesis of intentionality, or with the type of existence in the mind when one is thinking about a non-existent object. This is further discussed in §III, Chapter IV, subsection 4.2 "No Intensions/No Intentions") The relationship between the two is answered by the framework construction, e.g., there are internal questions and external questions. The former are answered by referring to the latter, such that existence claims become either logical or empirical, and the determination of the basic framework is pragmatically decided. For him, the question whether or not abstract entities exist depends only upon the framework adopted; the question must be answered pragmatically and relativistically.

But though Goodman did (like Quine) adopt some things from Carnap, he did not completely adopt the point that meaning was determined by a particular correspondence between the pragmatically determined framework and the derivative internal questions. And though Carnap was trying to argue that these ontological questions were "pseudo-questions", Carnap's answer was still not sufficient for Goodman, who was intent on denying that meaning is a relation –

defined as an entity in and of itself – between a sentence and the objects to which the sentence refers; meaning does not, in other words, hover as a distinct existent over and above the sentence. For him, positing propositions as entities over and above sentences is redundant and unnecessary. Of course, for this nominalist claim to succeed it is also necessary to disclaim synonymy, as the existence of synonymous sentences would necessitate the positing of the thing that both sentences are examples of, and this would of course be an abstract object. If the goal is to rid the theory of the separate entity called 'meaning', which is the reified relation between a sentence and an object, then a theory that succeeds in ridding itself of propositions must also rid itself of the abstract objects of synonymous sentences as an issue of consistency. And Goodman was, if nothing else, rigorously consistent.

3.4 Reference Not Meaning

It is pertinent to remember at this point that propositions, as a type of intensional object, are thought to be timeless complexes of terms, applying either1) to intentionality of consciousness or 2) as part of the theory of meaning, whereby the naming of the object is the meaning of an expression. The former was just discussed in the previous subsection, and the latter can be discussed presently, as those who disagreed with the theory of meaning chose instead the theory of reference. I would argue that the Fregean theory was historically at odd with the other important developments in the larger society at that time, particularly scientific developments in physics, which made such idealism seem

not only not empirically verifiable and hence incompatible with scientific methods, but in fact a little quaint. Russell's defense of public neutral objects in "The Problems of Philosophy" was of course made within the context of larger claims, but the demand for a philosophy consistent with scientific data was a central part not only of Russell's objection to Frege, but also of the whole of twentieth century thought. Not only did the logical positivists follow suit in this pursuit for methodologies equivalent to the rigorous ones found in science, but so did the behaviorists such as H.P. Grice. Something like "the True" as an existent is simply discarded by both the behaviorists and those empiricists who distinguished themselves from the behaviorists.

The latter philosophy is often characterized as part of the theory of meaning, from which the theory of reference was in contradistinction - a distinction made by Quine in "Notes on the Theory of Reference", where he divided it into the theory of reference, which includes denotation and extension, and the theory of meaning, which includes connotation and intension. As Katherine Elgin describes the theory of reference, it is a methodology that takes as its main task to characterize the relations between "a language (or, more broadly, a symbol system) and its objects".[1] And though Goodman, too, adamantly rejected any theory of meaning as he recognized that it was an attempt to give expression to intentional accounts of inner mental activity, behaviorism was recognized by both Quine and Goodman as an attempt to examine inner mental states in ways that accord with public neutral objects; it is a way that accords with science. But for

[1]Catherine Elgin, *With Reference to Reference* (Indianapolis, Indiana: Hackett Press, 1983), 5.

both of them, the behaviorist's emphasis on an analysis of inner mental states was, however it was done, simply the wrong question to be asking.

Semantics, as a kind of theory of reference, was an attempt to choose the 'reference' fork instead of the 'meaning' fork, thereby avoiding the lack of scientific rigor and precision inherent in intensional accounts. Seen historically, semantics developed as a movement in philosophy primarily in the 1930s and 1940s, and was part of a more general attempt to give non-intensionalist accounts of reality, as a concomitant move away from the perceived vagueness of metaphysics. As I previously quoted Roger Scruton, "The semantic approach takes its inspiration from Frege, and in fact seems to move away from the theory of meaning to what Quine has called the theory of reference: that is, its main tendency is to replace questions about meaning with questions about truth."[1] Like Quine, Goodman eschewed the subjectivism of meaning and intension questions, and, for Goodman, the satisfactory solution was to give accounts of ontology, epistemology , and aesthetics through an analysis of the structural relations of the symbols.

Clearly, this follows directly from his nominalism that rejected everything that could not be counted as an individual, construed extensionally, which only counts as entities those singular individuals at the lowest level, where any identity of content means an identity of entities. Reference dovetails nicely with nominalism as referential accounts can easily be given within extensional definitions of objects construed as individuals. Individuals are such only if they are discrete from other entities, and clearly intensional accounts of experience do

[1]Roger Scruton, *Art in Imagination* (South Bend, Indiana: St. Augustine's Press, 1998), 59.

not yield entities that are either discrete from one another or nonmental. The intentionalist will obviously assert mental contents and abstract objects as entities, and anyone, such as Goodman, who values a sparse and tidy ordering of the ontological universe will abhor such profligate populating strategies, for intentional objects are impossible to precisely describe, clearly delineate, or to quantify and do not, even in theory, subscribe to ostensive definitions. Intensional contexts, therefore, are those for which we possess no rules of replacement. Thus, meaning is unquantifiable and can give no intersubjective verification; and since it is intersubjective verification that gives science its claim to factual truth, it was thought by Goodman and others that philosophy ought to extract no less from its discipline. Since meaning, with its intentional contexts, could claim no such validity, it was clear that meaning could be abandoned.

But language, on the other hand, is bound by logic; language is bound by truth and it was therefore toward semantics that many philosophers turned. The commitment, thus, was to reference - not meaning, and predication took precedence over designation.

3.5 No Classes

The type/token distinction, introduced by Charles Pierce, cannot be construed as exactly analogous to the universal/particular distinction as the former only specifies the difference between the particular inscription of a word and that word in general. For example, there were five tokens of the word “the” in the last sentence; the word “the” – apart from any particular instances – is the type. It is necessary to cursorily introduce this terminology here prior to the discussion of classes, as the ontological difficulties

Goodman has with type/token are the same that he has with classes, such that an explication of the latter will serve as an explication of the former for our present purposes. In §III, Chapter I, subsection 1.5 "Goodman on Expression", I will review in more detail his discussion of the type/token distinction as it is in Languages of Art where that is more fully addressed.

The ordinary, non-philosophical usage of the term "class" assumes that things in the class are alike – for instance, children in a classroom. But, as Goodman pointed out in "A World of Individuals", mathematical or logical use allows anything to be in the class – like "Plato and this sheet of paper and the Taj Mahal". This is because the logician uses 'class' to apply to members chosen, and does not define membership on the basis of any common property. If classes are specified on the basis of a characteristic whose possession qualifies the individuals for membership in the set, e.g., {x: Man(x)}, then one is presented with Russell's paradox, which can be explained as follows. There are some sets that are not members of themselves, such as the set of all men (e.g., the set of all men is itself not a member of the set of all men). Other sets, though, are members of themselves (e.g. the set of all things that are not men). The latter is the case because the set itself is not a man, and therefore can be a member of the 'set of all things that are not men'. What, Russell then asks, of the set S whose members are those sets that are not members of themselves. Is S a member of S'? If it is, then it is not; and if it is not then it is.

Russell's paradox, stated in 1902, influenced the development of set theory and fostered the idea that sets are defined by their members rather than by the characteristics required for membership. Therefore, Goodman, in line with that particular point in

twentieth century set theory, argues that, while his notion of sets is obviously at odd with the "layman's prelogical usage", it is the precise and rational way to organize the data. In other words, he is trying to argue that there are no classes, defined as a grouping of individuals who share a trait, and that all language referring to classes so fallaciously construed can be translated into non-class language.

Goodman frequently reiterated that the main characteristic of his nominalism was that it admitted no classes, and that anything can be construed as an individual. Two reasons can be given for this. Firstly, to have classes is to accept the further operations that give us classes of classes, etc., etc. This is to not only to populate his ontological world with non-extensionalist infinity, but it is also to populate the ontology with entities that clearly fly in the face of Ockham's razor. In this case, even if we start with a finite set of objects in the world we can construct an infinite set of entities. That, clearly, is contrary to a Goodmanian sensibility.

Secondly, the traditional notion of classes must be forbidden because they depend upon the recognition of essentialist traits, which, as we have seen in the last three subsections, are completely at odds with Goodman's nominalism. Defined extensionally, Goodman only admits concrete particulars. In the philosophy of mathematics, the formalist maintains that there are no universals, and that classes/sets can be translated into more nominalist discourse e.g., 'numbers' can be translated into 'numerals'. The latter is descriptive of a mark on a page, whereas the former seems to ineluctably lead to a platonic realm. Goodman is, in this way, a formalist, and the commitment is to linguistic signs that are a kind of concrete individual.

Quine, of course, parted ways with Goodman over the commitment to classes/sets, (the terms are used interchangeably) for, Quine argued, though a theory that posits unobservable entities is generally not to be preferred to one that does not posit such entities, it can be preferable when it explains more. Quine's theory of naturalized epistemology is relevant here: philosophy and science are to be seen as continuous and the principles that decide between hypotheses in one ought to be the same principles that decide hypotheses in the other. We cannot, for example, directly observe electrons or any of the sub-atomic particles, yet we posit their existence anyway because with them our theories have increased explanatory power. And the unobservables that constitute sets are extensional objects for Quine, unlike properties, which are intensional objects. Quine thus argues against J.S. Mill's position that all science is directly empirical; for Quine, many of our necessary theoretical constructs cannot be directly observable and yet we are warranted in their assertion. While Ockham's razor dictates that we not unnecessarily multiply entities, Quine urges that we are justified in introducing new entities when the cost of not introducing them is too great – a position that is driven by simplicity requirements.

Likewise, mathematicians working in almost any of the contemporary fields of mathematics such as number theory, integral calculus, or concrete mathematics all freely admit that their work depends upon set theory, though it is an axiomatized set theory, which avoids the intuitive set theory that Russell argued fell into paradox. It is, in other words, impossible to do sophisticated mathematics without sets. Though the attempt to reduce talk about sets to talk

about concrete objects can succeed in a limited number of examples -Goodman's and Quine's paper "Steps Towards a Constructive Nominalism" gave several of those instances - whether or not it can in all instances is, of course, a very different question. And to give up mathematics on the assumption that such a nominalist translation can be so accomplished at some point in the future was, for Quine, to adopt a risky hypothesis with very little evidence to support it.

Again, the question revolves around the fact that the hypothesis that all platonist language can be translated into nominalist language is an *empirical* claim. Without the empirical proof, using platonist language with the claim that it could – in theory – be translated into acceptable nominalist terms is a promissory note and not a scientifically proven fact. And again, the difficulty for the reader is genuine: how does one parse his frequent (though 'presystematic') usage of the term 'class'? His methodology, as previously quoted, is stated thus:

> May a nominalistic language contain even so platonistic sounding a predicate of individuals as 'belongs to some classes satisfying the function F"? If we use such a predicate and regard as true some sentences applying it, are we not acknowledging that there are classes? Strangely enough we are not- so long as we take this string of words as a single predicate of individuals. For then the words in the predicate are no more separable units of the language than are the letters in the words, and we cannot take the predicate apart and operate on a sentence containing it so as to derive such a consequence as "there are some classes satisfying the function F". ….The distinction between nominalism and Platonism thus depends not upon what predicates of individuals are employed but upon what values are admitted for the variables.[1]

The linguistic string of words can be made an 'unbreakable' single predicate, making the variable an individual whose value is the function it describes. Since

[1]Nelson Goodman, *The Structure of Appearance*, 3rd ed. (Boston: Reidel, 1977), 27.

terms function referentially, the unbreakable predicate has replaced the whole string of words, and the troublesome word “classes’ – no longer isolated – is now not referring to a universal or a class. Goodman recognizes the potential problem but maintains that the device of the unbreakable predicate is not conceding that there are classes. We shall see his use of this device in the following subsection entitled “No Fictive Reference”.

As we examine the application of these terms in both his epistemology and his aesthetics, we will be able to explicate more clearly the effects of his nominalist interpretation. Pertinent to this will be the following question: if the platonistic term is only used provisionally prior to proper translation into the syntax of the calculus of individuals, how is the reader to referentially use the term - *as it is being currently used in the given (presystematic) sentence?* In other words, to what does ‘class’ *refer* in a “presystematic” Goodmanian sentence? A version of the typical nominalist question that was addressed to those Fregeans who wanted intensional objects seems appropriate here: ‘To what entity is the word ‘class’ referring?’ It is not referring to the non-individual platonic entity, since that is denied. Is it referring to the negation of that? This of course is not at all what Goodman would want, but it is necessary to examine in detail how the usage of the terms is applied in his epistemology and his aesthetics in order to determine whether or not his terms are not only promissory but ontologically vague.

3.6 No Fictive Reference

A final and less dire restriction is imposed by Goodman, and that is the forbidding of fictive references. As he explains it:

> …some names and descriptions and pictures – such as "Robinson Crusoe" or "winged horse" or a unicorn-picture – denote nothing although each belongs to a system along with other symbols that do denote one or many things. To hypostatize a realm of nonfactual entities for these empty symbols to denote seems to me pointless and confusing. When we speak of a picture as depicting a unicorn, even though there are no unicorns to depict, what we are saying in effect is rather that the picture is a unicorn-picture; we are saying not that the picture denotes anything but rather that it is denoted by the term "unicorn-picture". And we can distinguish unicorn-pictures from centaur-pictures, as we distinguish desks from tables, with no regard to their denoting anything.[1]

The restriction on this is analogous to the restriction on the null set, as both are at odds with both nominalism and extensionalism. A 'nothing' is in contradistinction to a 'thing'; and thus, to posit something as vaporous as a nothing-set or a fictive entity is anathema to the demands of extensionalism construed as constructed out of concrete individuals.

> Exemplification is never fictive – the features or labels exemplified cannot be null or vacuous – for an exemplified feature is present in, and an exemplified label denotes, at least the sample itself.[2]

This has posed a problem for various philosophers, but Goodman's solution is consistent with the rest of his philosophy. If one is given a fictional or pictorial account of an object that has never existed, Goodman posits the unbroken predicate: 'the-unicorn-picture'. In this unbroken one-place predicate the fictive object 'unicorn' becomes the real object, i.e., the 'unicorn-picture', and is thus a satisfactory subject for a referential relation. This treatment of non-being was important to Goodman as it also was to other twentieth

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[1]Nelson Goodman, *Of Mind and Other Matters* (Cambridge: Harvard University Press, 1984), 60.
[2] *Ibid*.

century philosophers for it demonstrated that the contextual definition was what gives the meaning and not merely a constrained predicate-subject relationship.

And non-being was a central issue for it was necessary to understand how sentences could be meaningful even though their constituent terms did not refer to an existent. Metaphysical realists, in both the medieval period and the twentieth century, had the greatest difficulty in providing a coherent picture of the ontological nature of universals because they had the difficult task of explaining *exactly* how a universal took part in the particular in ways that were not merely metaphorical, and the task of the nominalist was then to explain the character of the individual independently of participation of another logical type. The challenge, though, becomes an epistemological one: how does language, which necessarily involves the positing of common terms and fictional entities, become *meaningful*? For it was always the nominalists who had the greatest difficulty in giving a satisfactory epistemological explanation of how it is that we recognize and learn similarity, identity, and instances of non-being. It is to that issue that we now turn.

A. SECTION II. THE EPISTEMOLOGY

Chapter I. Twentieth Century Epistemology

1.1 Introduction

Having explicated Goodman's nominalism and the effects of his nominalism on his concepts and terms available to him, it is now necessary to examine his epistemology and the ways that that epistemology can be developed in light of the parameters established by his strict nominalism; this is necessary in order to eventually examine, in Section III, how both the epistemology and the nominalism affect his aesthetics. In regard to the adoption of an epistemology, it is immediately obvious that Goodman would be unable to posit a rationalist epistemology founded on *a priori* knowledge, as that would be inconsistent with his parsimonious and sparse ontology that demands strict proof for existence claims, and it would also be inconsistent with how Goodman understands the demands of Ockham's razor; but it is less obvious what other options might be unavailable to him. It is methodologically sound to delineate options deemed unacceptable before examining those that are chosen, because the arguments proffered for the latter can only be fully understood once they are seen in the light of what the theorist is trying to avoid. The following first chapter of this section will, therefore, examine the epistemological issue in that negative light, e.g., what arguments presented themselves as invalid to Goodman? This will be examined in consideration of both his ontological commitments and also given the prevailing positions current at the time, for while arguments condemned by others

cannot be given as a necessary reason why Goodman would also not adopt similar positions, it must be admitted that influences do exist. Philosophers do not philosophize in a vacuum and influences cannot be overstated, for they both direct and limit the possible avenues of thought.

Therefore, in order to fully understand Goodman's philosophy it is necessary to explicate the debates current at the time Goodman was first developing his own thought. Most pertinently, he, along with Quine and others, was trying to develop an epistemological framework in conjunction with an ontology that did not succumb to the pitfalls recently suffered by the positivists. But in doing this it must also be noted that Goodman's epistemology in many ways agrees with various tenets of positivism. In summarized fashion, they are as follows:

- All reality is composed of basic building blocks.
- Follow the dictum: "what science cannot discover, mankind cannot know".
- The rejection of the *a priori* and of metaphysical speculation.
- Philosophy, properly construed, is about the language through which we speak about the world.
- A symbolic system can be meaningful because it is an agreed-upon use of constructed symbols.
- An analysis of language in terms of the conditions that make a sentence meaningful provides those conditions that confirm the truth or falsity of that sentence.
- There is only the possibility of a piecemeal analysis.

While he held these many points in common with the positivists, he never claimed affiliation with them. The obvious questions are: 1)why? and 2) in what way does he diverge? The answer to the second question can be summarized by referring to the introduction, written by Geoffrey Hellman, of <u>The Structure of Appearance:</u>

"Goodman's corpus, from the perspective of major theses that emerge, constitutes a rather coherent – if scattered – whole. The most important for approaching Structure can be subsumed under four headings:

1) the methodological outlook of constructionalism;
2) an anti-foundationalist epistemology: rejection of the 'given', of any effort to sever perception from conceptualization (hence of all such approaches to an observation/theory dichotomy for science), and of the a priori, in favor of a modified coherence view of justification;….
3) The emphasis on multiple systems and starting points adequate to their respective purposes along with renunciation of a single correct system embracing all knowledge or reality – methodological and ontological pluralism;
4) The view that what are often taken as 'ultimate' metaphysical questions (concerning constituents or categories of 'reality') are pointless except when relativized to a system or 'way of construing' reference – a kind of metaphysical and ontological relativism".[1]

The second point is the crucial one, as the third and fourth points are a consequence of the second, in ways that will be explained in both this chapter and the next. The problem with 'the given' was a central problem of the 1930s and 1940s, and it was this issue that separated Goodman from the positivists. The original positivists held that 'the given' – those basic experiences that form the foundation of empirical truth – was phenomenalist, but later some of the positivists adopted physicalism after they failed to establish a coherent theory that could make sense of a phenomenal 'given'. Though Goodman's epistemology, as articulated in The Structure of Appearance and in later writings, is a phenomenal one, he yet argues that his constructionalism would also allow a physicalist (e.g., object) epistemology. In order to understand Goodman's position vis a vis these two alternative epistemologies and to understand why he developed an

[1] Nelson Goodman, *TheStructure of Appearance* (Dordrecht, Holland & Boston, U.S.A.: D. Reidel Publishing Company, 1977), xix-xx.

epistemology uniquely at odds with positivism while still maintaining those points held in common with it, it is necessary to briefly review twentieth-century logical positivism, followed by an exegesis of the subsequent development of semantics, for it is the adoption of semantics which, when combined with Goodman's phenomenal-based constructionalism, gives him the distinctive theories for which he is known.

1.2 Goodman Adopts The Postivists' Aversion to Metaphysics

A group of young philosophers in Continental Europe, who called themselves "The Vienna Circle", had members that included, among others, Moritz Schlick, Rudolf Carnap, Otto Neurath, and A.J. Ayer. Beginning in 1922, it soon became a force in the philosophy world, and though Goodman was not directly involved, he was so indirectly. Quine, during a post-doctoral fellowship from Harvard in 1932-1933, attended meetings of the Vienna Circle, and also spent several months in Prague, where he met Carnap. Goodman later joined these meetings, and through his close relationship to both Quine and Carnap, had an intimate knowledge of the positivist programme, which was therefore a prominent contender in debates regarding possible positions for both Goodman and for others.[1]

Though neither Bertrand Russell nor Ludwig Wittgenstein directly joined the Vienna Circle, their influence was enormous. Wittgenstein's Tractatus had established the legitimacy of the view that ontology must be understood as

[1]Alex Orenstein, *W.V. Quine* (Princeton, New Jersey: Princeton University Press, 2002), 5.

reducible to atomic units and that all reality was composed of these as the basic building blocks. This logical atomism was mirrored in language, and hence the basic truth of reality was found in these atomic units and the language that mirrored them, and was not found in either the abstraction of mathematics or in metaphysical speculation. The logical positivists were proposing a methodology that was rooted in the scientific dictum that only provable truths were to be accepted as truths - or as Russell said, "what science cannot discover, mankind cannot know".

This positivist argument can be traced back to the Humean position that also exhibited an aversion to metaphysics. Hume divided knowledge into 1) "relations of ideas", wherein mathematics was relegated to tautological truths exemplifying simply a consistent way of using symbols and seen as containing no statements about the world, and was contrasted with 2) the empirical statements called "matters of fact". It is the latter that hold significance for both Hume and the logical positivists, as these are those things that can gain intersubjective agreement. Goodman, too, was committed to only those things that can gain intersubjective agreement, as he was also committed to the positivist's position that philosophy is not about "the world" (for that is not directly confirmable) but about the language through which we speak about the world, for we can confirm or disconfirm the latter.

The logical positivists were emphatically to deny Kant's unique category of the synthetic *a priori*, which, derived from his adaptation of the Humean distinction between matters of fact and relations of ideas, was reformulated into

"synthetic" and "analytic". The synthetic *a priori*, of which mathematics was the prime example, claimed mathematics as both necessary and *a priori* and also as a subject that was experienced as new information. The positivists' rejection of the synthetic *a priori*, which Kant had defined as both true independent of experience and also synthetic - because it does not tautologically repeat itself but requires the cognitive and constructive act of counting - defined early twentieth-century analytic thought. This is owed to Russell and Whitehead, who, in Principia Mathematica, demonstrated that Kant's famous example of a synthetic *a priori* in the instance of 7 +5 = 12 is essentially a series of 1's on each side of an equal sign, making the statement without constructive and cognitive synthesizing. Therefore, they concluded, there was no synthetic *a priori*.

The rejection of the synthetic *a priori* was, therefore, on the basis that no synthetic proposition could be known *a priori*, and it was thus concomitant with the rejection of everything that could not be established as scientific, empirical fact. While mathematics still had meaning in that we had chosen to use the symbols in that particular way, the meaning was vacuous in the Humean sense of the term, and the entire category of knowledge *qua* knowledge was, for the positivists, composed of empirical fact. Metaphysical speculation, as unprovable claims, was relegated to unsolvable mysteries and not, therefore, deserving of curiosity or investigation. The *a priori* certainly fell into that category. But the problem was not merely that the metaphysicians were doomed to failure - it was that their sentences could not be parsed. As A.J. Ayer stated it, "Our charge against the metaphysician is not that he attempts to employ the understanding in a

field where it cannot profitably venture, but that he produces sentences which fail to conform to the conditions under which alone a sentence can be literally significant."[1] Goodman adopts two related points from this discussion: the Humean notion of mathematics as meaningful because it is an agreed-upon use of constructed symbols is exactly Goodman's argument for the validity of semantics, and secondly, he adopts a positivist analysis of language that gives the conditions that make a sentence meaningful as those conditions which confirm the truth or falsity of that sentence, for those are also the parameters of a semantic analysis. (This is discussed more fully in §II, Chapter I, subsection 1.4: "Goodman Adopts Semantics as Reference, Not Meaning".)

Also deemed as unconfirmable as metaphysics were ethics and aesthetics, where the latter was conceived as statements about beauty, and, since they could not be verified, they were, therefore, not objects of study. To again quote A.J. Ayer, "For, since the expression of a value judgement is not a proposition, the question of truth or falsehood does not here arise."[2] For the positivists, all 'value' statements were statements only about how we felt about the object in question; a position Goodman, of course, was to challenge within the semantic analysis of art. For the positivists and many of the analytic philosophers who followed, both aesthetics and ethics, relegated to the small domain of 'value' philosophy, could not share in the realm of knowledge since they were, by definition, not verifiable. As we shall see in Section III, Goodman's radical claim

[1]A.J. Ayer, *Language, Truth and Logic* (New York: Dover Publications, 1952), 35.
[2]*Ibid.*, 22.

that aesthetics was a part of epistemology must be seen in contrast to the general trend of the time that forbade such a doctrine.

The final point that needs to be made regarding positivism is its continuation of Russell's program that believed in the possibility of a piecemeal analysis e.g., the basis of analytic philosophy.[1] Reacting against the Hegelian excesses fueled by a methodology that demanded a complete understanding of the whole fabric of reality before any understanding of a part could be claimed, Russell and the positivists who followed him were adamant that precision could only be gained in a careful analysis, and that could only be accomplished by looking very closely at a particular problem. Wittgenstein's Tractatus becomes important at this point, for the logical atomism argued therein was thought to be a carefully ascertained analysis of the basic component parts, thereby leading to the accreted structure of the whole, which would likewise be logically and clearly understood. Obviously, this is the methodology adopted by Goodman in The Structures of Appearance.

In conclusion, the criticism of metaphysics in general and of any ontological commitment that might urge one in the direction of intentional meanings was a major tenet of positivism, and was a sustained reaction against idealism and its metaphysical excesses. There was strong support for an ontology that committed itself to only what was directly knowable. Although the positivists initially adopted the phenomenalism of Carnap's Aufbau that

[1]William Barrett and Henry D. Aiken, ed., *Philosophy in the Twentieth Century: An Anthology* Vol. 1-4. (New York: Random House, 1962), Vol. 3, 20.

dovetailed both with a Humean analysis of the immediate unit of experience, (which he had called 'impressions'), and also with Russell's sense-data analysis, some positivists were to move into physicalism –adopting the language of physics and hence the reality of objects - as defined by Carnap after he forsook the Aufbau, and by Neurath. But in either view, the move was emphatically away from metaphysics, idealism, and anything that seemed to insinuate abstract objects and universals. The positivists' verification principle, stated as, "The meaning of a statement is the method of its verification", has the obvious role in denouncing metaphysical claims, e.g., if there is no method of verification, then there is no meaning. This is reminiscent of Hume's dictum that, "When we entertain, therefore, any suspicion that a philosophical term is employed without any meaning or idea (as is but too frequent), we need but enquire, *from what impression is that supposed idea derived*? And if it be impossible to assign any, this will serve to confirm our suspicion."[1] We shall now examine the positivists' phenomenalism and its ability to give a clear epistemology, and Goodman's position regarding that kind of empiricism.

1.3 Goodman Rejects the Positivist's Sense Data and Their Phenomenal Reality

Since Goodman's The Structure of Appearance is phenomenal – seen particularly in the role of *qualia* - it might provisionally be seen as an attempt to incorporate the sense-data theory of Russell and the logical positivists with the atomism and the logical/empirical distinctions of Wittgenstein's Tractatus into a

[1]David Hume, *An Inquiry Concerning Human Understanding* ed. Eric Steinberg, 2nd edition. (Indianapolis/Cambridge: Hackett Publishing Company, 1993), 13.

rigorous analysis of language and immediate experience consistent with scientific principles. (We will ultimately see that this view is provisional only, for Goodman's phenomenalism is in fact like neither.) If the phenomenal unit comprises all the content of the immediate experience and serves as an epistemological reduction of predicates to their atomic form, then the phenomenal unit is as simple and immediate as is possible to conceive. Goodman was clearly trying to get to the very basic unit in his constructionalism, not unlike Wittgenstein's Tractatus. But it is important to note his historical positioning *vis a vis* the other philosophical debates of that time: his phenomenalism in The Structure of Appearance, first published in 1951, is a reworking of his dissertation, finished in 1941. The latter date is five or so years after Carnap had renounced the Aufbau and Neurath, Hempel, and others were arguing for physicalism. In other words, Goodman was not sufficiently swayed by Carnap or the other positivists who chose physicalism.

The question is why, especially as there are problems with phenomenalism. The most obvious difficulty is that since there is a different *sensum* for every different view of a material object, the phenomenalist language makes it difficult to articulate reality without recourse to object-language. Even if this problem is overcome, there is a further difficulty, namely, that since phenomenalism gives us experienced reality in nucleic bits that are experienced privately by the perceiver, it does present the additional problem of confirmation and intersubjective agreement. In other words, I now am confronted with two problems: 1) how can I guarantee that my previous experience was identical to

this present experience, and 2) how do I know that my phenomenal experience is like yours? We will see in §II Chapter II, entitled "Constructionalism" and §II Chapter III, entitled "Worldmaking", how Goodman attempts to resolve those problems. But before I analyze his solution to these two problems, it is necessary to examine a more pertinent reason why he might not have been persuaded by the physicalists, and then we will be in the position to understand how his phenomenalism is different from the positivists.

1.4 Goodman Rejects The Positivists' 'The Given'

The positivists argued that all empirical truths must ultimately be definable ostensively, and that these basic experiences form the foundation for other claims about the world. Reference to immediate experience, called 'the given', was often provided in phenomenalist terms, and as Ayer states, "Accordingly we define a sense-content not as the object, but as a part of a sense-experience."[1] But if it is part of "sense-experience" what exactly does that mean? Does it mean that it is part of my sensing? 'The given' was defined as that on which statements about experience were able to be verified, but the "given" had an odd way of evaporating upon close examination. If it is part of the sense experience, similar to how Hume had conceived it, it seemed unable to cohere as an external unit, such that the empirical fact dissolved into atomic yet private sense data that were part of the perceiver. So the important dilemma presented itself: where exactly was the easily grasped reality, and was it still external? The mind-independent

[1]A.J. Ayer, *Language, Truth and Logic* (New York: Dover Publications, 1952), 122.

reality was clearly becoming more mind-dependent than what an anti-idealist/empiricist would want. If 'the given' only provides information about my immediate sense data, then there is no intersubjective comparison of that data possible – as I cannot know, in a first-person sort of way, of what another person's phenomenal experience consists. The difficulties of committing to an objective reality then become insurmountable.

As Moritz Schlick so succinctly stated the problem at the time:

> "As a question about the existence of the 'external' world, the problem can make its appearance only through drawing a distinction of some kind between inner and outer, and this happens inasmuch and insofar as the given is regarded as a 'content' of consciousness, as belonging to a subject (or several) to whom it is given. The immediate data are thereby credited with a conscious character, the character of presentations or ideas; and the proposition in question would then assert that all reality possesses this character: not being outside consciousness. But this is nothing else but the basic principle of meta-physical idealism. If the philosopher thinks he can speak only of what is given to himself, we are confronted with a solipsistic metaphysics; but if he thinks he may assume that the given is distributed to many subjects, we then have an idealism of Berkeleyan type." [1]

That Goodman rejected 'the given' is clear both from the position he adopted and from the introduction to his The Structure of Appearance, cited above in §II, Chapter I, subsection 1.1 "Introduction". Since the positivists' phenomenal 'given' remained private, some positivists such as Neurath and Carnap argued that the solution was to adopt a language that can be translated into statements about the body, so that the sense datum "green" would be described as "the body of Carnap is in a state of green-seeing", a solution seen as consistent

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[1]Moritz Schlick, Philosophical Papers ed. Henk L. Mulder and Barbara F. B. van de Velde-Schlick, trans. Peter Heath (Boston: Dordrecht D. Reidel Publishing Company, 1979), 260.

with the demands of physical science. But an explication of every sensory experience in the language of physical science is not automatically granted. The difficulty with this position is that it had to be seen as promissory only, for though it *might* be the case that science will someday be able to reduce all experience to physical explanations, that obviously had not yet been achieved. (Nor, we might add, has it been achieved in current times.) Mental concepts can seem ineluctably non-physical, and the claim that they won't always be so is one taken only on faith.

By the time Goodman was to finish his The Structure of Appearance, all of these debates were widely known. The logical positivists' movement began breaking up in the mid-thirties and was completely disbanded by 1938. Goodman's refusal to claim full affiliation with either camp makes perfect sense given the problems evident in both, and the phenomenalism he did adopt must be seen in light of his emphasis on public language and its function in the referential role of semantics, for that is clearly his method for avoiding the privatization of sense-data problems found in the positivists' version of phenomenalism. This is an important point: the motive to abandon the phenomenalism of early logical positivism in favor of physicalism was in order to establish the public neutral object that could guarantee intersubjective agreement. But the physicalist solution failed since it presupposed a scientific reductionism that had not yet happened. Goodman appealed instead to the intersubjective agreement provided for in semantics, and tied his phenomenalism to that. In other words, Goodman's phenomenalism, which might initially appear similar to Russell and the positivists (as I stated in the beginning of subsection 1.2 "Sense Data and Phenomenal Reality"), is not the phenomenalism of

either Russell or the positivists. In order to understand this, it is important to see how reference and semantics play a role in his theories. This will be roughly outlined in the following section and more thoroughly discussed in §II, Chapter III, entitled "Effects of Goodman's Nominalism & Constructionalism on his Epistemology".

1.5 Goodman Adopts Semantics as Reference, Not Meaning

With the 1935 publication of Alfred Tarski's paper "On the Concept of Truth in Formalized Languages", the positivists had a tool with which they could analyze meaningful semantic expressions in language. Tarski's semantic theory does not apply "true" to beliefs but only to sentences; and it does not apply to natural languages, but only to math and logic or artificial languages. The positivists, too, initially preferred not to deal with natural languages with all their vagueness and ambiguity, but rather with ideal languages, and prior to Tarski, when they had limited themselves to a phenomenalist account of reality, they had also avoided accounts of truth as concomitant with their avoidance of unsubstantiated metaphysics. Though the 1937 paper by Carnap, which rejected the Aufbau and argued instead for physicalism, gave the positivists the option to avoid the difficulties inherent in phenomenalism, it was the Tarski paper that gave theory the restored ability for names to designate individuals and for sentences to designate propositions. This in turn gave verification procedures for claims about the world.

The notions of naming, predicating and truth satisfaction have in common the fact that they are semantic relations that relate words to objects in the world. A statement is true if the individual words in it are correctly descriptive of objects and if the relations between the words are correctly descriptive of relations in the world. It refers. The usual semantic view is a variation of the very old view typically referred to as the

correspondence theory: a sentence is true when it corresponds to reality. In correspondence theory, our knowledge is based on a primary group of sentences that are directly confirmable through either experience or ostension. The empiricist argues that this privileged class of sentences has the important place that it has because these sentences are intimately connected with the foundations of our knowledge. It is with these sentences that the idea of a truth condition is given epistemological content.

But Goodman does not claim empiricism or correspondence, but rather coherence within a relativist framework. A word does not correctly describe an object because it truly corresponds to that object, but because we have deemed it so and because it coheres with the rest of the body of knowledge; but we could have defined it otherwise. (This is the constructionalism, which is more fully discussed in §II, Chapter II.) On this reading there is no causal relation between the object and my understanding of the word such that my perception ascertains the natural delineation of the object and links that perception to the assigned name. On a causal account, my perception could not be otherwise than it is; our ideas really do correspond to the things that cause the perceptions. But Goodman does not argue that our perception of the object is caused by the object but that our perception is a constructed one; it is still the case that that word holds true for the object - its non-natural status does not obviate those truth conditions. The difficulty that Hume created with his truncated causal account whereby there was no distinction between the sensation and the perception (a difficulty re-experienced by the early positivists) is somewhat obviated in Goodman's account since, even though the phenomenal sensation is a biologically natural one, the

perception is a constructed one. (Again, more of this will be discussed in §II, Chapter II.)

As has been previously stated, Goodman's semantic account was not his alone and was instead part of a general effort to give an extensional account. Therefore to accept a semantic theory is to assert the empirical claim that truth is found within the constraints of logically replaceable terms that reference objects that can be objectively verified. Despite Goodman's denial that he is an empiricist, he still asserts the first part of this claim e.g. that truth is found within the constraints of logically replaceable terms that reference objects. Goodman believed that the answer to questions of knowledge was in giving an analysis of the relationship between "a language (or, more broadly, a symbol system) and its objects" [1] Language is bound by truth and by logic. And we know the world by means of reference, not by meaning - for truth conditions will be undermined by the existence of intensional contexts for which we possess no rules of replacement. If semantics is the view that language functions symbolically by referring to the objects for which the word stands, it will be made clear in §III how a semantic interpretation of aesthetics is also taking the reference fork and leaving the meaning fork for others.

[1]Catherine Elgin, *With Reference to Reference (*Indianapolis, Indiana: Hackett Press, 1983), 5.

1.6 Goodman Adopts the Rejection of the Analytic

The final instance of a limitation on the possibilities available to Goodman must be Quine's rejection of the analytic. The positivist's rejection of the Kantian synthetic *a priori* was trumped with Quine's rejection of the analytic. In "Two Dogmas of Empiricism", he annuls the distinction between the two categories of synthetic and analytic by arguing that all knowledge is empirical and, hence, revisable. The pragmatic view that all knowledge is science and that we may adapt our explanations and our experience in order to construct congruence between the theory and the practice is a view that had great impact on twentieth-century analytic thought in general as well as on Nelson Goodman in particular. Logic is made by us, as is language. This relativizes knowledge by arguing that all 'fact' is contingent, and that therefore we are free to construct the facts as they best suit our needs. As Goodman stated,

> Indeed I have argued in *Ways of Worldmaking* and elsewhere that the forms and the laws in our worlds do not lie there ready-made to be discovered but are imposed by world-versions we contrive – in the sciences, the arts, perception, and everyday practice…[it] is a question not of whether nature is lawful but of what generalizations we formulate and dignify as laws. The arts and sciences are no more mirrors held up to nature than nature is a mirror held up to the arts and sciences. And the reflections are many and diverse.[1]

In summary, the ways in which Goodman's thought agrees with the tenets of positivism are: reality cannot be known through metaphysical generalizations; reality is not required to be known in its entirety and can only be understood if it is first understood piecemeal; reality is composed of basic building blocks; and

[1]Nelson Goodman,*Of Mind and Other Matters* (Cambridge: Harvard University Press, 1984.), 21.

philosophy is not about “the world” but about the language through which we see the world, and the latter is primarily ascertained through science. He deviates from positivism in that he, trying to avoid their problems with ‘the given’, maintains that language does not correspond to reality in a naturalistic way and, hence, that truth conditions cannot be established by ascertaining correct causal conditions, though we can - with the use of an agreed upon symbolic system - make meaningful sentences. And, of course, he deviates from the positivists in his analysis of art. Having provided an exegesis of what Goodman was trying to avoid, it is now possible to examine in detail Goodman’s epistemology.

Chapter II. Constructionalism

2.1 Adequacy Criterion

Unlike many philosophers who are content to change their positions over time and to view their philosophy developmentally, Goodman's efforts to remain consistent in all his writings, and to rigorously maintain in his later writings the tenets he had established in his earliest work, are striking. For him, any philosophical analysis must be developed upon some basic starting point, and though he was not to advocate an empiricist foundationalism, the starting point obviously needed precision and rigor. It was his attempt, in The Structure of Appearance, to develop the primitive predicate system needed not only for the rest of his own philosophy (which he did, in fact, employ) but for any system regardless of ontological or epistemological commitments. The goal can thus be rephrased as: what is the constructional adequacy criterion for systems in general?

Clearly, the constructionalism must start with a limited set of rigorously defined terms and operations, which can be used by anyone with any particular ontological or epistemological commitments. Again, similar to Russell, Wittgenstein's Tratatus, and the positivists, the operative presupposition was that reality could be ascertained and known only if the language used to describe it was properly axiomatized. Since everyday language is fraught with ambiguities and obscurity, it is (for Goodman) the job of the philosopher to systematize that language in a way that fixes the reference of the terms. This methodology is of course that which is practiced by mathematicians who develop theorems and

axioms or any scientist who has employed technical language, whereby the definition of terms is such that they are specifically applicable within that endeavor. Goodman's approach is to apply that systematization that provides the axiomatic sentences in the investigation of putative epistemological knowledge; hence, the constructionalism. The Structure of Appearance attempts to fix the definitions needed for epistemology and ontology, placed within the language of first-order predicate calculus, such that the system has a set of terms defined within the system and an extra-logical set of terms taken as primitives. Once precise terms form the system, it is then possible to use these terms in the construction and analysis of other more complex experiences. The system is adequate if its theorems are sufficiently comprehensive i.e., if it can accomplish an analysis of the rest of considered experience.

If the goal is to devise procedures of operations and defined terms in such a way that knowledge of the world can be articulated without ambiguity or inaccuracy, those terms must be taken from the presystematic realm. In other words, in order to set the definitions to be used within the system, it is obviously necessary to begin somewhere and that must be with presystematic knowledge. The problem of choice among various alternative primitive predicates must be made on the basis of antecedent clarity, typically tested against background knowledge. These axiomatic starting points are, what he calls, 'the uninterpreted symbolic system', and the choices of primitives must require as little elaboration as possible. "To adopt a term as primitive is to introduce it into a system without defining it. In so far as its interpretation is not clear from ordinary usage, an

explanation – which is not part of the formal system – must be provided." [1] Simplicity and clarity are the guiding requirements. As he states in "The Test of Simplicity", "Systematization is the same thing as simplification of basis" [2] Whether we start with 'qualia' or with concrete individuals depends on the usefulness of each of those options and how simply they can be defined. The question of accuracy (not adequacy) focuses on the relationship between the definientia and the definienda, where the latter is seen as an abbreviated and simple replacement for the former, and it is these notational terms that establish the definitions within the system.

In order to understand Goodman's adequacy criterion and his choice of primitives it is necessary to explicate his position on Carnap, for much of Goodman's early writing, The Structure of Appearance included, is a critique of Carnap's Aufbau, yet Goodman's own constructional system must also be seen as heavily indebted to Carnap, for Goodman admittedly makes use of many of the basic constructs of Carnap's Aufbau. Main differences appear at the outset, though: Carnap begins with the calculus of classes, whereas Goodman uses the calculus of individuals and their sums. Carnap also begins with individuals as the concrete starting points whereas Goodman starts with qualia and builds individuals from their sums. As Goodman explains it: "The problem of interpreting qualitative terms in a particularistic system, of constructing repeatable 'universal' 'abstract' qualities from concrete particulars, I call the problem of

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[1]Nelson Goodman, *The Structure of Appearance*, 3rd ed. (Boston: Reidel, 1977), 45.
[2]Nelson Goodman, "The Test of Simplicity" *Science* Vol. 128 (1958): 1065.

abstraction. The problem of defining predicates pertaining to concrete individuals in a typical realistic system, of constructing unrepeatable concrete particulars from qualities, I call the problem of concretion" [1] Carnap does the former whereas Goodman the latter. But the important point is this: Goodman's adoption of qualia must be seen as a consequence of his criticisms of the Aufbau, which can be summarized as follows.

The two main difficulties Goodman sees in Carnap's Aufbau are: 1) the companionship difficulty, and 2) the imperfect community. The "companion difficulty" is explained by Carnap (quoted by Goodman) as: "For instance, if a certain color, say *r*, happened to occur only in things in which *b* also occurred, separate color classes for the two could not have been constructed"[2] And there is no way to tell whether or not this situation, i.e., of a systematic connection between qualities - might arise. The "imperfect community" problem, seen as a broadened form of the companionship difficulty, is the result of the difficulty Carnap faced when he attempted to establish a similarity class from a group of given individuals through the axiomatically defined 'similar-in-a-respect'. Goodman quotes Carnap's intentions: "Thus a class of elements having a single quality in common can be isolated by defining it as the overlap of two such similarity circles."[3] But "unfavorable conditions" sometimes obtain, Carnap concedes, and the rules do not give a class of all the members of which have at least one of just two qualities; the rules can give us qualities that might be similar

[1]Nelson Goodman, *The Structure of Appearance*, 3rd ed. (Boston: Reidel, 1977), 106.
[2]*Ibid*., 116.
[3]*Ibid*., 120.

but not identical. Since similarity is not transitive, *a* can be like *b*, and *b* can be like *c*, but *a* will not be like *c*, meaning that they are not necessarily similar in the same respect; thus, even though they have formed a similarity class it is a false similarity class, and the only way to avoid it is to either assume that no quality is the constant companion of another, or we have to assume that similarity is transitive; not plausible answers. As the problem of abstraction was to define the conditions under which a set of individuals have a common quality, we find that we must now formulate the definition of the primitive relation of concrete individuals in such a way that it excludes false quality classes like that illustrated between *a, b,* and *c*. Goodman maintains that Carnap would have to introduce a primitive that holds between classes, and the need to resort to extrasystematic assumptions seems objectionable to Goodman.

Goodman also raises difficulties with Carnap's "erlebs" – the atomic units of the system, which were a momentary cross-section of experience that had the ability to be 'similar-in-a-respect' to other erlebs - for Goodman argues that they fail to explain how we can get to the notion of abstract qualities from such concrete entities. The problem of abstraction involves finding a single predicate of particulars defined as a primitive in the system, and if we take the statement "white is the class of all white things" as a primitive it presupposes the admission of the particular instance "(x) is a white thing", then the problem of defining *that* is little different from the original problem. In order to define the particular instances of "(x) is a white thing", a distinct primitive predicate would be required for each instance of a quality term; hardly an economical system. In conclusion

to his discussion on Carnap, Goodman states that "the project of defining qualities in terms of some similarity relation of concrete elements remains unrealized. I shall not at present try to find other means of meeting these difficulties, but turn at once to the construction of a realistic system."[1]

The role that Goodman's nominalism plays in the constructional adequacy criterion is important. In the goal of restricting himself to individuals, he admits that it seems simply easier to start with qualia and construct concrete individuals out of them than to start with concrete individuals and construe qualities in terms of these. Therefore, the concrete individual seen in phenomenal terms is the atomic unit, not because it is necessarily so, but because the problems encountered by Carnap seemed insurmountable to Goodman. But while he explicitly states that the system is intended for both the nominalist and the platonist, he also writes such statements as:

> In discussing criteria of definition and explaining isomorphism, I have used the language of relations and other classes and have assumed that the systems under consideration are also framed in this language. This, indeed, is true of virtually all published systems. However, in stating the definitions of my system, and the extrasystematic rules and principles governing it, I shall confine myself as far as I can to language that speaks of no entities other than individuals, variables construed as taking classes or any other nonindividuals as values; it may contain only individual-variables, quantifiers binding these, individual-punctuation, and predicates (of one or more places) of individuals.[2]
>
> The nominalistic minded philosopher like myself will not willingly use apparatus that peoples his world with a host of ethereal, platonic, pseudo entities. As a result, he will so far as he can avoid all use of the calculus of classes, and every other reference to nonindividuals, in constructing a system.[3]

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[1]Nelson Goodman, *The Structure of Appearance*, 3rd ed. (Boston: Reidel, 1977), 134.
[2]*Ibid*., 22.
[3]*Ibid.,* 25-26.

The position seems to be that, while he is not going to write in classes at the base level, certainly others are free to at latter points in the system. As he is only giving the basic constructional rules of a system, the decision to add classes seems to be available to those so inclined. This, then, would allow a reinterpretation of classes, properties, or abstract objects within the constructs of a platonistic world. The relationship between those concepts and the constructional framework, which harbors them, can be explicated with the following quotes:

> As nothing is at rest or is in motion apart from a frame of reference, so nothing is primitive or is derivationally prior to anything apart from a constructional system.[1]

> The final section concerns nominalism, sometimes thought to be incompatible, or at least uncomfortable, with my irrealistic relativism. Why should such a relativism not be as open to platonistic as to nominalist world-versions? Since for the thoroughgoing irrealist everything including individuals is an artifact, why does he not find classes of classes of classes, for example, as admissible as individuals? All these questions are grounded in a misunderstanding of my brand of nominalism. Once that is corrected, they answer themselves; for the irrealist insists upon distinguishing between well-made and ill-made (or unmade) worlds, and the nominalist's proscription is against a way of making. Irrealism and nominalism are independent but entirely compatible. Indeed, nominalism neither conflicts with nor implies nor is implied by my other philosophical views.[2]

In conclusion, Goodman views platonism as a mistake, but his constructionalism allows that others - but not he – are free to make that mistake. He is only providing the tools for the job, so to speak; the job itself is freely chosen by each philosopher.

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[1]Nelson Goodman, *Ways of Worldmaking*. *4th Printing* (Indianapolis: Hackett Publishing Company, Inc., 1985), 12.
[2]Nelson Goodman, *Of Mind and Other Matters* (Cambridge: Harvard University Press, 1984), 29-30.

2.2 Extensional isomorphism

Isomorphism is routinely defined as sharing the same structure, as when two or more sentences are logically equivalent. This is taken off the model in mathematics, when two or more systems have a one-to-one correspondence, e.g. binary, ternary, etc., number systems are isomorphic in that each single member of one of the sets can be mapped onto a member of the other set because they all represent the real numbers. In twentieth-century philosophy there was both intensional and extensional isomorphism, but of course Goodman only embraces the extensional variety. While the way to test the accuracy of his constructional systems is with the criterion of extensional isomorphism between the definientia and the definienda, the kind of isomorphism required in Goodman's system is not the symmetric sort found in a one-to-one correspondence, because in the Goodmanian system the two domains are not perfectly equivalent. The reasons for this are twofold: 1) that the system is meant to be available to both the platonist and the nominalist, and 2) logicians had agreed that isomorphism – whether intensional or extensional identity – is too strong a criterion to place on logically replaceable terms, for no such identity can totally fulfill such a demand. I will explain each of these separately, beginning with the latter.

Requiring a synonymous relationship between the definientia and the definienda was established, by Quine, to be a false standard; Goodman later argued much the same thing in his article "On Likeness of Meaning". In addition to the synonymy problem, Goodman cites several other reasons for not expecting

the definiendum to be exactly isomorphic with the definiens: 1) there is the empirical fact that sometimes the extension of the definiens is not exactly identical with that of the definiendum, for the latter is a familiar term and hence is often ambiguous and vague; 2) a word is used in more than one way, such as Goodman's example with the word "cape", and precision of correspondence is left in doubt; and 3) there are instances where we are not in complete consensus with regard to the objects that fall under that description - Goodman gives the example of the word 'fern' wherein the common usage lacks agreement regarding which objects are so described. As Goodman explains the problem in Ways of Worldmaking:

> Trouble with the notion of meanings and even with the idea of exact sameness of meaning raised the question whether extensional identity might do, but this in turn proved too tight, for often multiple alternative definientia that are not coextensive are obviously equally admissible. For example, a point in a plane may be defined either as a certain pair of intersection lines or as a quite different pair or as a nest of regions, etc.; but the definientia having these disjoint extensions surely cannot all be co-extensive with the definiendum.[1]

He thus proposes a system whereby each definiendum and definiens is not squared in a one-to-one correspondence, but that the whole *system* of the definiens corresponds to the new *system* of definiendum. As he states it in The Structure of Appearance: "More generally, the set of all the definientia of a system must be extensionally isomorphic to the set of all the definienda."[2] Or in another passage: "It must always be borne in mind that isomorphism of the whole

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[1]Nelson Goodman, *Ways of Worldmaking*. *4th Printing* (Indianapolis: Hackett Publishing Company, Inc., 1985), 100.

[2]Nelson Goodman, *The Structure of Appearance*, 3rd ed. (Boston: Reidel, 1977), 10.

is demanded by our criterion"[1] Though the precise meaning of a correspondence that is between the whole of the definiens and the whole of definiendum is not explicitly provided for by Goodman, he does provide an answer to the obvious objection that this does not give us replacement *salva veritate*, when he writes:

> Yet it may be asked, "What is the good of a system if we cannot be sure that it gives us true translations of true sentences?" The answer is that a system is serviceable if its translations of such sentences as we care about are truth-value-preserving. The demand that its translations of *all* sentences be truth-value-preserving is incompatible with the very demand for flexibility that we have been seeking to meet in formulating a criterion of definition. That there are some statements we do not care about is immediately evident from the fact that in actual practice we accept alternative extensionally non-identical expressions as equally good definientia for the same term.[2]

In Goodman's system, the definientia must be equal to or greater than the definienda. This both provides the basis for the flexibility just discussed and it also allows the constructional system to be usable to both nominalists and platonists, the first of the reasons I gave for the lack of exact isomorphism in Goodman's system. This differential, whereby the definientia is equal to or greater than the definienda, is to allow a distinction of entities without a distinction in content, as the platonist will want to grant classes in addition to individuals, such that the class {x,y} can itself be the class of a class {{x,y}}, etc. Though it violates Goodman's nominalism and he wouldn't construct his ontology thus, the Goodmanian constructionalism, placed into the hands of the (misguided) platonist, would be able to. Again, the isomorphism is applicable to the entire constructional system and not to merely the definiendum and definiens found in one definition. As Katherine Elgin has expressed this:

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[1]Nelson Goodman, *The Structure of Appearance*, 3rd ed. (Boston: Reidel, 1977), 16.
[2]*Ibid*., 17.

> The reference of a term depends not on its use in a single sentence, or on its use in a sentence in a context, but rather on its role in a language. It is important that this be construed as a metaphysical claim, not an epistemological one.[1]

2.3 Anti-foundationalism

In the debate between the physicalists and the phenomenalists, Goodman argues that neither camp has proven the other inadequate nor has either camp proven itself adequate to the full task at hand. The phenomenalist fails in innumerable ways, as does also the physicalist. (See subsections 1.3 "Goodman Rejects the Positivists' Sense Data and Their Phenomenal Reality" and 1.4 "Goodman Rejects The Positivists' 'The Given'" of Chapter I of §II) In addition and perhaps more importantly, they both share the fundamentally mistaken assumption that they each are ascertaining reality in a direct and unmediated way. Foundationalism is a methodology that presupposes that there is a correct way to garner the truth – seen in correspondence terms – of a reality ascertained directly and unmediated by our cognitive structuring. The desire for a Cartesian epistemology free from doubt is abandoned by Goodman, as it was by others in the twentieth century. Therefore, the belief that there is an epistemological primacy in one or the other of the rival positions is not one Goodman has agreed to hold. As he states it:

> To me the debate seems a futile one, for I do not know how one would go about determining what are the originally given lumps.[2]

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[1]Catherine Elgin, *With Reference to Reference* (Indianapolis, Indiana: Hackett Press 1983), 9.
[2]Nelson Goodman, *The Structure of Appearance*, 3rd ed. (Boston: Reidel, 1977), 101.

Both phenomenalism and physicalism assume that we can know reality directly, and Goodman's disagreement on this account is a fundamental tenet of his philosophy. He continues to consistently articulate this latter point in many different writings, two examples of which are as follows. He states, in 1951, in The Structure of Appearance:

> Apart from the argument of universality, we have seen that the physicalist and the phenomenalist each claims the advantage of epistemological priority for his own sort of basis. Actually the argument does not seem to me very sound on either side; for the whole question of epistemological priority is badly confused. The claim is that one basis corresponds more closely than another to what is directly apprehended or immediately given, the one more nearly than the other represents naked experience as it come to us – prior to analysis, inference, interpretation, conceptualization.[1]

And again, in 1984, he states in Of Mind and Other Matters:

> …And this points to my most serious misgiving about Gibson's proposal: that the notion of 'the information provided by an optic array' is much too elliptical to serve the purpose at hand. The amount and kind of information derived from an optic array or anything else is usually no constant function of what is encountered but varies with the processing.[2]

Both of these quotes illustrate that Goodman refuses to believe that we are capable of viewing reality directly, and therefore, we are unable to determine the (preconceived) structure of reality. As he commented in the introduction of Languages of Art, "The reader of my first book understands that the more accurate title would be 'Structures of Appearance'."[3] There is no one structure of reality; there are multiple. And one could start with phenomenal entities or

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[1]Nelson Goodman, *The Structure of Appearance*, 3rd ed. (Boston: Reidel, 1977), 101.
[2]Nelson Goodman, *Of Mind and Other Matters* (Cambridge: Harvard University Press, 1984), 11.
[3]Nelson Goodman, *Languages of Art.* 2nd ed. (Indianapolis: Hackett Publishing Company, Inc., 1976), xii.

physical entities; the choice is arbitrary, for neither properly corresponds to a univocal 'reality' as 'reality' is not singular and cannot be directly known.

Goodman is, therefore, unprepared to prefer either kind of epistemology over the other, and it is a central point of his philosophy that his constructionalism does not compel him to do so. The important factor in the choice of ground elements in a constructional system is not whether one starts with a phenomenal or physical basis, but how precisely one constructs the definitions and operations. In fact, given the constructionalist approach, he is free to adopt either position as a starting point, as he states:

> I happen to be primarily concerned with problems treated by phenomenalistic systems; and the systems to be considered in this book are all phenomenalistic. But it should be clear by now that I neither make nor recognize any claim that any of the sytems has an advantage of epistemological fidelity over physicalistic systems in general or over an alternative phenomenalistic system.[1]

For the goal of constructionalism is to produce a working system that provides coherent statements, not statements that correspond to a world unstructured, for there is no such world as that. We do not, therefore, have to provide foundationalist certainty, as there is no such thing. The question is of primary importance to Goodman. There is no way, even in theory, to ascertain 'the given'. If we look at the different ways of describing the world and ask ourselves what is the actual thing that is being differently described, we are at a complete loss for a description. As he states it in "Ways of Worldmaking":

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[1]Nelson Goodman, *The Structure of Appearance*, 3rd ed. (Boston: Reidel, 1977), 103.

> What, then, is the neutral fact or thing described in these different terms?…(a) and (b) are but two among the various ways of organizing it. But what is it that is so organized? When we strip off the layers of convention all differences among ways of describing it, what is left? The onion is peeled down to its empty core.[1]

There are two further points worth noting:

1) Both phenomenalism and physicalism are kinds of empiricism, and Goodman rejects empiricism in favor of coherentism.

2) Any preference between rival systems is rejected by Goodman, in favor of a radical relativism.

In regard to the first point, Goodman opposes the traditional empiricist position that all knowledge is built on the foundation of basic perceptual experiences that are known directly, free of conceptualization, and determined causally. For Goodman, there is no such thing as an unconstructed (natural) experience. Even immediate sensory data is not free from constructed conceptualization.

In regard to the second point, Goodman rejects all kinds of 'isms' except nominalism. As he states in Of Mind and Other Matters:

> The basic answer, I think, is that the materialist is at heart an absolutist; he demands not merely that his own program be accepted but that alternative nonmaterialistic programs be banned. Our retreat from intentionalist and extensionalist identity criteria had the effect, indeed, the purpose, of admitting for instance definitions of points in terms of lines as well as of lines in terms of points, of admitting both realist and particularistic systems, physicalistic and phenomenalistic systems, etc.[2]

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[1]Nelson Goodman, *Ways of Worldmaking* 4th Printing (Indianapolis: Hackett Publishing Company, Inc., 1985), 118.

[2]Nelson Goodman, *Of Mind and Other Matters* (Cambridge: Harvard University Press, 1984), 46.

2.4 Coherentism

As noted earlier, Goodman disavowed the correspondence theory of knowledge, yet his commitment to coherentism is obviously not complete since his constructionalism requires that some individual statements must have initial credibility apart form their relations to other statements as the system must be constructed from these initial statements. While these statements are not immune from revision, they must be seen as credible independently from their coherence with other statements; hence, Goodman maintains a modified coherentism. Goodman states, too, that the coherentism for which he argues is a pluralistic one:

> More venerable than either utility or credibility as definitive of truth is coherence, interpreted in various ways but always requiring consistency. The problems, here, too have been enormous. But the classic and chilling objection that for any coherent world version there are equally coherent conflicting versions weakens when we are prepared to accept some two conflicting versions as both true. And the difficulty of establishing any correlation between internal coherence and external correspondence diminishes when the very distinction between the 'internal' and the 'external' is in question.[1]

The radicalism of this is obvious. Goodman is allowing, as it were, different 'realities' as contemporaneous to one another, and he is also denying the Carnapian distinction between the framework questions and internal questions, thereby relativizing all knowledge. Since the process of perceiving the world is not, for Goodman, a passive one and is instead an active one whereby we construct our knowledge as we process it, there is no 'world' over and apart from

[1]Nelson Goodman, *Ways of Worldmaking* 4th Printing (Indianapolis: Hackett Publishing Company, Inc., 1985), 124-125.

our knowledge of it. This is discussed more thoroughly in §II, Chapter III, subsection 3.3 "Metaphysical Pluralism: Worldmaking".

Of course, if we give up correspondence, then the ascertaining of truth becomes, perhaps, problematic. As Goodman states the problem:

> Moreover, if there is no independent world to match a version against, what constitutes truth and what are the tests for it?[1]

The potential criticism is that Goodman's pluralistic coherentism would allow for anything as long as that particular world in question was self-consistent. In answer to this Goodman posits the notion of 'rightness' as opposed to 'truth':

> Yet our making by means of versions is subject to severe constraints; and if nothing stands apart from all versions, what can be the basis and nature of these constraints? How can a version be wrong about a world it makes? We must obviously look for truth not in the relation of a version to something outside that it refers to but in characteristics of the version itself and its relationships to other versions…But the answer cannot lie in coherence alone; for a false or otherwise wrong version can hold together as well as a right one. Let us begin by looking at some of these that have to do with varieties of rightness other than truth.[2]

The kinds of worlds Goodman is talking about are the worlds 'built' by various investigative disciplines, such as physics, psychology, music, biology, visual art, etc. What makes a statement true in any one of these disciplines is whether or not it coheres with other accepted statements within that same discipline; not whether or not the statement can correspond with an uninterpreted world, for the latter is inconceivable to Goodman. As previously quoted:

> And so we may regard the disagreements as not about the facts but as due to differences in the conventions – of lines, points, regions, and modes of combination – adopted in organizing or describing the space. What, then, is

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[1]Nelson Goodman, *Of Mind and Other Matters* (Cambridge: Harvard University Press, 1984), 33.
[2]*Ibid.,* 36-37.

> the neutral fact or thing described in these different terms?…(a) and (b) are but two among the various ways of organizing it. But what is it that is so organized? When we strip off as layers of convention all differences among ways of describing it, what is left? The onion is peeled down to its empty core.[1]

As we shall see in this section, the construction of worlds is a consequence of the process of induction and, in turn, its product of projection, which Goodman defines in his essay "The Theory of Projection" as published in Fact, Fiction, and Forecast, as the process whereby we sort valid predictions from invalid predictions; the difficulty arising as both are based on observed regularities. Thus, a hypothesis is said to be actually projected after some of its instances have been determined as true but other instances have yet to be examined. Our minds work by noticing patterns and from the multiplicity of available patterns we choose some to project and others to ignore. Why we choose some and not others depends on what we value and what is the intent of the investigation; but it is never the case that we are merely a *tabula rasa* on which the world is neatly imprinted:

> The search is no longer for a raw given or fixed forms of the understanding or a unique and mandatory system of categories. Rather knowing is conceived as developing concepts and patterns, as establishing habits, and as revising or replacing the concepts and altering or breaking the habits in the face of new problems, needs or insights.[2]

Because the process of observing the world necessarily involves the creation of that which we do observe – since we select and project voluntarily the data to be so constructed – Goodman emphatically is arguing against the very notion of 'a

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[1]Nelson Goodman, *Ways of Worldmaking* 4th Printing (Indianapolis: Hackett Publishing Company, Inc., 1985), 118.
[2]Nelson Goodman, *Of Mind and Other Matters* (Cambridge: Harvard University Press, 1984), 19.

given' while simultaneously arguing against any correspondence theory of knowledge.

But these 'worlds' are not complete; absolute completeness of a system is not to be expected. Any discipline can be a systemization of the data that can be accomplished in several different ways that differ in ontological commitment, making them mutually incompatible. And it is important to note that all systemization is provisional only; the practice and the theory are both revisable.

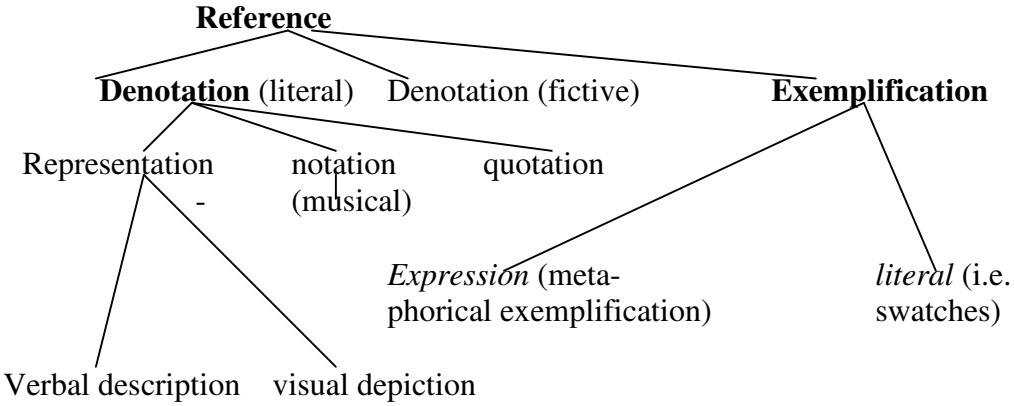
2.5 Relativized Reference

Unlike Quine, Goodman is not concerned about the origin of linguistic signs, e.g. how it is that we come to have them, but rather he is concerned about delineating the various relationships that "may obtain between a term or other sign or symbol and what it refers to"[1] Goodman explicates the various ways that symbolic reference is used in understanding the world, and, thus, reference is the genus encompassing all the separate species of denotation, representation, expression, and exemplification - with representation and expression being two different kinds of denotation; more specifically, expression is, as he says in Languages of Art a kind of "converse denotation" and falls under exemplification. (It is unclear whether or not the 'converse denotation' should be thought to be Goodman's final definition on exemplification, as he disavows that it is 'converse denotation' in Of Mind and Other Matters, when he says: "Exemplification indeed involves denotation, by inversion, yet cannot be equated with the converse

[1]Nelson Goodman, *Of Mind and Other Matters* (Cambridge: Harvard University Press, 1984), 55.

of denotation; for exemplification is selective, obtaining only between the symbol and some but not others of the labels denoting it or properties possessed by it."[1] This was published in 1984, sixteen years after Languages of Art, but he does not develop the thought any further, and most commentators adhere to the LA definition.) (Exemplification is discussed more fully in §III) As he states in LA, the term 'referent' is a general term for anything referred to, whether denoted, exemplified, or expressed. He also states, "Representation and description, as we have seen, are denotative while exemplification and expression run in the opposite direction from denotation."[2]

Graphically, it can be shown thus:



[1]Nelson Goodman, *Of Mind and Other Matters* (Cambridge: Harvard University Press, 1984), 59.
[2]Nelson Goodman, *Languages of Art* 2nd ed. (Indianapolis: Hackett Publishing Company, Inc., 1976), 233.

Goodman, in Of Mind and Other Matters, describes exemplification as "nondenotational reference…reference by a sample to a feature of the sample."[1] The most frequently cited example of Goodman's is the tailor's swatch, which exemplifies the color and weave of the fabric, but not its size or shape. In that same book he defines 'expression' as involving "exemplification of a label or feature that metaphorically rather than literally denotes or is possessed by a mark or other symbol."[2] Both exemplification and expression, though, must be seen as kinds of symbolic referencing, and hence as ways that things stand for other things. This notion of 'reference' is a primitive in Goodman's constructionalism.

A quick retelling of the history of reference is useful at this juncture. When Frege differentiated meaning from reference, it was left to Russell to distinguish those cases that referred to an actual entity from those cases that did not; hence, 'a unicorn' need not refer, yet the concept of a unicorn can be meaningful. That the sentence was a symbolic unit was reiterated by Russell when he said "a proposition is just a symbol", but it was not he but Quine who was prepared to discard meaning altogether. An entity, such as Quine's example in 'Pegasus', is explained by saying that predicates are not things that name entities but are certain linguistic expressions that are parts of sentences and therefore they refer but they do not name; an important point, since names can easily mislead us to the assumption of meaning as in an entity named. And names, Russell had shown, can be converted to descriptions. Furthermore,

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[1]Nelson Goodman, *Of Mind and Other Matters* (Cambridge: Harvard University Press, 1984), 59.
[2]*Ibid.,* 61.

meaning presupposed that synonymy could be established independently of meaning, which was not the case, hence, placing meaning in an untenable position. Quine, thus, preferred reference over meaning. And Goodman, coming of philosophical age at this time, joined the movement toward reference, but outside the framework of a correspondence theory. While the empiricists will argue that a privileged class of sentences is immediately connected to the foundations of our knowledge, and hence it is with these sentences that the idea of truth conditions has epistemological content, Goodman cannot take that route. Since, for Goodman, to have meaning is only to successfully refer – and that reference is done within the constructionalism and its notion of truth – truth itself must be differently explicated. Reference, then, is relativized to its particular sphere of knowledge. In the final section on Goodman's Constructionalism, we now turn to the relativized nature of his epistemology.

2.6 Relativized Constructionalism

In order to conclude this section of Goodman's constructionalism, it is necessary to reiterate the point of Goodman's constructionalism: it is to supply a system for providing the primitive (e.g. undefined) predicate basis for any theory. In order to do this, he must give the criteria of adequacy and accuracy for the constructional system, and though simplicity is obviously a guiding consideration, he must yet confront the dilemma of choosing between alternate primitive predicate bases. It is in the first chapter of The Structure of Appearance, entitled "Constructional Definition", that he articulates his notion of how it is we gain definitions for "an uninterpreted symbolic system", i.e., that

system that has not yet to be constructed and so has yet to have symbols that meaningfully refer. In so doing, he is also giving us an account of relativized and self-contained systems of knowledge - the only systems available to us.

The difficulty of deciding on primitive predicates is explicated by Goodman by presenting and then discarding several competing options regarding the adoption of definitions. First he examines the position that definition is gained by giving extensional identity between the definiendum and the definiens, but the fallacy with this is that it presupposes that one already knows the truth-value of the sentence. But if we do know this at the outset, "the whole test becomes useless; for its purpose was to determine whether points and p-classes of volumes are indeed the same."[1]

He therefore discards this as an option and his next suggestion is, then, to adopt a substitutability criterion as a test of "the accuracy of a constructional definition rather than as a test of denotative equivalence." But this of course presupposes a translatability of sentences, because in order to substitute we must first translate. Again, the potential option is discarded.

The final option seems to be the best:

"About the best we seem to be able to do toward a criterion along the lines so far considered is this: a definition must be such that every sentence we care about that can be translated into the system shall have the same truth value as its translation. But this is no criterion at all without some specification of what

[1]Nelson Goodman, *The Structure of Appearance*, 3rd ed. (Boston: Reidel, 1977), 6.

sentences we 'care about'."[1] This is solved if we again look at the parameters of the requirements for establishing definitions:

1. *'…it must always be borne in mind that isomorphism of the whole is demanded by our criterion'* [2] In other words, we are no longer attempting to give definitions to isolated sentences, (since neither definitional equivalence nor substitutability of individual sentences were successful), but to the symbolic system as a whole.
2. *'…since extensional identity of definiendum and definiens is no longer required, a given term may alternatively de defined by any of several others that are not extensionally identical with it.'*[3] The definitional satisfaction is responsive to contingencies and may be altered if the needs of the larger system so require. Therefore:
3. *'…a system is serviceable if its translations of such sentences we care about are truth-value-preserving…the demand that its translations of all sentences be truth-value-preserving is incompatible with the very demand for flexibility that we have been seeking to meet in formulating a criterion of definition…the criterion of isomorphism succeeds in providing for just the appropriate flexibility'*.[4] The isomorphism is not a one-to-one correspondence between the definiendum (the term being defined) and the definiens (the defining expression), but a weak extensionalism between the whole system of concepts

[1]Nelson Goodman, *The Structure of Appearance*, 3rd ed. (Boston: Reidel, 1977), 9.
[2]*Ibid*., 16.
[3]*Ibid*., 17.
[4]*Ibid*.

> to which the definiendum belongs and the whole newly constructed system to which the definiens belongs.

What Goodman has claimed is a constructionalism that is coherentist and that can be revised based not on satisfaction of empirical verification, but on the basis of whether the larger system demands it. In this way, Goodman can use the referential criterion of semantics without the demand that it be referring to anything empirical. Hence, many worlds.

It is important to note one result of this constructional relativism: it does not take the notion of an unrelativized similarity as a primitive. Even though a collection of particulars may stand in a similarity relation to one another it does not mean that they share a common trait. There are no natural kinds. Since all knowledge is relative to the system in which it is being analyzed, reference always has to be relativized to some (constructed) system. Furthermore, since all perception is tainted by the combination of habituation, preferential projection of predicates, categorization of data, etc., we can never claim that our knowledge is a irect ascertaining of neutral data. As Goodman states it:

> I am convinced, with Wartofsky, that there is no one correct way of describing or picturing or perceiving 'the world' but rather that there are many equally right but conflicting ways – and thus, in effect, many actual worlds.[1]

Several pages later, he revisits this point when he adds:

> The search is no longer for a raw given or fixed forms of the understanding or a unique and mandatory system of categories. Rather knowing is conceived as developing concepts and patterns, as establishing habits, and

[1]Nelson Goodman, *Of Mind and Other Matters* (Cambridge: Harvard University Press, 1984), 14.

> as revising or replacing the concepts and altering or breaking the habits in the face of new problems, needs, or insights. Reconceptions, reorganization, invention, are seen to be as important in all kinds of knowing as they are in the arts.[1]

Goodman is arguing for an epistemology that is based on the referential nature of symbol systems embedded in all constructionalisms, which are built and revised as demanded by evolving needs for systemic categorization of knowledge. Each system, or 'world', is self-contained and the referencing functions of the symbols are applicable only within those systems; making knowledge itself relative.

Having explained Goodman's notion of constructionalism and how systems of knowledge are built on an uninterpreted system, it is now possible to explain Goodman's "worldmaking".

[1]Nelson Goodman, *Of Mind and Other Matters* (Cambridge: Harvard University Press, 1984), 19.

Chapter III. The Effects of Goodman's Nominalist Constructionalism on His Epistemology

3.1 Induction and Projection of Predicates

Nelson Goodman's article "The New Riddle of Induction", published in Fact, Fiction, and Forecast in 1954, elicited not only many, many responses in the philosophy journals but also earned its own book entitled Grue: The New Riddle of Induction (edited by Douglas Stalker), the end of which has a 316-entry annotated bibliography with each entry referencing Goodman's "grue" paradox. The word "grue", as used in "The New Riddle of Induction", was defined by Goodman as:

> …all things examined before *t* just in case they are green but to other things just in case they are blue.[1]

Hilary Putnam, in his introduction to the fourth edition ofFact, Fiction, and Forecast, describes the predicate grue as: "If it is either observed before a certain date and is green, or is not observed before that date and is blue."[2] Obviously, this applies to the emeralds examined before time *t* because they were found to be green, and, therefore, they are grue. So we have good reason to believe that since all emeralds before time *t* were green, and hence grue, that all emeralds after time *t* will also be grue. But in that case, they will also be blue.

Since evidence statements regarding all the emeralds before *t* confirm that they are all grue, they also unfortunately confirm, in turn, both of the competing hypotheses, e.g., 1) that all emeralds are green and 2) that all emeralds are blue.

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[1]Nelson Goodman, *Fact, Fiction, and Forecast* 4th ed. Cambridge: Harvard University Press, 1983), 74.
[2]*Ibid*., vii.

Though we – safely outside the experiment – know which predicate is truly projected and, therefore, know that the emeralds will be green, the logical difficulty is that that information cannot be garnered only from the evidence presented. The difficulty, in essence, is how to distinguish law-like hypotheses from accidental ones.

The word, derived from James Joyce's word "gruebleen", which was published in 1939 in his novel Finnegan's Wake,[1] was used to illustrate the main problem in induction: how do we distinguish the properties that we can correctly project from a sample to the wider population from those properties that cannot be so projected? Hume had, according to many philosophers in the past, incorrectly seen the problem of induction as how to justify induction - a problem since we have neither experience nor necessity from which to draw any predictions that we might have about the future. Hume, again according to some, then spoke only of the origin of inductive generalizations, e.g., habit, and did not, therefore, address the more pertinent problem of the justification for induction. Goodman recasts the problem, noting that Hume attempted to give the necessary and sufficient conditions for valid induction, which were, in fact, an attempt to define valid induction, and he notes, "we owe belated apologies to Hume"[2] But Hume's reliance on habit to explain induction was, to Goodman, incomplete: "the problem

[1]Douglas Stalker, "Introduction" in *Grue! The New Riddle of Induction* ed. Douglas Stalker (Chicago and Las Salle, Illinois: Open Court Publishing Company, 1994), 1.
[2]Nelson Goodman, *Fact, Fiction, and Forecast* 4th ed. Cambridge: Harvard University Press, 1983), 64

of induction is not a problem of demonstration but a problem of defining the difference between valid and invalid predictions."[1]

And this is not so easy as it might seem. Carnap, Hempel, and others had devoted extensive parts of their writings attempting to codify inductive practices, and rival positions such as confirmation theory, Baysian logic, etc., abounded. But it was Goodman who, by arguing, in effect, that inductive logic – unlike deductive – is simply without the syntax that enables us to formally delineate valid from invalid, silenced those attempts. The notion that induction could have a valid form was abandoned. But the problem of distinguishing which regularities could be projected into the future and which regularities would not be projected still remained - hence, the 'new' riddle. In other words, any object has numerous variables associated with it, and some of those variables are repeated instances seen in past examples of the same kind of object as is seen in the present, i.e. this year's couch is soft, large, brown, and made of rough fabric – just like last year's. But here is the difficulty: some of those repeated variables will be predicted by the viewer to be repeated in the future but some others will not be so projected. On what bases are some projected yet not others?

Goodman explains induction as the process of projecting valid predicates when they positively correlate with past inductive projections of the culture, and, contrary to that, we decide not to project predicates when they yield "unacceptable inferences"[2] It is the latter that we call invalid projections, and

[1]Nelson Goodman, *Fact, Fiction, and Forecast* 4th ed. Cambridge: Harvard University Press, 1983), 65.
[2]Ibid., 63.

that applies when the inference "violates a rule we are unwilling to amend"[1] He uses the example of the word "fish": we used to apply the word to whales, but ultimately we were forced to admit that such a definition violated other definitions in ways that were unacceptable, i.e., it violated other rules we were unwilling to amend. Hence we re-defined the word "whale" so that the other definitions might remain. Not unlike Wittgenstein's late philosophy, Goodman is maintaining that the usage determines the definition and the definition determines the extension of the term. He describes this process thus:

> The point is that rules and particular inferences alike are justified by being brought into agreement with each other….
>
> An inductive inference, too, is justified by conformity to general rules, and a general rule by conformity to accepted inductive inferences. Predictions are justified if they conform to valid canons of induction; and the canons are valid if they accurately codify accepted inductive practices.[2]

It had been thought, by Hempel and others, that the problem of determining what distinguishes valid from invalid inductive generalizations must be found within the distinction of law-like generalizations and non-law-like generalizations. But what the 'grue' paradox showed was that equally confirmable hypotheses can be projected, e.g., the next emerald can be green and the next emerald can be grue, and, therefore, blue, on the basis of the given evidence. To say that valid predictions can be determined if we base them on past regularities doesn't answer the question because there are past regularities that we do not project. As Goodman states, "Regularities are where you find them, and

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[1]Nelson Goodman, *Fact, Fiction, and Forecast* 4th ed. Cambridge: Harvard University Press, 1983), 64.
[2]*Ibid*.

you can find them anywhere. As we have seen, Hume's failure to recognize and deal with this problem has been shared even by his most recent successors."[1] The question still remains: how do we know something is law-like?

The answer is both social and constructionalist. It is social because we project predicates that are 'entrenched' due to the fact that they are in accordance with the practice of our community. As he explains it in the essay that follows "The New Riddle of Induction", which is entitled "The Problem of Projection":

> Plainly 'green', as a veteran of earlier and many more projections than 'grue', has the more impressive biography. The predicate 'green', we may say, is much better *entrenched* that the predicate 'grue'.[2] [italics his]

Goodman is pointing out that we do not see the law-like nature of the inductive generalization in the form of the statement itself, but we see the inductive generalization in the larger context of social practice. It is not syntax that determines valid induction but conformity to social practice. Goodman reiterates this point in many of his writings, as the following two excerpts show:

> What makes a category right? Very briefly, and oversimply, its adoption in inductive practice, its entrenchment, resulting from inertia modified by invention.[3]

And, in Ways of Worldmaking, he makes a similar point:

> A primary factor in projectibility is habit…[4]

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[1]Nelson Goodman, *Fact, Fiction, and Forecast* 4th ed. Cambridge: Harvard University Press, 1983), 82.
[2]*Ibid*., 94.
[3]Nelson Goodman, *Of Mind and Other Matters* (Cambridge: Harvard University Press, 1984), 38.
[4]Nelson Goodman, *Ways of Worldmaking* 4th Printing (Indianapolis: Hackett Publishing Company, Inc., 1985), 128.

> Rightness of induction requires rightness of predicates projected, and that in turn may vary with practice.[1]

The answer is also constructionalist in that we are free to re-make our world; inductive practices, which are the fundamental mechanism with which we cognize, are determined by social practices, yet we – as a collective of individuals – are able to remake those patterns. We can consciously alter our habits, and, in fact, that is exactly what constantly changing cultures do. Because we sometimes amend our inductive rules to be in conformity with certain practices that we do not want to abandon, and because we likewise sometimes are willing to abandon practices instead of changing rules, we are constantly able to re-create our social entrenchment habits. Theory and practice are inter-related yet mutually affecting. The principle is one of pragmatism, which is a strand of thought that continually resurfaces in Goodman's philosophy. The important point to notice is that Goodman never appeals, as does Quine, to any kind of innate structures governing the entrenchment process, such as an innate ability to have made comparative similarity judgements. There are no natural kinds for Goodman. Thus, induction forms an essential element in Goodman's worldmaking and in his relativism and his pluralism, which I will separate into individual subsections; though their concerns implicate one another, I will first explain each independently.

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[1]Nelson Goodman, *Ways of Worldmaking* 4th Printing (Indianapolis: Hackett Publishing Company, Inc., 1985), 129.

3.2 Epistemological Relativism

While Goodman certainly discusses his relativism in his first book, The Structure of Appearance, and repeatedly in other publications, it is the primary focus of his second-to-last publication, namely, Ways of Worldmaking. Of the seven chapters in the book, the first four had been published in journals, and it is the first chapter, "Words, Works, Worlds" that clearly explicates both his relativism and his worldmaking. In what can easily be seen as incorporating Russell's theory of descriptions and his notion that phrases do not refer though complete sentences do, Goodman states in the beginning of that chapter:

> Rather, we are inclined to regard the two strings of words not as complete statements with truth-values of their own but as elliptical for some such statements as "under frame of reference A, the sun always moves" and "under frame of reference B, the sun never moves" – statements that may both be true of the same world.[1]

Both of these statements do not, so to speak, refer in and of themselves, but are truncated from the larger system of which, properly viewed, they are an integral part. In other words, they are 'true' relative to their individual systems of descriptions.

That there are many different systems, varying from physics, biology, Impressionist art, and literature, which cannot be reduced to any of the others, is both an argument for epistemological relativism and an argument against those empiricists who posit a given, and also against both the phenomenalist and the physicalist who each claim epistemological priority. Goodman is arguing that there is no one world, neither in the sense that any of them are reducible to a more

[1]Nelson Goodman, *Ways of Worldmaking* 4th Printing (Indianapolis: Hackett Publishing Company, Inc., 1985), 2.

fundamental one, (clearly, in this way he differs enormously from Russell), nor can they all be combined and through conjunction form one complete world, for the 'truths' in one are not necessarily truths in another. As he states:

> We cannot test a version by comparing it with a world undescribed, undepicted, unperceived, but only by other means that I shall discuss later. While we may speak of determining what versions are right as 'learning about the world', 'the world' supposedly being that which all right versions describe, all we learn about the world is contained in right versions of it; and while the underlying world, bereft of these, need not be denied to those who love it, it is perhaps on the whole a world well lost.[1]

We are better off, he is saying, if we give up on the false hope that "monopolistic" philosophies offer us, along with giving up the false promises of a correspondence theory of truth. All knowledge is relative to the system in which it resides, and not only can different systems not be reduced to each other, but the 'truths' within one system are relative only to that system, making all knowledge relative: "Not only motion, derivation, weighting, order, but even reality is relative."[2] And Goodman is unflinching in his relativism. He refuses to reduce the claim that incompatible systems are also equally right systems to merely a case of saying the same thing in different ways, for that would presuppose the legitimacy of synonymy. The latter is an assumption that Goodman, along with Quine, has rejected, as for example, in his article "Likeness of Meaning", published in 1949, wherein he argued that even a synonymy based on extensional definitions would also not yield two terms with the same meaning. Hence, we do not have different versions of the same thing, but, in fact, different things.

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[1]Nelson Goodman, *Ways of Worldmaking* 4th Printing (Indianapolis: Hackett Publishing Company, Inc., 1985), 4.
[2]*Ibid.,* 20.

This point is articulated in the sixth chapter in Ways of Worldmaking, which is entitled "The Fabrication of Facts", wherein he argues his position that facts are made - not found - and that different systems give us incompatible yet true facts, such that it is not acceptable to say that two different systems give us 'versions of the same fact'. As he states:

> If we are tempted to say that 'both are versions of the same facts', this must no more be taken to imply that there are independent facts of which both are versions than likeness of meaning between two terms implies that there are some entities called meanings. 'Fact' like 'meaning' is a syncategorematic term; for facts, after all, are obviously factitious…Meanings have been replaced by reference – or the relationship among terms – and facts also are replaceable by analysis of 'relationships among versions'.[1]

Goodman is intent on denying that the relationship between the viewer and the thing viewed is one of "correctly" determining the aspects of that object which exist both independently of the perceptual process, and *a priori* of the viewing. For Goodman, there is no world unperceived, and one viewing of it cannot be privileged over another.

The underlying argument is that we do not see the world in a direct and unmediated manner; Kant, Goodman feels, was right about that part. We do not merely see, but we construct what we see. When Goodman declares, "The myths of the innocent eye and of the absolute given are unholy accomplices",[2] he is concomitantly dismissing the view that the object in front of us (and this applies to the artwork as readily as to any other phenomenal experience) is a completely

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[1]Nelson Goodman, *Ways of Worldmaking* 4th Printing (Indianapolis: Hackett Publishing Company, Inc., 1985), 93.
[2]Nelson Goodman, *Languages of Art.* 2nd ed. (Indianapolis: Hackett Publishing Company, Inc., 1976), 5.

constituted object that we merely absorb, and he is also dismissing the positivists' commitment to the empirical given. Instead, he argues that we construct the data as we absorb it. "Our capacity for overlooking is virtually unlimited", he states in Ways of Worldmaking,[1] and his point is also the obverse: we choose – either through the adoption of entrenchment practices given to us in the social order or by our own willful choices – to include and categorize some data to the exclusion of other data. Hence, 'the world' is not singular; it cannot be reduced to one version, and our understanding of it cannot be accomplished by identifying the correct metaphysical unit of existence; there is no 'correct', there is only that which is relevant to the inquiry at hand, and is, hence, relative to that system. For Goodman, the statements "The sun revolves around the earth" and "The earth revolves around the sun", can both be true if each is interpreted within the system that describes those relations. It is adamantly not the case that the relationship between the viewer and the thing viewed is one of "correctly" determining the aspects of that object, which exist independently of the perceptual process. Again, Goodman rejects the basic assumptions on which most philosophers base their arguments, and claims that since there is no world except those worlds we make and perceive, one view cannot be privileged over another. He reiterates this view in many of his writings, such as in the following two examples:

> If I were to ask what is the food for men, I should have to answer "none". For there are many foods. And if I am asked what is the way the world is, I must likewise answer, "none'. For the way the world is and that this way is not captured by any description. For me, there is no way that is the way the world is; and so of course no description can capture it. But there are many

[1]Nelson Goodman, *Ways of Worldmaking* 4th Printing (Indianapolis: Hackett Publishing Company, Inc., 1985), 14.

> ways the world is and every true description captures one of them. The difference between my friend and me is, in sum, the enormous difference between absolutism and relativism.[1]
>
> … But once we recognize that some supposed features of the world derive from – are made and imposed by –versions, 'the world' rapidly evaporates. For there is no version –independent feature, no true version compatible with all true versions. [2]

Reality is literally what we make it, and our knowledge (if it can still be called that) is relativized to only that world – the world we are now understanding by analyzing the referencing functions of the symbols that pertain only to that world. Therefore, reference is seen as the essential mechanism by which we understand those worlds we create. And it is the referential function within worldmaking that allows Goodman to answer the complaint issued against the phenomenalist, e.g., how do I know that my phenomenal experience is like yours? It is to that that we now turn.

3.4 Metaphysical Pluralism: Worldmaking

Goodman's epistemological relativism leads directly to his metaphysical pluralism, for if each system of knowledge has truths relative only to that system, and different systems can be both incompatible and equally 'true', then, clearly, one has many different 'worlds'. As he states:

> …in what non-trivial sense are there… many worlds? Just this, I think: that many different world-versions are of independent interest and importance, without any requirement or presumption of reducibility to a single base. The pluralist, far from being anti-scientific, accepts the sciences at full value. His typical adversary is the monopolistic materialist or physicalist who maintains that one system, physics, is

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[1]Nelson Goodman, *Problems and Projects* (Indianapolis & NY: The Bobbs-Merrill Company, Inc., 1972), 31..
[2]Nelson Goodman, *Of Mind and Other Matters* (Cambridge: Harvard University Press, 1984), 33.

> preeminent and all-inclusive, such that every other version must eventually be reduced to it or rejected as false or meaningless.[1]

It must also be noted that Goodman's pluralism is an attack not only on the reductionism of his time, but also a criticism of the broader practice of assuming the *a priori* existence of the elementary units of perception or cognition. He rejected the notion of an elementary substance of reality – which, in the mid-twentieth century, was seen as a debate between reductive materialism and phenomenalism – and replaced it with a constructional pluralism. In doing this Goodman demonstrated that he was uncompelled to choose sides between the phenomenalists and the physicalists, and instead issued a position guaranteed to annoy both. (It will be remembered that Goodman does not adopt phenomenalism in any way other than provisionally for the purposes of his constructionalism.) As Hilary Putnam characterized Goodman in his essay "Reflections on Goodman's Ways of Worldmaking":

> ….that while the attempt to reduce sense data to physical objects or events is an admissible research program for Goodman, it is no more (and no less) reasonable than reducing physical objects to sense data. As research programs, there is nothing wrong with either physicalism or phenomenalism; as dogmatic monisms there is everything wrong with both of them.[2]

Hence Goodman adopts phenomenalism in The Structure of Appearance as part of a "research program" but refuses to unqualifiedly commit to it. Goodman recognized that the difficulty lies in the proposed translation between the thing language and either a) the sense-datum language of the phenomenalists or b) the brain-state language of the physicalists. Either kind of translation is, as Goodman

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[1]Nelson Goodman, *Ways of Worldmaking* 4th Printing (Indianapolis: Hackett Publishing Company, Inc., 1985), 4.
[2]Hilary Putnam, "Reflections on Goodman's Ways of Worldmaking" in *The Journal of Philosohy*, Vol. LXXVI, No. II, (1979): 604.

states in The Structure of Appearance, a proposed "extensional isomorphism" that promises to preserve the truth-value found in the thing language. But this is precisely where both theories run into trouble. I will address the problems involved in phenomenalism first.

Phenomenalism cannot describe the world in phenomenalist terms without recourse to an object-language; hence calling into question the unprovable assumption that reality is*, a priori*, given in such a phenomenalist form. Furthermore, this conception of reality also presupposes the fallacious (according to Goodman) empirical assumption that reality exists apart and separate from our conception and that truth is the proper reflection of that antecedent reality, e.g., the correspondence theory. In addition, the phenomenalist must also address the two main problems associated with the theory: 1) how can I guarantee that my previous experience was identical to this present experience? and 2) how do I know that my phenomenal experience is like yours? Goodman can provisionally adopt phenomenalism in experimental form for the purposes of the constructionalism because he has answers to most of these problems. First, he does not adopt the position that there are ready-made metaphysical units, nor does he adopt the correspondence theory; hence, he essentially avoids both of those objections. He solves the second of the enumerated questions, e.g., "how do I know that my phenomenal experience is like yours?" in his worldmaking theory, wherein worlds are made by social agreement on inductive practices revealed in the general projection of certain predicates, which themselves referentially relate to other entities. Hence, I know my experience is like yours because we have

agreed to construct our world, we have agreed on the terms used, and we have agreed on the referential function of those terms. In other words, he has taken the private, as it were, out of phenomenalism. And, finally, Goodman addresses the problems inherent in phenomenalism by saying, in effect, that he is not essentially committed to it. It will be remembered that his constructionalism takes phenomenalism as a starting point not because Goodman is adamant about being a phenomenalist, but because the problems Carnap had experienced as a consequence of starting with physicalism were too insurmountable. Goodman is a pluralist; he theoretically could have started with another set of primary predicates that were not phenomenalistic.

Physicalism, which also demands the correspondence theory of truth as part of its epistemology, had even more insurmountable problems for Goodman. Goodman argues that the physicalists predicated their analyses of ontological facts on proofs that would *someday* – with enough advancement in science – be evident. In other words, science would someday explain away the troublesome non-material entities, and physicalism would be vindicated. Though the thing-language is riddled with mental terms, including belief ascriptions, the physicalists argued that science would someday be able to explain these in neural, chemical, and, hence, physical terminology. For Goodman these claims are too large to be taken on faith; hence, Goodman rejected the physicalist option as well as rejecting a full-blooded acceptance of phenomenalism, and committed himself instead to pluralism.

Pluralism was also the consistent and logical extension of Goodman's constructional adequacy criteria for definitions as formulated in The Structure of Appearance, and pluralism does not easily fall prey to criticisms of unfounded, mystical speculation or to the fallacy of banking on the promissory notes of science. It is consistent with the deflationary nominalism that Goodman is adamant to maintain because it does not *necessarily* countenance any entities other than individuals.

By discarding the basic premises of both the physicalists and the phenomenalists, i.e., the identification of the raw material of knowledge – Goodman instead focuses on *what* it is that we ultimately call knowledge. His analysis of ontology is thus similar to his analysis of art, which is also accomplished by identifying relations between constructed objects and not by searching for the natural objects or basic units. It is the relationships and the symbols used to represent those relationships that constitute knowledge, and these alone are the important point for Goodman. In other words, it is *not what* the data is when it is originally given, but the fact that that data takes certain forms *when* it is called knowledge. We cannot know its original form:

> The issue is not what is given but how it is given. Is it given as a single whole or is it given in many small particles? This captures the precise issue – and at the same time discloses its emptiness.[1]

The point is *what* we call knowledge. We cannot point to a final answer to the question, "how is reality given to us?". All we can hope to do is define what constitutes reality at the point where we agree that we have knowledge. "Reality"

[1]Nelson Goodman, *Problems and Projects* (Indianapolis & NY: The Bobbs-Merrill Company, Inc., 1972), 26-27.

prior to our knowledge constructs is an oxymoron to Goodman. The very important thing here is to recognize that Goodman is arguing for a radical version of what, in fact, others have argued for: a metaphysical role for the observer. Not unlike Kant, Goodman is arguing that reality is, apart from the (to use Kant's word) "contatenation" of the data, virtually empty. There is no (phenomenal) reality separate from our absorption and arrangement of the information into those categories we find relevant. And it is our act of finding them relevant that makes them relevant and, hence, makes them real. It is, as it were, performative, in that way that the Queen makes a man a knight by granting him knighthood; analogously, we make reality by deeming something worthy of the accolade "real". Since "our capacity for overlooking is virtually unlimited", our act of recognizing something as real is an action born of social habit and individual choice and is, hence, at least somewhat voluntary, for it could have been otherwise, e.g., we could have overlooked it. In other words, the freedom of choice to project certain predicates over others has led us to the metaphysical freedom of creating what it is that we experience, e.g., worldmaking. Goodman reiterates this freedom in virtually all of his writings, which the following excerpts demonstrate:

> Worldmaking sometimes, without adding or dropping entities, alters emphasis, and a difference between two versions that consists primarily or even solely in their relative weighting of the same entities may be striking and consequential.[1]

> Wartofsky and Gardner participate in the current transition from static absolutism to dynamic relativism in epistemology. The search is no longer

[1]Nelson Goodman, *Ways of Worldmaking* 4th Printing (Indianapolis: Hackett Publishing Company, Inc., 1985), 101.

> for a raw given or fixed forms of the understanding or a unique and mandatory system of categories. Rather knowing is conceived as developing concepts and patterns, as establishing habits, and as revising or replacing the concepts and altering or breaking the habits in the face of new problems, needs, or insights. Reconceptions, reorganization, invention, are seen to be as important in all kinds of knowing as they are in the arts."[1]
>
> Truth of a hypothesis after all is a matter of fit – fit with a body of theory, and fit of hypothesis and theory to the data at hand and the facts to be encountered…But such fitness, such aptness in conforming to and reforming our knowledge and our world, is equally relevant for the aesthetic symbol. Truth and its aesthetic counterpart amount to appropriateness under different names. If we speak of hypotheses but not of works of art as true, that is because we reserve the terms "true" and "false" for symbols in sentential form."[2]

Since no part of reality is given to us in a pure, unprocessed state, we are then intimately involved in its formation. Our process of selection – what we ignore, what we choose, and how we integrate what we choose into the already existing epistemological system – determines the form of the 'fact' that we, therefore, construct. Having rejected the epistemological purity of the Humean or Lockean empiricists, Goodman merges epistemology with metaphysics. The former does not analyze *how* we know independently of the metaphysical question of *what* we know: the metaphysical does not exist independently of the epistemological.

3.5 Truth

Goodman's notion of truth is noticeably different from most philosophers. This is the joint consequence of several different strains in his philosophy: his

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[1]Nelson Goodman, *Of Mind and Other Matters* (Cambridge: Harvard University Press, 1984), 19.
[2]Nelson Goodman, *Languages of Art* 2nd ed. (Indianapolis: Hackett Publishing Company, Inc., 1976), 264.

pluralism, his relativism, his coherentism, and his constructionalism. Though Goodman's introduction of the supplemental notion of "rightness of fit" is significantly at odds with traditional substitutability definitions of truth, he is in agreement with philosophers on some grounds. For example, he agrees with some philosophers, such as Russell, who found the Fregean notion of sentential truth-values implausible:

> But what, if anything, does a sentence denote? According to a view prevalent among logicians, a statement denotes a truth-value; that is, all true statements denote truth, and all false statements denote falsity. I dislike this on at least three scores: first, reification of truth-values…second, identification of the denotata of all true statements….third, lack of any provision for nondeclarative statements..[1]

Furthermore, Goodman does not completely abandon the traditional sense of the term "truth" but states that that can only be applied to verbal statements that can accurately be said to be true or false, since only they have the strictly circumscribed relation of a predicate describing (or failing to describe) a subject. As he states it in the interview published in Of Mind and Other Things:

> I like to keep the term 'true' for statements. Statements in a language are true or they are false. I don't like to speak of a picture as being true or false, since it doesn't literally make a statement. But I would rather say that a picture can be right or wrong the way a design can be right or wrong.[2]

But many sentences are not statements or propositions, for which Goodman introduces the notion of "rightness of fit". This is meant to include all the sentences that are not in propositional form plus all non-verbal information. For

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[1]Nelson Goodman, *Of Mind and Other Matters* (Cambridge: Harvard University Press, 1984), 56.
[2]*Ibid*., 196.

example, there are many sentences, such as found in metaphors, than cannot be said to be either literally true or false, and yet they are meaningful and we often call them "true". Goodman wants to explain their epistemological role given that they have no sentential truth-value. Hence, the notion of "right".

In order to understand this it is important to remember that apart from a system, an entity is indeterminate. As he describes it in The Structure of Appearance, a point is relative to each acceptable system, and in that system, the point is determinate. But absolutely and independently of the systems we construct, it is indeterminate; therefore, the notion of rightness of fit. Each definition is right within its own system; thus, rightness serves as a kind of harness on relativism - such that not everything is acceptable - and issues of consistency, coherence, appropriateness within the system, and accordance with past practice and antecedent projections, are all constraints he recognizes. But no cases can be tested for correctness by being compared with a monolithic 'world', since there is no source of undescribed reality, so 'truth' – in its traditional correspondence capacity – has no meaning for Goodman in this context.

What makes something 'right' in a given 'world' is if that particular fact has explanatory power in that world, i.e., whether or not it improves our knowledge in that particular discipline. If it fails to cohere with the rest of the accepted body of facts, then we have two options: we can reject the new fact and call it 'false', or we radically alter the rest of the body of knowledge so that the new fact is now consistent with the whole. (This is similar to Quine's coherentism as described in The Web of Belief.) In other words, we either change

the theory or reject the fact, and it is this constantly re-occurring process that stimulates the evolution of 'worlds'. We do not invent worlds from scratch, but rather, through this process of 'amending a ragged practice' we invent new worlds out of old. As he states it:

> Standards of rightness in science do not rest on uniformity and constancy of particular judgments. Inductive validity, fairness of sample, relevance of categorization, all of them essential elements in judging the correctness of observations and theories, do depend upon conformity with practice – but upon a tenuous conformity hard won by the give-and-take adjustment involving extensive revision of both observations and theories. Standards of rightness in the arts are likewise arrived at, tentatively and imperfectly, on the basis of but also amending a ragged practice.[1]

This places induction in a primary epistemological role. Since we construct our worlds, the correctness of that construction is dependent upon the rightness of the categorization of facts that we have deemed pertinent, which in turn is dependent upon the proper inductive reasoning that yields the correct projection of predicates. And since inductive inference requires neither syntactical regularities, nor even the truth of premises or conclusion as a correct "inductive argument may even yield a false conclusion from true premises,"[2] what makes an inductive argument right is, simply, the general acceptance that it is right. This standard seems, Goodman recognizes, problematic:

> Obviously we cannot equate truth with acceptability; for we take truth to be constant while acceptability is transient. Even what is maximally acceptable at one moment may become inacceptable later. But ultimate acceptability – acceptability that is not subsequently lost – is of course as steadfast as truth. Such ultimate acceptability, although we may seldom if ever know when or whether it has been or will be achieved, serves as a sufficient condition for truth. And since acceptability involves inductive

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[1]Nelson Goodman, *Of Mind and Other Matters* (Cambridge: Harvard University Press, 1984), 7.
[2]*Ibid*., 37.

> validity, which involves right categorization, which involves entrenchment, habit must be recognized as an integral ingredient of truth."[1]

The ultimate criterion for knowledge-acquisition is not, therefore, the same as truth. The latter is a subset of the former, whereby the former also includes the inductive categorization that results in worldmaking. As the lexicographer is dependent upon the antecedent definition established by usage, so our knowledge claims are dependent upon social entrenchment; we project 'green' and not 'grue' because 'green' is a term that is habitually projected by society and individual usage conforms to that. We do not, in other words, project predicates as isolated individuals, and acceptability, thus, is at the basis of the projection of predicates. As Goodman states it:

> What I have been saying bears on the nature of knowledge. On these terms, 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. Much [2]of knowing aims at something other than true, or any, belief. An increase in acuity of insight or in range of comprehension, rather than a change in belief, occurs.[2]

This broadening of the criterion for knowledge is an important part of Goodman's epistemology. Putnam makes note of this when he says, "Consider the experience of reading a novel like Don Quixote. One thing that happens to us is that our

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[1]Nelson Goodman, *Of Mind and Other Matters* (Cambridge: Harvard University Press, 1984), 7.

[2] Nelson Goodman, *Ways of Worldmaking* 4th Printing (Indianapolis: Hackett Publishing company, Inc., 1985), 21.

conceptual and perceptual repertoire becomes enlarged….This enlargement of our stock of predicates and of metaphors is cognitive."[1]

But others have not been so favorable towards Goodman's notion of knowledge or truth. Hempel quotes Neurath - who also questioned the notion of an unconceptualized reality - as saying: "It is always science as a system of statements which is at issue. Statements are compared with statements, not with 'experience', 'the world', or anything else."[2] Hempel argues that while the two points of view, e.g. those of Goodman's and Neurath's - are not identical, there is much that is shared. As he states, "The central idea in Goodman's book that has a strong kinship with one of Neurath's theses is to the effect that the rightness of a version cannot be characterized as its applicability to the world."[3] The difficulty that Hempel sees in this sort of relativism is its fundamental inability to support science. As he states:

> But Neurath's formulations – and I think to some extent Goodman's - give rise to the uneasy feeling that we are being offered a coherence theory of knowledge, in which simplicity, scope, and coherence are the dominant requirements for acceptable theories; and one wonders how the empirical character of scientific claims or versions is accommodated in this conception of making version from version and adjudicating proposed hypotheses by their fit with the accepted system.[4]

Hempel, like other empiricists, is concerned that theories will be too readily adjusted so that their internal consistency is more valued than their adherence to the external facts. Of course, Hempel was implicitly positing an independent and

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[1]Hilary Putnam, "Reflections on Goodman's Ways of Worldmaking" in *The Journal of Philosophy*, Vol. LXXVI, No. II, (1979): 615.
[2]Carl Hempel, "Comments on Goodman's Way of Worldmaking" in *Synthese* 45 (1980): 193.
[3]*Ibid*.
[4]*Ibid*., 196.

metaphysically attenuated reality and the correspondence theory that accompanies that point of view because Hempel was concerned about the actual physical sciences in ways Goodman was not. Goodman's notion of science remained somewhat abstract – a methodology requiring rigor and precision but not necessarily a practice that discovered a world already made, though the latter is surely the scientist's point of view. Goodman seems as unconcerned with the actual practice of real science as he does with the actual practice of real mathematics; in both cases he is willing to excise the practitioners rather than accommodate his philosophy to their methodology. For mathematicians who need the null set, classes, infinity, and sets, Goodman is as willing to ignore them and their demands as he is willing to ignore the demands of empirically-minded scientists.

Chapter IV. Influences on Goodman's Philosophy

4.1 Introduction

Now that Goodman's ontology and his epistemology have been fully explicated, it is at this juncture that I give a very brief summary of Goodman's influences. Of course, both Bertrand Russell and W.V.O. Quine were influential, hence, the in-depth survey of both of these philosophers in §I. The former was considered in part because he was influential on the whole of the twentieth century; the latter because he was both an important figure in twentieth century American analytical thought and a frequent collaborator of Goodman's. These two I will not reiterate in this section, but will focus on additional influences. In addition, the discussion surrounding the constructionalism included an analysis of Rudolph Carnap's influence, so he, too, shall be left out of this section, as will be Goodman's teacher at Harvard, C.I. Lewis, whose influence was also referred to in §I. Therefore, the other sources of influence, which will be discussed in this chapter, are: Immanuel Kant, George Berkeley, and William James. I will proceed in that order.

4.2 Kant

It is important to note both what Goodman took from Kant and in what ways Goodman rejected Kant, for together these two choices structure much of Goodmanian philosophy. Clearly Goodman agreed with Kant that we 'concatenate' the empirical data, which is unstructured before we impose on it space, time, and causation. Goodman only takes this perspective farther when he

argues that all data is not only absent these three things, but is completely indefinite before our acceptance of it into our worldmaking.

But Goodman also departs from the Kantian perspective that demands a bifurcation between cognition and judging, such that these are seen as different kinds of contemplations that correspond to the objects that they are contemplating. In other words, to contemplate an aesthetic object is a different mental activity than contemplating a cognitive object; resulting in the distinction between 1) knowing, and 2) judging. To 'know' something is to have that thing brought under a concept, under a principle. To 'judge' something, on the other hand, is to experience it as a particular. With aesthetic experiences, one experiences the particular as either the beautiful or the sublime, the latter being that which holds the greatest reward, for it is that which most fully appeals to our disinterested contemplation - the 'purposeless purpose' such as seen in the tulip, which is recognized as God's creation; it is a contemplation which is independent of our knowing the purpose of that object or what advantage we might extract from the object. On the other hand, the painting and other forms of human artifacts are merely beautiful and cannot give us the truly disinterested contemplation. But in both cases, aesthetics is feeling, not knowing.

Of course, this is not Goodman. Goodman rejects the Kantian distinction between knowing and judging by denying a priori knowledge, and, hence, the epistemological distinction between analytic and synthetic statements. For, in order for Kant to take aesthetic contemplation out of the world of cognitive knowledge acquisition, he needs to maintain the division between the

methodology of those two kinds of experiences, i.e. knowing and judging, and the division is dependent upon the antecedent divisions of a priori/a posteriori and analytic/synthetic. There is, for Goodman, a clear rejection of the division between cognitive and non-cognitive thought, and thus, for him, aesthetics is knowledge acquisition on par with empirical knowledge acquisition. As he states:

> The naïve notion that science seeks truth, while art seeks beauty, is wrong on many counts. Science seeks relevant, significant, illuminating principles, often setting aside trivial or overcomplicated truths in favor of powerful unifying approximations. And art, like science, provides a grasp of new affinities and contrasts, cuts across worn categories to yield new organizations, new vision of the worlds we live in…
>
> ….Science becomes associated with unfeeling intellect, the humanities with pure emotion, thus slandering both. Intellectual effort is motivated by profound need and provides deep satisfaction; and the emotions often function also as cognitive instruments. Neither art nor science could flourish if is did not give satisfaction, or if satisfaction were the only aim.[1]

By not following Kant in this distinction between judging and knowing and by not taking the alternate position and identifying himself as a strict empiricist with only faith in the a posteriori, - which would also have given him the same bifurcation - he completely distanced himself from the position which purports a division between knowing and feeling. The advantage of not identifying himself as a strict empiricist, and thus not maintaining that all knowledge comes from empirical sources, is that he was not limited to saying that the way of understanding our interaction with an object (including an art object) is limited to an analysis which explains art as a function of 'taste'. He continued to

[1]Nelson Goodman, *The Structure of Appearance*, 3rd ed. (Boston: Reidel, 1977), xix-xx. Also cited in Nelson Goodman, *Of Mind and Other Matters* (Cambridge: Harvard University Press, 1984), 5.

maintain the importance of art in an interview with Frans Boenders and Mia Gosselin, published in Of Mind and Other Matters:

> All my life has been lived in the arts and in philosophy, but it was only very late in 1968, that I ever wrote anything combining the two. I had become increasingly aware that the revelation we get from science (I am talking about theoretical science) and the revelation we get from art are very much alike.[1]

Goodman refers to Kant's influence on a few occasions, most notably in the following instance:

> The non-Kantian theme of multiplicity of worlds is closely akin to the Kantian theme of the vacuity of the notion of pure content. The one denies us a unique world, the other the common stuff of which worlds are made. Together these theses defy our intuitive demand for something stolid underneath, and threaten to leave us uncontrolled, spinning out our own inconsequent fantasies.
>
> The overwhelming case against perception without conception, the pure given, absolute immediacy, the innocent eye, substance as substratum, has been so fully and frequently set forth by Berkeley, Kant, Cassirer, Gombrich, Bruner, and many others – as to need no restatement here. Talk of unstructured content or an unconceptualized given or a substratum without properties is self-defeating; for the talk imposes structure, conceptualizes, ascribes properties.[2]

As Goodman writes in Of Mind and Other Matters :

> [it is]…an obsolete view of perception as a purely passive process. Not since the advent of modern cognitive psychology has such a view been defensible.[3]

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[1]Nelson Goodman, *Of Mind and Other Matters* (Cambridge: Harvard University Press, 1984), 192.
[2]Nelson Goodman, *Languages of Art.* 2nd ed. (Indianapolis: Hackett Publishing Company, Inc., 1976), 6.
[3]Nelson Goodman, *Of Mind and Other Matters* (Cambridge: Harvard University Press, 1984), 25.

His version of it in Languages of Art is, "The myths of the innocent eye and of the absolute given are unholy accomplices."[1] Clearly, Kant's argument resonated with Goodman.

4.3 Berkeley

The influence of George Berkeley's thought on Goodman is less often recognized, but may, in fact, be more pronounced. Not only did Goodman comment on this influence (for example, the last quoted statement) but Goodman frequently taught a course on Berkeley at The University of Pennsylvania, and the parallels in the two men's systems are greater than is initially evident. Berkeley's empiricism led to solipsistic idealism, and Roger Scruton has argued that Goodman's semantics likewise led to a kind of idealism:

> It is interesting that Goodman….takes over many of the idealist's premises. In particular, he refuses to acknowledge a clear division between cognitive and non-cognitive states of mind….For Goodman, as for the idealist, the aesthetic and scientific attitudes are contiguous members of a single spectrum; the motive of each is curiosity and the end awareness.[2]

Though I think there is some evidence for this view, I believe a stronger claim can be made that it is solipsistic idealism that they have in common, at least in some strains of Goodman's philosophy. In Berkeley's empiricism, the causal account of perception gives the external object as the source of data, but that external object has no existence independent of its perception by the subject, resulting in its lacking independent character as much as does Goodman's 'indefinite' object

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[1]Nelson Goodman, *Languages of Art* 2nd ed. (Indianapolis: Hackett Publishing Company, Inc., 1976), 5.
[2]Roger Scruton, *Art in Imagination* (South Bend, Indiana: St. Augustine's Press, 1998), 189.

outside a constructionalist framework. Furthermore, once the data enters consciousness for Berkeley, it is thereby credited as real and it becomes inner or mental. The theory then asserts that all reality has this character: there are no existents outside consciousness.

Goodman's semantics has the external object as the source of data (though not strictly causally), and absorption of the data is cognized through the recognition of what the referring relationships are between our words for the objects and the objects themselves. But, as we've seen, his web of relations between our words for objects and the things to which the words apply does not correspond to any fixed objective reality. Determinations of truth are based on the relationship between the definiendum and the definitia, and the coherence of both within the same symbol scheme. Because the referencing functions of the subject's symbol scheme need only satisfy the demands of coherence and be agreed upon by some subset of the population (he's not arguing for private language), this cognitive relation is thus separated from verification with the external world, for there is no 'world' with which to correspond; they become 'real' when they are brought into the subject's constructionalism and, hence, worldmaking.

This is strikingly similar to Berkeley for the following reasons. Ultimately, Goodman's semantics has the incubated existence of Berkeley's ideas since neither gain any ontological legitimacy from the external world; entities apart from the subject's awareness (in Berkeley's case) and the subject's worldmaking (in Goodman's case) are not credited with full ontological character;

and in both cases it is the taking in of the data by the subject that gives the data ontological existence. If a philosopher argues that he can speak only of what is given to him or herself, we are confronted with a solipsistic metaphysics. While Goodman's semantics depend on some linguistic agreement with others (how many others is never clear), it might thus be argued that his metaphysics is not really solipsistic, but since it is still a world that grants existence to entities only after they have been accepted - by the subject – to be part of the constructed 'world', its coherence becomes more subjective than other coherence theories and is thus closer to a solipsistic point of view.

4.4 James

The strain of pragmatism evident in Goodman's philosophy has often been remarked on, and Goodman himself credits James' pluralism as an influence:

> As intimated by William James's equivocal title A Pluralistic Universe, the issue between monism and pluralism tends to evaporate under analysis. If there is but one world, it embraces a multiplicity of contrasting aspects; if there are many worlds, the collection of them all is one. The one world may be taken as many, or the many worlds taken as one; whether one or many depends on the way of taking.[1]

James is often thought of as an imprecise, if yet interesting, philosopher, but it was his non-doctrinaire commitment to a pluralistic ontology that attracted Goodman, though of course Goodman has none of James' theological interpretations. As James explains it:

[1]Nelson Goodman, *Ways of Worldmaking* 4th Printing (Indianapolis: Hackett Publishing Company, Inc., 1985), 2.

> The philosophy of the absolute agrees with the pluralistic philosophy which I am going to contrast with it in these lectures, in that both identify human substance with the divine substance. But whereas absolutism thinks that the said substance becomes fully divine only in the form of totality, and is not its real self in any form but the *all*-form at all, that the substance of reality may never get totally collected, that some of it may remain outside of the largest combination of it ever made, and that a distributive form of reality, the *each*-form, is logically as acceptable and empirically as probable as the all form commonly acquiesced in as so obviously the self-evident thing.[1] (italics his)

But Goodman's resemblance to James was not just in Goodman's advocacy of pluralism. Like the pragmatists before him, Goodman was unwilling to choose sides in what he thought was a pointless debate, e.g., in Goodman's case that between the physicalists and the phenomenalists. This was analogous to the situation faced by the pragmatists. Unwilling to choose sides in the battle between the materialists and the idealists, and unwilling to allow the Humean induction riddle to lead them into the depths of skepticism, the pragmatist's solution was the dictum 'reasoning to the best explanation'. While Pierce's term for the methodology -'abduction' whereby he claimed that it was another kind of logic in addition to deduction and induction – did not necessarily gain adherents, the general practice did. The pragmatic adjudication between competing, yet equally unsatisfactory choices, is Goodman's solution, too, and it forms a central part of his thinking. The point for Goodman, as for the pragmatists such as William James or Pierce, was to provide analytic comprehension in the service of a continuing explanation; the pragmatist was unlikely to be sidetracked in a cul-de-sac of irresolvable debate.

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[1]James, William*, Essays in Radical Empiricism and A Pluralistic Universe* (Gloucester, Mass.: P. Smith Publishers, 1967), 20.

Chapter V. The Effects of Goodman's Epistemology on His Terminology/Concepts

5.1 No Universal Truths

The effects of Goodman's epistemology on the terms and concepts available to him are seen most clearly in the notions of truth and in the kinds of knowledge that can be claimed within the referential functions of his semantic account. The most obvious limitation is the one on truth. As Goodman's position on truth was explicated in §II, Chapter III, subsection 3.4 "Truth", it is now possible to summarize the consequences to that position and it is clear that Goodman cannot refer to certain kinds of universal truths, which would include universal scientific facts, universal truths about human nature, or even a universal account of common sense as is relied on in both J.S. Mill's philosophy as well as mid-twentieth century philosophy of language. Since Goodman disavows the correspondence theory of truth and the causal account of knowledge, his coherentism, especially when combined with his relativism, gives no claim to absolute or objective truths. Of course, he is willing, if not eager, to accept this consequence, especially as the relations established in Goodman's criteria for constructional adequacy remain firmly cognitive in the sense of that term as separate from material, biological, and physiological influences. But the consequences to both science and art are significant, since many terms and concepts generally employed in both realms cannot be so employed using Goodman's philosophy.

Carl Hempel recognized the difficulties inherent in science if one adopts a Goodmanian approach, since the empiricism on which science depends would be sacrificed by Goodman's relativism. When Goodman remarks that "modes of organization …are not 'found in the world' but built into a world",[1] Hempel responds, "To be sure, this is so: but in the search for scientifically right versions, the stubbornness of facts shows itself in the realization that we cannot well use just any criteria we please."[2] Hempel was warning against the slippery slope that flows between a non-doctrinaire tolerance of other's viewpoints and an abandonment of criteria, and he therefore maintained that any decision to accept a statement must be seen as causally connected with our experience. Hempel, like other empiricist-minded scientists, would argue that basic statements in science are causally connected to experience universally understood by all persons, not experienced relative to separate symbol systems or individual persons. Therefore, the concepts of scientific facts or universal human truths are unavailable to Goodman.

5.2 No Natural Kinds

While the effects this notion of truth has on art will be more fully discussed in §III, it is nevertheless useful at this juncture to remember that most versions of the causal point of view commit to an irremediably biological necessity to perception, and our reactions to it are delineated not by our own social agreements that have codified themselves into the logic of

[1]Nelson Goodman, *Ways of Worldmaking* 4th Printing (Indianapolis: Hackett Publishing Company, Inc., 1985), 12.
[2]Carl Hempel, "Comments on Goodman's Way of Worldmaking" in *Synthese* 45 (1980): 198.

semantics, but by the constraints imposed on us by biologically grounded resemblances. Hence, the causal point of view is most frequently relied upon by both scientists and artists. Goodman, of course, readily gives up any appeal to biologically determined responses to stimuli that would be universally shared and immutably guaranteed. There is no 'natural' way of seeing things nor are there any natural kinds:

> We understand the symbols and value them because these are the meanings we have attached to those symbols. We could just as easily have chosen others. "The 'natural' kinds are simply those we are in the habit of picking out for and by labeling.[1]

This rejection of all natural kinds and of any uniformity that might be biologically imposed on the species and be universally revealed in every individual has wide-ranging consequences, which are more fully seen within the following examination of Goodman's semantic account.

As Goodman relativizes truth to a non-natural semantic account, which relies on reference garnered through the malleable process of social conformity not based on universal biological principles, his semantics re-enforces his epistemological relativism. While the previous subsection discussed the limitations of relativism in the sphere of scientific investigations, it must be remarked that Goodman's emphasis on semantics and the role in induction in ascertaining facts/truth has at least one positive consequence in art, for Goodman's notion of the role of induction legitimizes art traditions and explains the progression of styles and periods in art history without succumbing to the view that such changes in visual rules are merely random, and hence the consequence of baseless 'taste' decisions. Decisions about what qualifies as art

[1]Nelson Goodman, *Languages of Art.* 2nd ed. (Indianapolis: Hackett Publishing Company, Inc., 1976), 32.

are seen, by Goodman, as part of the larger social consensus process inherent in the formulation of any symbol system. Furthermore, by taking art out of the 'beauty' and sensate domain, Goodman categorizes it in the more solid sphere of human social inductive activity and the symbol systems that develop out of that activity, which, thus, places it within the sphere of knowledge acquisition. The non-natural account of semantics is able to explain the accrued changes brought about by the introduction of novel metaphors and their associated stylistic innovations, and thereby making aesthetic symbols meaningful instead of merely decorative or pleasant. These symbols, in turn, pattern themselves in broader social/art movements as they are governed by the probabilistic accretion of changes in the models for artmaking, which are the natural result of induction and what Goodman refers to as the 'projection of predicates'. In other words, art history is moved forward because of the changes in the patterns of predicates that are projected.

5.3 Cultural Relativism

But it must be remembered that each of these patterns of projections is relative to the culture in which it is exhibited, thus making the artwork relative to the knowledge claims of only that particular society. In other words, it becomes difficult to explain on a Goodmanian account, how it is that we – as twenty-first century Americans – can understand and appreciate ancient African art or even contemporary art from another culture. While his epistemological relativism, buttressed by his semantic account, encourages a view that makes knowledge

acquisition responsive to the gradual accretion of created facts, it also limits knowledge to the 'facts' of that particular culture and leaves us at odds to explain how we can access the knowledge of other, foreign, cultures. Hence it cannot explain how certain facts pattern themselves across all cultures. Cultural relativism is well-known for these problems, and Goodman's theories lead us directly to them, as we are able to appeal neither to any knowledge claims that presuppose universal, immutable human constructs, such that would demand a univocal reaction to the same stimulus nor to any external objective reality that would necessarily appear the same to all observers. Thus Goodman's epistemological relativism forces him to use the terms and concepts of cultural relativism, and makes him unable to appeal to either scientific truth or to artistic understanding outside one's particular symbol system.

5.4 Knowledge from Human Sensory Systems is Non-Natural and Constructed

It must be remembered that Goodman's constructionalism begins with 'an uninterpreted system'. This means that the primary predicates are not yet a part of the constructionalism that would give them definition within the system, and choice among primary predicates is determined by their presystematic definition, which must be both clear and simple. To reiterate, the primary predicate that Goodman introduces in his calculus of individuals is the two-place relation of 'overlap', thought of (presystematically) as the sign for two entities that overlap, or share content. Since Goodman maintains that the notion of 'overlap' has

minimal ontological or epistemolological commitments, the system is designed to begin with 'an uninterpreted system' in order to construct the ontology. This makes his philosophy in contradistinction to someone like Quine, who begins with the neural input as the origin of epistemological data. In doing so, Quine begins with physiology and with uniform human responses and it is not, therefore, a surprise that he embraces a naturalized epistemology. But Goodman's approach to semantics sees knowledge acquisition as entirely non-natural, and while it was Quine who claimed that the epistemological boat, so to speak, is built while we are in it, it must be seen that Goodman's is not only constructed ad hoc, but constructed completely at the will of - to continue the metaphor - 'the boat builders', without the limitations of either the empiricist's verificationalist principles or of Quine's naturalized epistemology. For Goodman, since we understand the symbols and value them because these are the meanings we have attached to those symbols, we could just as easily have chosen others: As previously quoted: "The 'natural' kinds are simply those we are in the habit of picking out for and by labeling."[1]

On a Goodmanian account, therefore, we cannot claim that our sensory faculties are, *a priori* to any constructed symbol system that would determine the referencing of the inputted data, uniformly made to parse experience in any particular way. In other words, for Goodman, the body itself is not an 'interpreted' system. Not only does resemblance fall by the wayside, but it would be hard to argue for the existence of a universally applied verbal or visual

[1]Nelson Goodman, *Languages of Art.* 2nd ed. (Indianapolis: Hackett Publishing Company, Inc., 1976), 32.

response across cultures and time periods for the same stimuli. For example, it would be hard to explain how it is that all cultures view large predators as intimidating, or babies as vulnerable, or tiny flowers as delicate. If symbol systems were truly non-natural and constructed, then there would be no ability to make a claim for a universal reaction to the same stimulus. Some symbol systems would conceivably find tiny flowers delicate while others would not; some would find predators fearful while others would not. This Goodmanian denial of biologically determined responses seems counterintuitive at best, but it is the consequence of his non-natural semantics. The pertinent point at this juncture is to note that such a non-natural and constructed semantics is at a loss to explain how many human responses to identical stimuli seem universal to the species, and hence natural and non-constructed.

5.5 No Autonomous Object

The notions of naming and predication, which are part of the semantic account, are generally a rendering of the correspondence theory of knowledge, where the names are relating to objects named and the predicates relating to the objects that apply. But in the empiricist account - underwritten by the correspondence theory of perception - it has been frequently noted that there is a divide between the perceptual/mental processing in the subject and the inert object that is the source of the data coming into this actively processing agent. This is the traditional problem faced by empiricists who posited the cognizing subject distinct from the non-cognizing object, and then were unable to explain how a non-cognizing object (such as an art object) was able to express anything to the

cognizing subject. Hence, the difficulties in empiricists' aesthetic theories, which often led them to embrace a point of view that reduced art to sensate pleasure.

While of course Goodman does not adopt empiricism, he does nevertheless adopt the semantic interpretation of reality, and on this reading, understanding reality is like understanding a sentence, whereby the sentence is understood by relating the terms to what the terms refer to. In order to understand how his semantics differs from the usual empiricist's semantics, and thus, in turn, to understand exactly what are the consequences to the terms and concepts available to him as a result of his semantics, it would be helpful, at this juncture, to attempt a step-by step analysis of Goodman's notion of worldmaking, from the beginning of the phenomenal awareness of qualia (as he describes it in The Structure of Appearance) to the final product of worldmaking (as he describes it in Ways of Worldmaking). If we can do this, we will then see precisely how the perception of the external world is semantically constructed by the viewer in conjunction with his or her antecedently accepted symbol system, and we can then see what are the consequences to this view.

To begin with, of course, Goodman views the initial perceptual package in phenomenal terms, i.e. qualia. Hence, our first awareness is of the individuals of color, time, and place. But these do not automatically cohere into a pre-determined object; we are free to recognize certain predicates while ignoring others on the basis of whether those predicates are consistent with the predicates in the past that we have chosen to project. In other words, we primarily see what we expect to see. The predicate recognition is part of our symbol system, and hence, as we see the predicates we also make use of the familiar symbols (whether verbal or visual), which, in turn, now cohere

into a familiar object. To give an example: the chemist and the psychologist are both looking at a brown chair. Both of them see a brown quale at time t and at place x. The chemist recognizes familiar patterns, i.e. the chemist sees the brown vinyl of the seat cover and notes the chemical composition of the vinyl and of the electromagnetic waves that control the color brown, whereas the psychologist sees brown vinyl and notes the unfriendly nature of both the material and the color. This presumably is part of Goodman's claim that one world cannot be reduced to another world, for there is no way to go from the symbol system of the chemist's molecule world to the emotive symbol system that is part of the psychologist's world.

The point of this is to argue that since the object exists not objectively, it does also not exist autonomously. Each of those two chairs has been concatenated (and I believe Kant's word is applicable here) by drawing on different symbol systems, and hence each 'chair' is part of each person's social symbol system (sometimes combining with a personal and subjective construct) rather than being an external and autonomous object. Since Goodman's semantics is non-causal, non-natural, constructionalist, and relativist, there is no separate and independent object that is cognized by the separate subject, since the subject metaphysically creates what the subject epistemologically experiences. This is the essence of worldmaking. Therefore, there is no autonomous object. Hence Goodman is constrained in his usage of the concept 'object', as it cannot be used in such a way as to presuppose its existence *a priori* to its adoption into a constructed symbol system, or apart from that adoption.

5.6 Object Does Not Transmit Anything Other Than What the Symbol System Determines

The question now becomes how different this Goodmanian position is from that of the empiricists. For the latter, there is such a large divide between the perceptual/mental processing in the subject and the inert object that it is difficult to explain how a non-cognizing object such as an art object would be able to express anything to the cognizing subject. Similarly, since the Goodmanian object is constructed by the viewer, it seems to be somewhat difficult to explain how the object is able to confront the subject with new information, as the subject is constructing the object by assigning predicates on the basis of their antecedent familiarity. Again, the object has been rendered mute; not because the subject is so metaphysically separate from the object as in empiricism, but because the object is so much an integral part of the subject's own symbol creation, e.g. because the object is not sufficiently separate from the subject. A direct consequence of this is that the object does not symbolize anything other than what it has been determined to symbolize based on the referential functions within the symbol system in use. While he states in Ways of Worldmaking, "…the philosophy of art should be conceived as an integral part of metaphysics and epistemology",[1] it is not entirely clear how non-autonomous objects are able to convey new knowledge. His analysis of metaphor, as articulated first in Languages of Art and later reiterated in Ways of Worldmaking and other later writings, is meant to give an explanation for the mechanism behind the introduction of new ways of symbolizing. It is that to which we turn in the third section.

[1]Nelson Goodman, *Ways of Worldmaking* 4th Printing (Indianapolis: Hackett Publishing Company, Inc., 1985), 102.

Section III. THE AESTHETICS

Chapter I. Goodman's Expression as Reference

1.1 The Centrality of Reference

It is clearly evident that reference has a central role in both Goodman's metaphysics and in his epistemology, and this fact holds true also in his aesthetics as encapsulated in Languages of Art, which he wrote twenty-seven years after he completed his dissertation, which ultimately became Structure of Appearance. As he wanted to avoid, in his metaphysics, not only meaning and intensional accounts, but also the positing of abstract objects, Goodman was likewise intent in his analysis of art to avoid such commitments, and hence, his view that aesthetics is referential functioning within a semantic account, which posits only individuals, is consistent with the rest of his philosophy.

Thus the distinction between what the art object represents and what it expresses was not, for Goodman, a difference between the kinds of thing represented and the kinds of thing expressed. In other words, he is committed to the notion that it is false to assert that the distinction between expression and representation is based on a concomitant distinction between the concrete and the abstract. Instead, the correct approach is to analyze the different ways the different grammatical parts of the sentence, which is used to describe the picture, are said to function referentially. As he states in Languages of Art, "A picture, to represent an object, must be a symbol for it, stand for it, refer to it."[1] Thus reference plays a central role in his aesthetics.

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[1]Nelson Goodman, *Languages of Art.* 2nd ed. (Indianapolis: Hackett Publishing Company, Inc., 1976), 5.

This symbol analysis within the semantic account is the important departure from traditional aesthetics that Goodman adopts, but before an analysis of Goodman's notion of expression as reference can be given, it is necessary both to explicate the radical nature of his position through a contrast with the usual usage of the term 'expression', and also briefly to explicate his concomitant analysis of representation. I will, hence, do both of those in that order.

1.2 The Term "Expression"

In order to understand how aesthetics can be viewed through an analysis of referencing, it is necessary to first review the positions that Goodman has rejected, which can be easily done by examining the traditional usage of the term 'expression'. The term has been used in various ways, ranging from Kant's in distinguishing aesthetics from morals, where art is the free creation of beauty for beauty's sake, to Croce's idealist use in which he argued that the raw sense-data of subjective experience are 'intuited' by the artist who then 'expresses' it in a work of art, to even being used by the pragmatist John Dewey when he employed the term as that which is identical with art when art is in the service of conveying the experience of life. While these disparate uses of the term 'expression' vary according to their roles within the larger context of each philosopher's theory, what they each have in common is what I will call the broad definition of 'expression': one which refers to the role of emotions and their transmittal through the medium of art.

But even the most broadly construed notion of 'expression', such as the one I have just cited, shows its independence from the world of empirical fact and verificationist

truth, and is thus most readily employed by idealists, for it is they who are likely to define expression as a mental state distinct from and more elemental than matter. For even using the broad definition, emotion is identified with the immaterial - a thing that replicates itself across the broad participating spectrum of artwork, artist, and viewer. Certainly, to any empiricist, this transmittal is suspect; hence the empiricist's unbridgeable gap between the cognizing subject and the non-cognizing object. But for a coherentist and nominalist like Goodman, who is averse to positing non-extensionalist subjective and mental experience and any insinuation of their foundation in universal ideas, this broad definition of expression with its reliance on transcendent emotion becomes not only inexplicable but also mystically evanescent and vague. The obvious questions for someone like Goodman regarding expression are: 'exactly *what* is it?' and 'exactly *where* is it?', and these are questions that cannot be answered by intentional accounts, i.e., accounts that give explanations in terms of beliefs about the intentional objects of nonexistent entities, but are answered within a general semantic account of aesthetics as is understood through an account of reference. Hence, his famous retort, whereby he reframes the question as: "*When* is art", wherein the latter is answerable in the framework of linguistic analysis, i.e., it is art when it successfully refers.

1.3 Goodman on Representation

His treatment of representation has perhaps received the most publicity, probably since it is that part which directly attacks the sanctity of the realist tradition in painting. This dissertation will not review that literature, as it has been well reviewed in the past, and also because the analysis of how Goodman's nominalism influences his aesthetics is

more fully revealed in his analysis of expression and metaphor. (The exception to this generalization is seen in the discussion of the unbreakable predicate in representation, discussed in §III, Chapter IV "The Effects of Goodman's Nominalism and His Worldmaking on His Aesthetics", subsection 4.3 "No Referencing of General Terms or Fictive Entities") Therefore, as only a brief account of representation is needed in order to explain expression, I will present it thus.

The insistence by Goodman that resemblance is not sufficient for representation came at a time when modernism and abstraction were fully accepted by the western art-viewing world, and the notion that art was constructed from a conventional symbolization scheme, which we were free to re-construct at any given agreed-upon moment, was an idea born at the right time. For Goodman, therefore, representation is not resemblance and he states it thus:

> The plain fact is that a picture, to represent an object, must be a symbol for it, stand for it, refer to it; and that no degree of resemblance is sufficient to establish the requisite relationship of reference. Nor is resemblance *necessary* for reference; almost anything may stand for almost anything else. A picture that represents – like a passage that describes – an object refers to and, more particularly, *denotes* it. Denotation is the core of representation and is independent of resemblance.[1]

The criterion is not copying reality, for there is no antecedent reality with which the picture is correlated; worldmaking has already preempted that point of view. Representation is successful when the symbolic correlations are communicated, and those instances of symbolic referencing are part of the symbol system that has been constructed and it is non-natural. Our eye selects, organizes, and constructs; it does not merely function as a mirror. Hence as Goodman states, one of the connections between

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[1]Nelson Goodman, *Languages of Art.* 2nd ed. (Indianapolis: Hackett Publishing Company, Inc., 1976), 5.

aesthetics and epistemology: "The myths of the innocent eye and the absolute given are unholy accomplices."[1] Statements must be looked at apart from the fallacious assumption that they tell us something about a monolithic "reality." As his supporter and sometime-collaborator Catherine Elgin states it:

> If we take such agreement as evidence for an ontological thesis, we revert to a Doppelganger theory. Our linguistic intuitions are treated as evidence for "real properties" or "natural kinds" as evidence, that is, for a metaphysical taxonomy that is independent of any classifications we may make. According to this account, language mirrors reality - a Platonist reality composed of universals as well as particulars. Instantiation is an ontological relation, not a semantic or conventional one.[2]

It is this Doppleganger problem that Goodman (and, by extension, Elgin) are adamant to avoid. This is a direct continuation of his concerns as expressed in The Structure of Appearance, i.e. language does not mirror reality, and we do not find a monolithic reality by looking closely, even really closely, at our language. Symbol usage tells us only about symbol usage, not about Reality. This is Goodman's point when he argues for multiple, though mutually exclusive and competing, symbol systems: "There are obviously many alternative ways of defining a term, all of them equally legitimate…"[3] Therefore, the central character in aesthetics – as in epistemology - is reference.

1.4 Goodman on Reference in Aesthetics

In Languages of Art, Goodman initially poses the question as: is the difference between representation and expression one of domain? As he frames the question, "Is it

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[1]Nelson Goodman, *Languages of Art.* 2nd ed. (Indianapolis: Hackett Publishing Company, Inc., 1976), 8.
[2]Catherine Elgin, *With Reference to Reference* (Indianapolis, Indiana: Hackett Press, 1983), 31.
[3]Nelson Goodman, *The Structure of Appearance*, 3rd ed. (Boston: Reidel, 1977), 7.

similarly the case that what is represented and what is expressed are alike denoted, and that the difference depends solely upon whether what is denoted is a particular or a property?"[1] As Wollheim characterizes Goodman's approach:

> Many traditional accounts of representation and expression have attempted to locate the difference between representation and expression in the difference between the kinds of thing represented and the kinds of thing expressed. Goodman, however, reverses the procedure and tries to locate the difference in the different ways in which the picture stands to the things it represents and the things it expresses.[2]

It is important to Goodman that he disavow us of the false notion that the distinction between expression and representation is based on a concomitant distinction between a particular and a property, especially when those terms are construed in the usual way as a distinction between the empirical/concrete and the non-extensional abstract, for, of course, he denies the latter. Instead, Goodman's approach is to analyze the ways the different grammatical parts of the sentence – the sentence that is used to describe the picture - are said to function referentially. His standard example is: "Before me is a picture of trees and cliffs by the sea, painted in dull grays, and expressing great sadness." The picture, which represents trees and cliffs by the sea, denotes what it represents in the same way that the subject of a sentence denotes its object. As previously quoted: "A picture, to represent an object, must be a symbol for it, stand for it, refer to it."[3] Thus the picture denotes its object.

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[1]Nelson Goodman, *Languages of Art.* 2nd ed. (Indianapolis: Hackett Publishing Company, Inc., 1976), 46

[2]Richard Wollheim, "Nelson Goodman's Languages of Art" in *On Art and the Mind* (Cambridge, Mass.: Harvard University Press, 1974), 291.

[3]Nelson Goodman, *Languages of Art.* 2nd ed. (Indianapolis: Hackett Publishing Company, Inc., 1976), 5.

But whereas the picture denotes what it represents, it does not denote what it expresses, i.e., the picture does not denote sadness; rather, the picture is denoted by the predicate ‘sad’. Therefore, representation and expression differ not because they denote different domains, and they differ only because of the distinct ways that they refer. Exactly what this means I will now further explicate.

Reference is the genus encompassing all the separate species of 1) denotation 2) representation 3) expression, and 4) exemplification. The functions of these four are the ways in which paintings refer, with representation and expression being the two different kinds of symbolization, and denotation and exemplification being the two ways the referencing is accomplished. But whereas the picture denotes what it represents, we have seen that it does not denote what it expresses, and Goodman generally refers to expression as converse denotation. In other words, the picture does not denote sadness; the picture is denoted by the predicate ‘sad’. Therefore, representation and expression differ not because thy denote different domains. They differ because of the distinct ways that they refer. When we say that the picture expresses the emotion ‘sad’, Goodman argues that it is not the case that the picture refers to an abstract entity “sadness” in the way it refers to cliffs by the sea. And, of course, he maintains this, because the world of properties (defined in non-Goodmanian intensionalist terms) is a myth, a conceit of those unable to formulate a clearly articulated nominalist world. In other words, Platonist talk about non-extensionalist properties can be replaced by nominalist talk about words. Because Goodman wants to avoid the definition of expression that has historically equated expression with the immeasurable and unformed gushing of psychological emotion, he promises instead to give us lucidity, thus taking much of human psychology

out of an analysis of art and giving instead a symbol theory in terms of reference. Hence, to see an object as a representation that also expresses something is to see it under a description. Emotion may be one of the kinds of things that a picture can be said to express, but expression as such is defined not by its intimacy with emotion but by the referencing that occurs between the predicate describing the expression and instance of that expression in the painting.

Since Goodman is giving an analysis of the structural relations of the symbols, the way to proceed is then limited to a semantic account, which is consistent with other facets of his thought. As he states it: "My approach is rather through an analytic study of types and functions of symbols and symbol systems…universes of worlds as well as worlds themselves may be built in many ways."[1] In aesthetics, this semantic view impacts directly on his notion of what art does and what it is, i.e., art is a symbol system; art is a language. And it is, thus, one that we construct. As Elgin states: "A theory of reference takes as its main task to characterize the relations between a language (or, more broadly, a symbol system) and its objects."[1] Art is a symbol system that we construct, and the pertinent facts to consider are the relations between the words we use to describe the art and the art object itself.

If we ask the question, "Why do we choose to symbolize one object, or why assign a particular label to a group of objects, instead of to others?", Goodman answers that importance is a socially derived seal-of-approval, one that is given consequent to the process of choosing, not antecedently. It is, in other words, important because we chose

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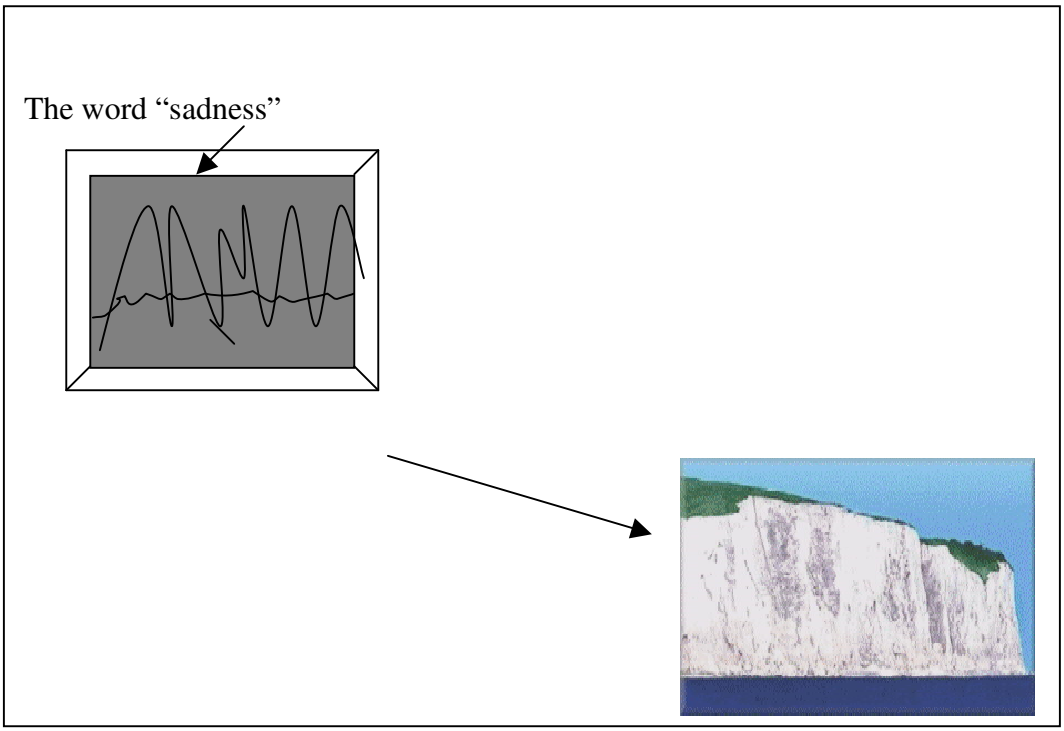
[1]Nelson Goodman, *Ways of Worldmaking* 4th Printing (Indianapolis: Hackett Publishing Company, Inc., 1985), 5.
[1]Catherine Elgin, *With Reference to Reference* (Indianapolis, Indiana: Hackett Press, 1983), 5.

it; we did not choose it because it was important. Hence, Goodman's theory of entrenchment becomes essential, as does his central point that reference is the mechanism whereby symbolic relations -which function denotatively between the picture and particulars in the world outside the picture - are communicated and understood. (This will be more fully discussed in Chapter III, "Goodman's Aesthetics as a Branch of Epistemology".) But suffice it to say for present purposes, constructed referential symbol systems explains both representation and expression in Goodman's aesthetics, and it is to a more complete analysis of the latter that we may now turn.

1.5 Goodman on Expression

Goodman defines expression as converse denotation. Since he tries to structure a syntactical analysis of symbols where representation, denotation, exemplification and expression are not defined as relations between artworks and the mental and emotional states in the artist/viewers, but are defined in terms of the relations between linguistic terms and the way they stand to things in the world, it is, therefore, important for him to clearly separate the direction in which the denotation travels. As he states it, "Thus while a picture denotes what it represents, and a predicate denotes what it describes, what properties the picture or the predicate possesses depends rather upon what predicates denote it… Whether or not what is represented is concrete while what is expressed is abstract, what is expressed subsumes the picture as an instance much as the picture subsumes what it represents."[1] The picture Goodman has given us is something like this:

[1]Nelson Goodman, *Languages of Art.* 2nd ed. (Indianapolis: Hackett Publishing Company, Inc., 1976), 51-52.



To say “a picture denotes what it represents” is fairly straightforward: the picture denotes the actual object. (The direction of the arrow in the illustration indicates the direction of denotation.) When Goodman says, “…the predicate denotes what it describes”, he means the predicate “sadness” denotes the painting, i.e., the predicate describes the painting; the painting is described by the predicate; the predicate “sadness” denotes the sad painting.

In this context, does ‘predicate’ mean the word “sadness” or the property sadness, and how does Goodman differentiate the two? When Goodman says, “…what properties the picture or the predicate possesses depends rather upon what predicates denote it….”, what he presumably means in the phrase ‘what predicates denote it’ is that the pronoun ‘it’ has as its antecedent ‘painting’, because, of course, it would make no sense to say that the predicate denotes the predicate. But precisely how he, in fact, uses the term

'properties' is sometimes less than clear in Languages of Art. On several footnoted occasions, he tries to clarify the usage of the term so that it coincides more fully with his nominalism, after he has used it in ways that seem incompatible with nominalism. For example, in the beginning of the second part (there are six parts in the book, each subdivided into topics), he states the following: "I think we shall do best at the start to confine "express" to cases where reference is to a feeling or other property rather than to an occurrence of it."[1] There is a footnote after the word 'property' and it reads: "The seemingly shameless platonism exhibited here will be corrected shortly (section 3 below)."[2] But it is unclear where exactly "section 3" might be, since none of the parts of the Table of Contents are labeled 'section'; in other words, he could be referring to the third part of the book, which is simply labeled "III Art and Authenticity", or he could be referring to the third topic headline, entitled "Exemplification", or the particular part wherein the footnote occurs, i.e., what I am calling the second part of the book. I am inclined to think it is the latter, though he fails to directly signal the reader in the "Exemplification" part that he is clarifying an earlier point stated in the footnote on page 47, though he closes the "Exemplification" section with the following statement: "The 'difference in domain' discussed earlier thus reduces to this: while anything may be denoted, only labels may be exemplified."[3] The word 'exemplified' is footnoted and that reads:

> If (as in SA, Part III) such abstract entities as qualia are recognized, these – although not labels – may indeed be exemplified by their instances, which are

[1]Nelson Goodman, *Languages of Art.* 2nd ed. (Indianapolis: Hackett Publishing Company, Inc., 1976), 46-47.
[2]*Ibid.*
[3]Nelson Goodman, *Languages of Art.* 2nd ed. (Indianapolis: Hackett Publishing Company, Inc., 1976), 56-57.

> concrete wholes containing these qualia. But exemplification of other properties would still have to be explained as above in terms of exemplification of predicates; and simplicity of exposition for our present purposes seems best served by treating all exemplification in this one way.[1]

Clearly, Goodman would like to avoid using the term 'property' in a way that would assume non-extensions, and would want to use it in the way it was defined in Structure of Appearance, i.e., the typically repeated pattern of qualia exhibited by an object, for to do otherwise would weaken his extensional account of reference.

But his difficulty with the term "property" is continued throughout Languages of Art. When explaining the role of labels in metaphorical exemplification, (which is more fully explained in §III, Chapter II "Goodman's Metaphorical Exemplification") he states the following: "Though accuracy would often call for speaking of expression of predicates, I defer to a prissy prejudice by speaking throughout this section of expression of properties."[2] The footnote, attached to the word "properties", reads as follows: "No difficulty or obscurity is removed by such pussyfooting; and the bolder course of defying prejudice and speaking forthrightly of expression of labels rather than properties is surely to be recommended."[3] Two pages later, he repeats the recommendation after he makes the following statement: "We must note carefully that the pictorial metaphor here has to do not with what the picture may exemplify or express but with what may exemplify the picture and express the corresponding property."[4] The footnote, again attached to the word 'property' reads: "Or express the picture itself, if we stop pampering prejudice."[5]

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[1]Nelson Goodman, *Languages of Art.* 2nd ed. (Indianapolis: Hackett Publishing Company, Inc., 1976), 57.
[2]*Ibid*., 87
[3]*Ibid*.
[4]*Ibid*., 89.
[5]*Ibid.*

His desire to avoid platonist talk, and hence, platonist commitment, occurs also in his discussion of the syntactical requirements of a notational scheme (more fully discussed in this section's Chapter II "Goodman's Metaphorical Exemplification", subsection 2.2 "Instantiation as Part of a Constructed System", and Chapter III "Goodman's Aesthetics As a Branch of Epistemology", subsection 3.1 "The Distinction Between Aesthetic and Non-Aesthetic") where he states: "In other words, being instances of one character in a notation must constitute a sufficient condition for marks being 'true copies' or replicas of each other..."[1] The word 'replicas' is footnoted and that reads:

> The distinction between a word 'type' and its 'tokens' was stressed by Peirce; see Collected Papers of Charles Sanders Peirce, vol. IV, ed. C. Hartshorne and P. Weiss (Cambridge, Mass., Harvard University Press, 1933), p. 423. The type is the universal or class of which marks are instances or members. Although I speak in the present text of a character as a class of marks, this is for me informal parlance admissible only because it can readily be translated into more acceptable language. I prefer (se SA, pp. 354-364) to dismiss the type altogether and treat the so-called tokens of a type as *replicas* of one another. An inscription need not be an exact duplicate of another to be a replica, or true copy, of it; indeed, there is in general no degree of similarity that is necessary or sufficient for replicahood. See further the examples discussed later in this section.[2] (Italics in the original)

Clearly, the use of the word 'property' is important in analyzing Goodman's notion of expression, as he must distance himself from the platonic associations of the word if he is to explain expression solely in terms of extensionalist reference. Whereas the logical relationship between the subject of the painting and what it denotes is to be found in an empirical relationship between the symbol and the actual object in the world, the logical relationship between what the painting is said to express is found not in a

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[1]Nelson Goodman, *Languages of Art.* 2nd ed. (Indianapolis: Hackett Publishing Company, Inc., 1976),
[2]*Ibid.*

relationship between those symbols and entities external to those symbols, such as would be the case for an idealist aesthetician, but between those symbols found in the painting, and the linguistic terms which are the label for the painting, i.e., "sadness", which, therefore, denote the painting. The painting must in some way possess the attribute of sadness, and the attribution is found to be correct if the linguistic term accurately describes (i.e., denotes) the painting.

Though both representation and expression are kinds of denotation, expression is characterized as converse denotation, which is differentiated from the denotation of representation as "the difference in direction of reference between a relation that runs from label to labeled, and another that runs from labeled to label."[1] But this needs to be further elucidated. In other words, even if we know the way the referential function is operating, we still need to know something about, as it were, the internal character of expression. When we say that the painting is expressing something, what exactly is happening that allows us to say that? Goodman presents the dilemma in the following way:

> Before me is a picture of trees and cliffs by the sea, painted in dull grays, and expressing great sadness. This description gives information of three kinds, saying something about (1) what things the picture represents, (2) what properties it possesses, and (3) what feelings it expresses. The logical nature of the underlying relationship in the first two cases is plain: the picture denotes a certain scene and is a concrete instance of certain shades of gray. But what is the logical character of the relationship the picture bears to what it is said to express?[2]

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[1]Nelson Goodman, *Of Mind and Other Matters* (Cambridge: Harvard University Press, 1984), 93.

[2]Nelson Goodman, *Languages of Art.* 2nd ed. (Indianapolis: Hackett Publishing Company, Inc., 1976), 50.

The usual recourse is to claim that art expresses emotion, and Goodman carefully and fully argues against identifying expression with emotion. The following several quotations will serve as examples:

> That a person expresses sadness may mean that he expresses the feeling of sadness or that he expresses his having of that feeling. This muddles matters, since obviously a person may express sadness he neither has nor claims to have, or may have or claim to have a feeling he does not express. I think we shall do best at the start to confine 'express' to cases where reference is to a feeling or other property rather than to an occurrence of it…[1]

> Some of these cases suggest that what is expressed is, rather, the feeling or emotion excited in the viewer: that a picture expresses sadness by making the gallery-goer a bit sad, and a tragedy expresses grief by reducing the spectator to virtual or actual tears…[but this view] is hardly more plausible…For one thing, whatever emotion may be excited is seldom the one expressed. A face expressing agony inspires pity rather than pain; a body expressing hatred and anger tends to arouse aversion or fear…[2]

> These confused notions of expression are entangled with the popular conviction that excitation of the emotions is a primary function of art. Let me enter here a parenthetical protest against this idea…[3]

Clearly, Goodman is adamant to separate the notion of expression from the notion of emotion. Not only is the emotion expressed in a painting (in those instances where what is expressed is, indeed, an emotion) not coextensive with the emotion experienced by the viewer, but it is clear that Goodman also wants to avoid the substitutivity problem, i.e., if the point to art is to experience an emotion then it becomes more economical for the viewer to substitute directly the emotive experience for the mediated art experience. By arguing that the purpose of art is not to express emotion, he both avoids the substitutivity problem and also avoids both intensional and intentional (distinct from the

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[1]Nelson Goodman, *Languages of Art.* 2nd ed. (Indianapolis: Hackett Publishing Company, Inc., 1976), 50.
[2]*Ibid.*, 47.
[3]*Ibid*., 48.

logical notion of "intensional", which is equivalent to non-extensional, and referring, instead, to the content of mental states) accounts; thereby opening the alternative possibility of a rigorous semantic account whereby language as a symbol system is at the core of the explanation. In turn, this semantic account explains phenomena irrespective of the discipline, hence avoiding the traditional dichotomy between science and art. In other words, it is the semantic account of reference that explains both aesthetic objects and non-aesthetic objects. Whereas science has always been identified with cognition and art with emoting, Goodman disavowed that bifurcation and likewise disavowed that art could not be an instance of knowledge acquisition.

Toward the end of Languages of Art, Goodman writes a short section under the heading "The Function of Feeling", wherein he concludes his arguments on the lack of distinction between scientific and artistic undertakings. Simply put, emotion is not a necessary condition for aesthetics. Firstly, emotions expressed in art are muted as compared to real-life situations that involve the same emotions – e.g., terrifying paintings are not as terrifying when experienced first person – and secondly, they are often 'reversed in polarity', i.e., we willingly experience kinds of emotion that we would ordinarily shun, such as fear, hatred, or disgust. Furthermore, the level of emotive content varies considerably among artworks, and, to use Goodman's example, something like a Piet Mondrian painting is not obviously more emotive than Newton's law, "and a line between emotive and cognitive is less likely to mark off the aesthetic neatly from the scientific than to mark off some aesthetic objects and experiences from others."[1] But, of course, to say that not all artworks are more emotive than all objects of scientific

[1]Nelson Goodman, *Languages of Art.* 2nd ed. (Indianapolis: Hackett Publishing Company, Inc., 1976), 247.

discourse is not to say that, on average, they are not more emotive. But Goodman is not addressing that point; he is merely pointing out that it is not a necessary or sufficient condition that artworks be more emotive in order to be considered artworks. And Goodman is arguing that those who claim artworks are necessarily more emotive are unable to articulate exactly in what way that is so; and clearly that failure is a serious weakening of their claim. (A final discussion of the role of emotion is to be found in §III, Chapter III, subsection 3.2 "Symbol Systems and Knowledge Acquisition".)

It is clear at this point that not only emotions can be expressed. The statement, "The painting is red" is of the same form as the statement, "The painting is sad", and, therefore, while the latter expresses an emotion the former clearly does not; it expresses red, and is, thus, denoted by the predicate 'red'. In other words, the painting expresses 'redness'. The word 'red' denotes the painting; the painting is an instance of red. The latter is what Goodman's calls exemplification and is the central component of his explanation of metaphor and how it is metaphor that gives us expression, and it is to that that we can now turn.

Chapter II. Goodman's Metaphorical Exemplification

2.1 Possession and Exemplification

Is the painting sad in the same way it is gray? No, for as Goodman points out: "A picture literally possesses a gray color, really belongs to the class of gray things; but only metaphorically does it possess sadness or belong to the class of things that feel sad."[1] The extension of the class of gray things includes that painting, but the extension of the class of sad things does not, literally, include that painting. It might include the viewer as the viewer looks at that painting and feels sad, but it does not include the painting, which cannot feel sad. By possessing the color gray it partakes of two relationships: 1) it literally belongs to the class of gray things, and 2) it metaphorically belongs to the class of sad things.

Literal possession is fairly easy to understand. An object possesses a property if the object is a member of the property's class. The gray painting literally possesses the color gray and is, therefore, a member of the class of gray things. Goodman defines literal possession in straightforward extensionalist terms: look at the extension of the term 'gray objects' and see whether or not the gray painting is a member of that set. And any given object will literally possess a wide range of properties, including its size, shape, color, etc.

Metaphorical possession is more difficult and it is Goodman's analysis of metaphorical possession that is central to his account of metaphor and *that* is central to his account of expression. Given that Goodman's view of expression makes no

[1]Nelson Goodman, *Languages of Art.* 2nd ed. (Indianapolis: Hackett Publishing Company, Inc., 1976), 51.

reference to inner mental states, the explanation of metaphor is likewise not dependent on a realm of inner mental or emotional states. Instead, metaphor is analyzed functionally: the object both literally possesses some properties and it metaphorically exemplifies other properties. It is thus by explicating the operations of possession and exemplification that metaphor is explained.

The original and literal definition of the term 'sad' as applied to an individual who might feel that emotion has now been extended to a broader category incorporating things such as the painting, which cannot be literally sad but can be said to be metaphorically sad. In other words, more entities have been added to the class; metaphor is accomplished by a new and novel change in the extension of the term. Of course, they are more novel when they are initially introduced, as Goodman notes: "Metaphors, like new styles of representation, become more literal as their novelty wanes."[1] He is pointing out that we notice more the initial expansion in the extensional definition of the term, which then quickly becomes absorbed into the general usage of the term.

But Goodmanian metaphor can not be explained only in terms of possession or only with the notion of an increase in the extensional definition of the term; one must include the concomitant feature of exemplification, for expression cannot be explained as converse denotation without the notion of exemplification, as it is exemplification that presupposes symbolization, and hence, it is that that provides the basis of Goodman's expression. This is essential in Goodman's theory. To exemplify is to be an instance of something; it automatically refers to that of which it is an instance. As Goodman states the point: "Exemplification is possession plus reference. To have without symbolizing is

[1]Nelson Goodman, *Languages of Art.* 2nd ed. (Indianapolis: Hackett Publishing Company, Inc., 1976), 68.

merely to possess, while to symbolize without having is to refer in some other way than by exemplifying. The swatch exemplifies only those properties that it both has and refers to."[1] For not all of the object's qualities are examples of metaphorical exemplification; not all of them symbolize. As Goodman states, "A square swatch does not exemplify squareness, and a picture that rapidly increases in market value does not express the property of being a gold mine."[2] Each object, including works of art, has many different predicates, but not all of them are part of their definition; only some predicates are thought to be pertinent. This is true of all objects and it is even truer of artworks. We are taught to notice certain predicates of the paintings and interpret them symbolically: e.g., the colors, the texture, and the subject-matter. Whether or not the canvas is taut is not particularly relevant, nor is the fact that it was painted by an artist who stood while painting, or sat.

To exemplify is to possess the attribute in question by the social decree that we take that attribute into account when we characterize the object. It may not be the intent of the particular speaker or artist that is of importance, for the speaker/artist may be cognizant of what the symbol is instantiating or may not be so cognizant. But the symbol, whether linguistic or non-verbal, must have as part of its definition that particular symbolic meaning that is revealed through the instantiation. In other words, the symbol, by being part of the language, thus functions as symbolizing a particular thing. The "intent" then is found not necessarily in the mind of the user, but in the structure of the language. Therefore, the mere intent of the artist is neither necessary nor

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[1]Nelson Goodman, *Languages of Art.* 2nd ed. (Indianapolis: Hackett Publishing Company, Inc., 1976), 53.
[2]*Ibid*., 86.

sufficient – the meaning embedded in the symbol must be successfully communicated to others, which, of course, presupposes social agreement on the projection of predicates. The latter is the mechanism by which we socially agree on what to expect and, hence, what we have antecedently valued.

Thus through metaphorical exemplification, the picture refers to sadness. So the picture is an instance of representation and denotation, and it is also an instance of exemplification and expression. Representation and description (whether pictorial or literary) are both denotative of terms, whereas exemplification and expression are denoted by terms. Expression is found in the relation of metaphorical exemplification, and it is metaphorical exemplification that relates the predicate to that that it describes by converse denotation; or more precisely, the relation is a "subrelation of converse denotation", for the referencing must be traveling in both directions. For example, the painting exemplifies sadness and the predicate "sadness" denotes the painting. As Goodman states it,

> The constraint upon exemplification as compared with denotation derives from the status of exemplification as a subrelation of the converse of denotation, from the fact that denotation implies reference between two elements in one direction while exemplification implies reference between the two in both directions.[1]

When Goodman asks the question, "But what is the logical character of the relationship the picture bears to what it is said to express?,"[2] his answer is thus: since the accomplishment of metaphorical exemplification is a consequence of the viewer cognitively grasping the symbol meaning in question, the metaphorical exemplification is found *in the symbol*. But the mechanics of this still need to be further revealed.

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[1]Nelson Goodman, *Languages of Art.* 2nd ed. (Indianapolis: Hackett Publishing Company, Inc., 1976), 59.
[2]*Ibid.,* 50.

2.2. Instantiation as Part of a Constructed System

Goodman insists that the referencing relationship between 'sadness' and its symbolization by, among other things in the painting, the color grey is not natural and instead argues that it is a consequence of social construction. He does this by arguing, firstly, against the view that the symbol and what it symbolizes are two different kinds of entities, particularly as the ontology that posits non-individuals (universals) often posits those universals as non-constructed, and, secondly, he argues that the symbols we use are chosen by us. I will explain both of those arguments in that order.

We use the color grey in a painting that symbolizes sadness because grey is one of the devices that can signal that particular expression, which makes instantiation an essential part of what distinguishes aesthetic objects from non-aesthetic objects. It is for that reason that Goodman lists exemplification as, what he calls, the fourth symptom of the aesthetic:

> A fourth and final symptom of the aesthetic is the feature that distinguishes exemplificational from denotational systems and that combines with density to distinguish showing from saying. An experience is exemplified insofar as concerned with properties exemplified or expressed – i.e. properties possessed and shown forth – by a symbol, not merely things the symbol denotes…. But exemplification, like denotation, relates a symbol to a referent… [1]

The painting *shows* itself as an instance of a sad painting; the symbols are instantiations of sadness. And a symbol is said to exemplify something when it can be said that the particular instance of the symbol instantiates that thing it is also said to refer to. At this juncture, the question must be put: exactly what is the symbol exemplifying? It might

[1]Nelson Goodman, *Languages of Art.* 2nd ed. (Indianapolis: Hackett Publishing Company, Inc., 1976), 253.

seem as though the relationship is between the particular instance of the symbolizing – in this instance a particular sad painting – and the general category of sadness; or, in other words, a relationship between a particular and a universal, where the latter is construed as a non-extensionalist property. While there are clearly non-aesthetic instances of particular symbols being used in ways that are not indicative of a relationship of instantiation in idealist terms, e.g., the relationship between the silhouette icon for "men" on the bathroom door and the men for whom the bathroom itself exists, the way in which symbolic grey is an instantiation of sadness might seem like the traditional problem of the relationship between a particular and a universal similar to the relationship between a particular just act and the platonic universal "justice". But Goodman (and by extension, Elgin) is quick to point out that it is important to remember that this instantiation is not an ontological relation, but a semantic or conventional one. Unlike a metaphysical realist's account, the individual object is not instantiating a universal. How does Goodman argue this?

The frequently cited example of exemplification by Goodman is the swatch. The swatch of cloth, used by the merchant, exemplifies the color and texture of the fabric it is meant to symbolize. It does not, though, exemplify a tiny square, since that is not for what it is intended; it refers to what the tailored suit will be like. As he states:

> Exemplification is possession plus reference. To have without symbolizing is merely to possess, while to symbolize without having is to refer in some other way than by exemplifying. The swatch exemplifies only those properties that it both has and refers to.[1]

[1]Nelson Goodman, *Languages of Art.* 2nd ed. (Indianapolis: Hackett Publishing Company, Inc., 1976), 53.

In Goodman's terms, something symbolizes when it has been said to refer, and this must be understood in terms of a functioning linguistic (and nonverbal) practice whereby the symbolic usage has been agreed upon by both artist and viewers. It is a kind of ostension: I (as an artist) am pointing to something; I am using certain symbols (instead of my finger), and you (the viewer) understand the referential-finger-pointing embedded in my symbol. It has successfully referred because it has exemplified what it is expressing through the use of socially agreed-upon symbols. And what is being expressed is understood in terms of our labels for the experience; the term 'sadness' is the label to which the painting is referring through the instance of reference as seen in exemplification.

This is why Goodman wants to use the example of a label and a swatch; this is a relation between two particulars, and not a relation between two separate ontological kinds. The swatch exemplifies certain labels, such as 'brown', 'tweed', etc. But it does not exemplify entities of a 'different domain' (to use Goodman's phrase); it does not exemplify any universals. Elgin addressed the problem in the following way:

> A term denotes whatever it applies to. This information is helpful only if we have a way to identify terms and their ranges of application. Neither is straightforward.
>
> To recognize an expression as a term is to recognize that it functions referentially. But there are serious disagreements as to which expressions do so. The dispute between nominalists and Platonists concerning the status of abstract singular nouns is a case in point. A singular term is, or is replaceable by, a quantifiable variable. A general term is true or false of the objects denoted by such a variable. Since nominalists admit nothing but individuals into their ontologies, a problem arises regarding the interpretation of abstract singular nouns. Some follow Goodman in taking such terms to denote scattered individuals. Others construe them nonreferentially, holding them to be syncategorematic, or to belong to an unperspicuous shorthand…Platonists admit classes as well as individuals into their ontology. Thus, they hold abstract singular nouns to be genuine terms, immediately replaceable by quantifiable variables. Some nominalists then disagree

> with Platonists over the sorts of expressions that can legitimately be supplanted by variables.[1]

If the painting expresses sadness, its "sadness" is not a term that can be quantified over; we cannot replace that term with a variable and treat it as a name, hence, admitting existence claims. The only variable that may have a value is an individual. Though Goodman never characterizes the general term 'sad' as an instance of a scattered individual, as his explanation for the aesthetic use of the term is never an ontological explanation, though he could have, consistent with his nominalism, made that argument. His account of aesthetic instantiation – always given in referential and semantic terms – does, though, commit him to entities of only one kind, i.e. individuals. It is important to explicate exactly how he does this.

Goodman is aware of the difficulty in explaining instantiation in terms that do not indicate a relationship between a particular circumscribed object and a non-extensionalist – or mental – category, as is shown in his repeated attempts to correct for misinterpretations of the words "property" or "types", (noted especially in the footnotes in Languages of Art), and in the organizational titles of his topics for the second part of the book (II The Sound of Pictures), which begin with the title "A Difference in Domain", which ontological position is then denied within the text, i.e. there is no difference in ontological domain. The position that argues for a different domain is also denied by the title of the next topic: "A Difference in Direction", which places the difference between what is represented and what is expressed or instantiated firmly within a referential account. But it is Elgin, particularly in the chapter entitled

[1]Elgin, Catherine. *With Reference to Reference.* Indianapolis, Indiana: Hackett Press, 1983, 23.

"Exemplification" in her book on Goodman entitled With Reference to Reference, who speaks most directly to the platonist problem:

> An objection might, and probably should, be raised at this point. I have been speaking of labels as the objects of exemplification. But in the previous paragraphs it was sadness, terror, bliss, and so on, that were said to be expressed. If expression is a mode of exemplification, then either so-called universals must be exemplified, or labels, expressed. Although I prefer the latter promulgation, as it carries no suggestion of Platonism, the two actually come to much the same thing. Recall of Plato's formulation of the problem of universals: What is that which all just acts have in common by virtue of which they can be called 'just'? His answer: Justice. But we have found that all that the instances of a label need have in common in order to be called by that label is that the label actually apply to them. Accordingly, an action is an instance of justice if and only if the predicate 'just' applies to it. And a picture expresses sadness if and only if it expresses the predicate 'sad'.[1]

When she says, "they come to much the same thing" she is referring to the move, as it were, that takes talk of universals and converts it into talk about words. In the medieval nominalists' explanation of the phenomenon, universals were just words, or "flatus vocis", and we make up the words that refer to the general categories as we experience the similar examples, thereby denying the realist's position that the entities referred to by general terms are mind independent and hence metaphysically prior to and independent of our existence. The crucial point in understanding Goodman's scheme is found in the answer to the question whether the same is true of non-verbal symbols. The answer is yes; the symbols exist as category markers for the general term that stands for its repeating instances. The instantiation relation thus is seen as one between labels and swatches, for a label can certainly change and be amended. Goodman stresses this point when he amends an earlier statement:

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[1]Elgin, Catherine. *With Reference to Reference.* Indianapolis, Indiana: Hackett Press, 1983, 82.

> Earlier I said that what is exemplified is abstract. Now I have interpreted exemplification as obtaining between the sample and a label – for instance, between the sample and each concrete inscription of a predicate…. The 'difference in domain' discussed earlier thus reduces to this: while anything may be denoted, only labels may be exemplified.[1]

In other words, there are no differences in domain; there are just individuals. And the example of the swatch serves perfectly for this notion of instantiation, because that is exactly our notion of a label – one "assigns" a label. The label is put on the package before it is sold, the label is typed up and attached to the wall next to the painting hanging in a gallery; the label is that which we assign to groups of objects or people in order to easily refer to them. This is clearly differentiated from the Platonic notion of "justice".

It is now possible to address Goodman's argument regarding the constructed nature of those symbols. Goodman embraces Gombrich's point that we ought to abandon the obsolete idea that viewing is a merely passive process, and instead emphasizes that the aesthetic experience is a kind of comprehension albeit a visual comprehension. It is easy, for Goodman, to argue from the point that art is symbol interpretation to the claim that the symbols themselves are constructed. The cognitive activity involved in visual art is a cognitive activity of interpreting the use of the symbols that we have devised. If the eye is not passive - if there is no "virgin eye" - then we must *learn* to see what it is that we see, making it a kind of epistemological experience. Furthermore, we change the symbols when they no longer suit our purposes, making it a constructed symbolism, e.g. knowledge acquisition of a constructionalist world. For Goodman, the symbols could have been different, and understanding how metaphor is a thing constructed by us

[1]Nelson Goodman, *Languages of Art.* 2nd ed. (Indianapolis: Hackett Publishing Company, Inc., 1976), 56-57.

through a change in the usage of a term, is to understand how symbols are constructed by us. In order to do this, it is necessary to explicate the role of extension in metaphor.

2.3 A Different Extension

What needs to be considered at this point is both how symbols function as a projection of predicates and how it is that symbols can be constructed anew, because wherein the latter is accomplished through the change in the usage (extension) of a term, that can only be understood as part of the former phenomenon of the projection of predicates. (The projection of predicates was fully discussed in §II, Chapter III "The Effects of Goodman's Nominalist Constructionalism on His Epistemology", subsection 3.1 "Induction and Projection of Predicates".) In addition, an explanation of the extensional expansion of a term involves an explanation of Goodman's notion of range and realm. Therefore, in this subsection, I will explicate the role of the projection of predicates within aesthetics, the notion of range and realm within metaphor, the extensional expansion of terms in the construction of metaphor, and lastly, the distinction between metaphor and ambiguity as elucidated through Goodman's theory of notation.

Goodman explains how it is that the audience identifies symbols by sorting them from alternative symbols when he notes, "what counts as red, for example, will vary somewhat depending upon whether objects are being classified as red or nonred, or as red or orange or yellow or green or blue or violet."[1] What he is arguing is that the decision to recognize – or project– some predicates instead of others depends often on the category that is being sorted for, and these category decisions are prior to the sorting of

[1]Nelson Goodman, *Languages of Art.* 2nd ed. (Indianapolis: Hackett Publishing Company, Inc., 1976), 71-72.

individuals. For example, the distinctions between crimson and cadmium will not be noticed if we are sorting for red from nonred; we will not project those predicates. Since we expect to differentiate red from nonred, what we recognize is appropriate to the parsing relative to the antecedent category decision. And we project the predicates we do because we select the ones more often used before. As Goodman describes it,

> To learn and use any language is to resolve problems of projection. On the basis of sample inscriptions of a character we must decide whether other marks, as they appear, belong to that character; and on the basis of sample compliants of a character, we must decide whether other objects comply. Notational and discursive languages are alike in this respect.[1]

While the role of the projection of predicates is evident in this process of language use, the additional role of range, i.e., the extension of the term, and realm, i.e., the 'family' to which the term belongs, in the general choice of predicates still needs to be elucidated if we are to understand how new symbols may emerge. For what predicates are projected depends also upon what predicates have been projected in the past, and metaphor, in turn, depends on that, too. I will now turn to the explanation of metaphor.

A metaphor becomes such by a change in both range and realm. The range is the objects to which the term applies, whereas the realm is the general category or schema being employed. Goodman defines it thus:

> The aggregate of the ranges of extension of the labels in a schema may be called a *realm*. It consists of the objects sorted by the schema – that is, of the objects denoted by at least one of the alternative labels. Thus the range of "red" comprises all red things while the realm in question may comprise all colored things. But since the realm depends upon the schema within which a label is functioning, and since a label may belong to any number of such schemata, even a label with a unique range seldom operates in a unique realm.[2]

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[1]Nelson Goodman, *Languages of Art.* 2nd ed. (Indianapolis: Hackett Publishing Company, Inc., 1976), 201.
[2]*Ibid.,* 72.

When we take a word or phrase out of its usual context and shift it into a new one, we thereby change the objects over which it ranges and we also extend the aggregate realms of that word/phrase. It's that shift which startles us and awakens in us a new perspective. Given that symbol use is a kind of language with which we are able to communicate to one another, we are able to communicate new things when we use symbols in a heretofore-unused way. In this instance, the range, i.e., the objects to which it applies, of that predicate "sadness" has been increased, as has the realm to which the predicate is usually assigned, such that we now think of art as possibly exemplifying sadness whereas we had not previously thought of sadness as being exemplified in non-human realms. Thus, there has been a change in both range and realm. Metaphor is a way of giving us new information, new interpretations, or, as Goodman expresses it, "Metaphor, it seems, is a matter of teaching an old word new tricks – of applying an old label in a new way."[1]

Goodman's interest in extensional definitions was not, of course, his alone, but he had shown an early interest in it long before he wrote Languages of Art, in articles such as "On Likeness of Meaning", published in 1949, where he examined the implications of extensional definition and extensional expansion, particularly how that affects issues of synonymy and analyticity:

> Now the important point here is this: Although two words have the same extension, certain predicates composed by making identical additions to these two words may have different extensions. It is then perhaps the case that for every two words that differ in meaning either their extensions or the extensions of some corresponding compounds of them has different extensions? If so, difference of meaning among extensionally identical predicates can be explained as difference in the extensions of certain other predications. Or, if we call the extension of a predicate by itself its *primary* extension, and the extension of any of its compounds a *secondary*

[1]Nelson Goodman, *Languages of Art.* 2nd ed. (Indianapolis: Hackett Publishing Company, Inc., 1976), 69.

> extension, the thesis is formulated as follows: two terms have the same meaning if and only if they have the same primary and secondary extension.[1]

The distinction between a primary extension and a secondary extension is seen again in Goodman's writings almost twenty years later in Languages of Art. A metaphor is an extension of a term, and it thus both depends on previous usage – it retains and uses the original definition – and it violates that previous usage because it has extended the primary extension. This is the surprise effect embedded within metaphor: the artist has pointed out that this object, heretofore never used as an instance of this quality 'sadness', is now an exemplar of that quality. So our primary definition of 'sadness' stays in tact, but it has been extended in its secondary usage that now includes this new aesthetic object.

It is now evident how his explication of the relationship between the symbol and its ability to communicate is wholly a constructed relationship, and as a constructed system there are discernable rules in place, which is explained in Goodman's theory of notation. Part of his analysis of aesthetics is based on the formal constraints centered on issues of relative frequency of shifts in meaning within a particular range and whether there is a clear border between any two given instances. The latter is called finite differentiation, the former density. A notational scheme, i.e., any symbol scheme that consists of characters – such as written music score – has characters that are finitely differentiated from one another (i.e., a 'B' note is not a 'C' note) and the characters are disjoint, such that any given mark can be determined to belong in some particular category; for all the inscriptions are conspicuously different from one another. Symbol

[1]Nelson Goodman,"On Likeness of Meaning" in *Analysis* 10 (1949): 5.

systems such as music, the alphabetical system, and the numerical system all count as notational systems.

Furthermore, in a notational system the relationship between one aural version of the system and a written version, for example, the relationship between a musical performance and the score is a referential relationship; the performance is denoted by the score. Again, the difference in the two versions is not a difference in domain, but a difference in direction. To 'have a compliant' is used, by Goodman, interchangeably with 'denotes', and 'compliance-class' is interchangeable with 'extension', so that "whatever is denoted by a symbol complies with it".[1] Hence a performance of a piece of music complies with – or is denoted by – the written score, or more generally, a "symbol system consists of a symbol scheme correlated with a field of reference."[2] If the compliance relationship is invariant, then there is no ambiguity, which is of course what is required of a notational system but not of a non-notational one such as natural languages or visual art. A notational system therefore has the syntactic requirements of character-indifference among the instances of each character, i.e., all "A's" are the same as all other "A's"; disjointness; and finite differentiation; and the semantic requirements of unambiguity; finite semantic differentiation; and disjointness of compliance-classes. The latter is important for the following reason:

> For if two different compliance-classes intersect, some inscription will have two compliants such that one belongs to a compliance-class that the other does not; and a chain from compliant to inscription to compliant will thus lead from a member of one compliance-class to something outside that class.[3]

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[1]Nelson Goodman, *Languages of Art.* 2nd ed. (Indianapolis: Hackett Publishing Company, Inc., 1976), 144.
[2]*Ibid*., 143.
[3]*Ibid.,* 150.

(This is reminiscent of Goodman's discussion of Carnap's "imperfect community" problem. See §II, Chapter II "Constructionalism", subsection 2.1 "Adequacy Criterion".)

A painting, on the other hand, does not exhibit a clear border between two instances of characters; gray is not clearly distinct from green-gray; thus, the system is dense. If a system is dense, then there are infinitely many characters where between any two there can be a third. The latter of course implies lack of differentiation. Thus non-notational systems – such as painting, sculpture, or natural languages – are syntactically and semantically dense. As Goodman explains it, "Neither the pictorial characters nor the exemplified properties are differentiated; and exemplified predicates come from a discursive and unlimited natural language. Comparison with the case of an ungraduated thermometer is pertinent here…"[1] In this kind of system, there is no finite differentiation because one mark cannot necessarily be said to belong to one category of characters rather than to another. Ambiguity is therefore a part of this system, as Goodman states:

> A mark that is unequivocally an inscription of a single character is nevertheless ambiguous if it has different compliants at different times or in different contexts, whether its several ranges result from different literal or from literal and metaphorical uses.[2]

Since density implies a lack of finite differentiation, the disjointness requirement of notational systems is violated because a mark can belong to two different characters, whether at the same time or at different times. Clearly, this makes ambiguity quite distinct from metaphor, which is dependent on previous usage of the term.

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[1]Nelson Goodman, *Languages of Art.* 2nd ed. (Indianapolis: Hackett Publishing Company, Inc., 1976), 234.
[2]*Ibid*., 147.

While Goodman spends much time on distinguishing between notational and non-notational systems, as well as between pictorial and linguistic, discursive languages from non-discursive languages, allographic art, (i.e., where legitimate copies are made that are indistinguishable from one another), from autographic art, (i.e., where even the most exact copy does not count as genuine) – the central point to these distinctions is summarized by the following statement: "The significant difference lies in the relation of a symbol to others in a denotative system."[1] For example, Goodman argues that the difference between a diagram of Mt. Fujiyama and a drawing of it is not in what is symbolized, but:

> The difference is syntactic: the constituitive aspects of the diagrammatic as compared with the pictorial character are expressly and narrowly restricted. The only relevant features of the diagram are the ordinate and abscissa of each of the points the center of the line passes through. The thickness of the line, its color and intensity, the absolute size of the diagram, etc., do not matter…For the sketch, this is not true. Any thickening or thinning of the line, its color, its contrast with the background, its size, even the qualities of the paper – none of these is ruled out, none can be ignored.[2]

The symbols in the drawing are relatively replete and dense, which is a different kind of symbol usage than in the illustration. The main point Goodman is trying to make is that symbol systems function differently from one another because they have different referential relations from one another, as seen in their differing syntactical and semantical relations. In other words, the "internal structure" of the symbol is irrelevant; what is relevant is that they symbolize differently by functioning in different referential ways within the schema. This is the crucial point. What counts is their function within the schema: for example, whether or not the character is clearly disjoint from other characters

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[1]Nelson Goodman, *Languages of Art.* 2nd ed. (Indianapolis: Hackett Publishing Company, Inc., 1976), 228.
[2]Ibid., 229.

is what is important, not whatever the symbol might be symbolizing; not the “internal” character of the symbol. In other words, it is reference that counts, not meaning.

Chapter III. Aesthetics As a Branch of Epistemology

3.1 The Distinction Between Aesthetic and Non-Aesthetic

As we have seen in the previous subsection, Goodman's system of notation explicates the distinctions between notational and discursive, but it also distinguishes between aesthetic and non-aesthetic. Not, of course, expecting an essentialist definition that could distinguish between the two, Goodman rather looks for the differing ways that the symbol processes might reveal themselves. Correspondingly, the differences are "neither a necessary nor a sufficient condition for, but merely tend in conjunction with other such symptoms to be present in, aesthetic experience."[1]

The "symptoms" are: syntactic density, semantic density, syntactic repleteness, and exemplification. The first is characteristic of nonlinguistic systems and visual art in general and is distinguished from disjointness and differentiation of characters, as density implies a lack of articulation. Semantic density is seen in the function of expression in the visual arts, as what is being exemplified is not obviously excluded from belonging to other character or exemplifying symbols. Syntactic repleteness distinguishes those instances that are more diagrammatic from those that are more representational, such that the diagram's lines are not interpreted with the fine granularity with which a drawing is interpreted, i.e. the thickness or color of the drawing's lines are relevant to the meaning whereas the diagram's line quality is unimportant to the symbolic referencing. Instantiation distinguishes showing from saying.

What constitutes the symptoms of the non-aesthetic? Goodman lists them as follows: "Density, repleteness, and exemplification, then, are earmarks of the aesthetic;

[1]Nelson Goodman, *Languages of Art.* 2nd ed. (Indianapolis: Hackett Publishing Company, Inc., 1976), 252.

articulateness, attenuation, and denotation, earmarks of the nonaesthetic."[2] Ambiguity, then, is more easily tolerated in the aesthetic than in the non-aesthetic, wherein the latter depends upon the clear symbolic meaning associated with the denotation of an articulate character. Understanding the aesthetic, on the other hand, requires "maximum sensitivity of discrimination", and the claim is not that the aesthetic is essentially mysterious and unknowable but that the aesthetic requires a precision of perceptual faculties and a careful attention to subtle details. Because the syntactic and semantic density of the system makes it difficult to determine the referent for any given character, the aesthetic is understood with greater difficulty than is the non-aesthetic.

But Goodman argues that the four symptoms are "severally neither sufficient nor necessary for aesthetic experience, they may be conjunctively sufficient and disjunctively necessary; perhaps, that is, an experience is aesthetic if it has all these attributes and only if it has at least one of them."[2] And, Goodman notes, this definition is independent of quality assessments; what makes a "good" opera is left up to others.

3.2 The Similarity Between Aesthetic and Non-Aesthetic

Now that a complete explication has been given of both Goodman's epistemology and of his aesthetics, it is easily possible to see the close affiliation one has with the other. As is well known, Goodman continually emphasizes that aesthetics is a part of epistemology, thus separating aesthetics from its more frequent associations with moral

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[2]Nelson Goodman, *Languages of Art.* 2nd ed. (Indianapolis: Hackett Publishing Company, Inc., 1976), 254.
[2]*Ibid*.

theory and value judgment, and also divorcing it from an affiliation with non-cognitive activities. As Goodman states,

> The naïve notion that science seeks truth, while art seeks beauty, is wrong on many counts. Science seeks relevant, significant, illuminating principles, often setting aside trivial or overcomplicated truth in favor of powerful unifying approximations. And art, like science, provides a grasp of new affinities and contrasts, cuts across worn categories to yield new organizations, new vision of the worlds we live in…[1]

As I have shown, Goodman's aesthetics is based on a referential and semantic account; an account that gives an analysis of the ways that words refer to objects in the world. In this account, all understanding is accomplished by tracing a symbol back to that to which it is referring, and once the circumscriptive correlation is complete so is the understanding. Symbols function as samples, which in turn refer to labels, but nothing comes already labeled. As Goodman states, there is no given and there is no innocent eye. In both science and art, we construct what we see, since each object has many different yet equally accurate descriptions, and the problem is to identify which of those descriptions is appropriate to the endeavor in which we are engaged. Given any instance, the inductive problem is to determine which of the labels exemplified by that particular object are to be projected, i.e., which are important. Knowledge acquisition is accomplished through the implementation and use of symbol systems, the mechanics of which are revealed in the analysis of referencing functions and the inductive practice of the projection of predicates. As Goodman states toward the end of Languages in Art:

> More to the immediate point of our inquiry, though, is the disclosure of certain special features of the functioning of symbols not only in overt induction but also in such kindred processes as category detection and pattern perception: first, that

[1]Nelson Goodman, *Of Mind and Other Matters* (Cambridge: Harvard University Press, 1984), 5.

> evidence takes effect only through application of a general symbol (label or term or hypothesis) having extension that properly includes the data; second, that the alternatives are primarily such general symbols, divergent in extension, rather than isolated particulars; and third, that pertinent time-and-trouble-saving habits can develop only through use of such symbols. Perhaps, indeed, these are earmarks of cognitive behavior in general.[1]

These processes are true in all fields of inquiry, whether art or science. Symbol recognition is the consequence of pattern perception and a prior projection of predicates, and this symbol recognition is the core of cognition, in all endeavors whether they are scientific or aesthetic. Goodman argues repeatedly against the mistaken notion that the two activities differ because science is cognition and art is emotion, or that they differ because science gives objective and certain facts and art gives only subjective opinion. As we have seen, the world of foundationalist epistemology, which had hoped to claim to give certain facts, has been abandoned by Goodman in favor of a coherentist view within relativistically built worlds, of which there are pluralistically many. Therefore, Goodman's relativism denies firmly established objective facts, as all facts are relative to a particular worldmaking activity, which itself is subject to the constant revisions credited to any inductive activity. In this, science is granted no more a foundational certainty than is art. Therefore, pluralism and relativism reinforce the lack of division between science and art. As he and Elgin state the problem in their co-authored book, Reconceptions in Philosophy:

> Since by now most us are well aware that mistakes are always possible, the quest for certainty has been abandoned. No sentences are incontrovertible, and no modes of reasoning infallible. Even so, the traditional restrictions on the application of "knowledge" and on the scope and methods of epistemology have largely been retained. As a result, cognitively significant affinities between verbal and

[1]Nelson Goodman, *Languages of Art.* 2nd ed. (Indianapolis: Hackett Publishing Company, Inc., 1976), 169-170.

> nonverbal symbols, between literal and metaphorical sentences, between descriptive and normative sentences have often been overlooked. Indeed, the exclusion of the evaluative, the figurative, and the nonverbal from epistemology has rendered their cognitive aspects all but invisible.[1]

Thus, since epistemology is the theory of knowledge, it then has to encompass all those aspects of experience that give us knowledge. Therefore, he consistently and repeatedly argues for viewing aesthetics as a sub-division of epistemology, as in the following quote from Ways of Worldmaking: "The philosophy of art should be conceived as an integral part of metaphysics and epistemology".[2] He reiterates this basic point in many, many places, such as in Of Mind and Other Matters, when he makes the point slightly differently: "All told, …[it is] my conception of epistemology as the philosophy of the understanding and thus as embracing the philosophy of science and the philosophy of art."[3] However he states it, Goodman views aesthetics as part of epistemology.

Of course, this has the obvious consequence of abandoning essentialist questions in art, much as it had in epistemology. Goodman has expressed this in many of his writings, including Languages of Art, Of Mind and Other Matters, and Ways of Worldmaking. In the latter, he stated: "If attempts to answer the question 'What is art?' characteristically end in frustration and confusion, perhaps – as so often in philosophy – the question is the wrong one."[4] The question ought, he says, to be rephrased as "When is art?". His answer is not what came to be known as the institutional theory, i.e. it is art

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[1]Nelson Goodman and Catherine Elgin, *Reconceptions in Philosophy and Other Arts and Sciences* (Indianapolis and Cambridge: Hackett Publishing Company, 1988), 4.

[2]Nelson Goodman, *Ways of Worldmaking* 4th Printing (Indianapolis: Hackett Publishing Company, Inc., 1985), 102.

[3]Nelson Goodman, *Of Mind and Other Matters* (Cambridge: Harvard University Press, 1984), 1.

[4]Nelson Goodman, *Ways of Worldmaking* 4th Printing (Indianapolis: Hackett Publishing Company, Inc., 1985), 57.

when the artworld deems it so, but instead he articulated the program presented in Language in Art: the semantic account of reference. It is art if it is part of the symbol schema pertinent to the discipline in question, i.e., it is music if it conforms to the notational system appropriate to music, or it is visual art if it conforms to the non-notational system appropriate to visual art. If its symbols are able to refer according to the rules established by the relevant schema, then it is art. And the activity of parsing those symbols – of tracing their referential routes - is the activity of understanding.

Goodman also argues for aesthetics as part of epistemology by countering that the position, which claims their separation, is not tenable. Though I have previously pointed to this argument of Goodman's, it bears repetition: those who maintain that emotion is the central feature of the aesthetic and concomitantly that cognition is the essential feature of science are not able to say, precisely, in what way that is true; and hence, without a persuasive argument, the claim cannot be made. In other words, the claim that emotion is central to art in ways that it is not central to science has not been convincingly argued, but instead, merely definitionally stipulated. Goodman argues, instead, that emotion is neither a necessary nor a sufficient condition for the aesthetic. Therefore the bifurcation between judging and knowing is denied by Goodman, and, instead, all knowledge acquisition is inductively judging something to be (provisionally) true within a certain world. This puts induction in a central role, and makes revision a continuous necessity. This, in turn, places a premium on new ways of looking at old information, and gives metaphor the role of cognitively reorganizing data. As Catherine Elgin expressed the point:

> There seems then to be no important difference in the cognitive roles of literal and metaphorical claims in science. Both are open to intersubjective scrutiny. Both

> can be contested, confirmed or disconfirmed by evidence, accepted and incorporated into a science or rejected as false, or as trivial, or as lacking in explanatory power…The metaphor then both organizes the phenomena for investigation and provides a vocabulary with which to carry out that investigation. It is implausible, at best, to claim that a metaphor that plays these roles is not functioning cognitively.[1]

Clearly, the advantage to making aesthetics part of epistemology is that aesthetics can claim to be a source of genuine knowledge about the world instead of a mere barometric measuring of the viewer's sensate pleasure regarding that world, and for those who take art seriously (as does Goodman) this is a felicitous move. In other words, Goodman's symbol theory makes art a potential source for cognizing data and, therefore, as part of the cognitive process; hence, it is of epistemological significance.

[1]Catherine Elgin, *With Reference to Reference* (Indianapolis, Indiana: Hackett Press, 1983), 69.

Chapter IV. The Effects of Goodman's Nominalism and Worldmaking on His Aesthetics

4.1 Introduction

We are now at the point where we can summarize the effects of both Goodman's nominalism and his worldmaking on the terms and concepts available to him in his aesthetics. While many of these same effects have been the evident consequences in the two earlier sections, i.e., "The Metaphysics" and "The Epistemology", their relevance to aesthetics in particular will be discussed now.

4.2 No Intensions/No Intentions

While there are a few writers who argue that the two terms "intentional" and "intensional" are indistinguishable and equivalent, I would argue, with others, that the terms have important distinctions. This is relevant to Goodman, as he repeatedly discussed his opposition to intensions, though he only used the word "intention" in the usual layman's use of the term, partially for the reason that the term hadn't gained general currency during the years he was writing, particularly in his early career. But I believe a cogent argument can be made that his nominalism and his epistemology commit him to having neither intensions nor intentional objects in his aesthetics. Before making the case for this, I will first provide a brief definition of the two terms.

The term "intensional" is used in logic contexts in two (non-mutually exclusive) ways: 1) to mean the equivalent of non-extensional, and 2) as distinguished from the extension of the term, which is defined as the set of objects to which the term applies, while the intension is defined as that by virtue of which the objects belong to that set.

The latter is thought to be primarily either a property or a quality, thereby providing the *meaning* of the term as opposed to the extensional *reference* of the term, and hence, for philosophers like Goodman, is suspect. As we have seen in every facet of Goodman's philosophy, he rejected meaning in favor of reference.

"Intentional", is used in philosophy of mind to frame issues of mental or psychological attitudes towards objects. Initially posited by Brentano as a way of explaining how it is that we are able to refer to non-existent objects, he thus referred to the objects of things such as believing, wanting, etc., as instances of "intentional inexistence" and argued that the mental object is neither completely actual nor completely non-existent and that it ceases to exist at all once the thought is over. Hence believing, wanting, etc., are "intentional acts". It is also thought by some that intentional acts are able to explain what is peculiar to psychological phenomena, and thus provides a clarification of the difference between mental and nonmental. Of course, working this thesis out in convincing detail has proved not to the satisfaction of all, particularly for someone like Goodman.

As we saw in §I and §II, intensional accounts are those for which we possess no rules of replacement, and therefore are unquantifiable and unable to give intersubjective verification, and, therefore, not acceptable options for Goodman. Intersubjective verification is, of course, that which gives science its claim to factual truth, and though Goodman is not committed to objective, empiricist science, he is committed to the intersubjective verification garnered from the semantic account, which also demands replacement of terms *salva veritate*, at least within the constraints imposed by his extensional isomorphism. This is why we saw, in §I, that he disclaimed intensions in his

metaphysics, which included, for him, abstract objects as they are construed by the mind and often thought of as independent of space and time. Clearly, it is true that intensional objects have no foundation within a Goodmanian system constructed around phenomenal qualia as the basic unit of experience, as qualia exist within a specific time and place. The demand for extensional individuals negates any consideration of intensional objects.

This is true in aesthetics as well. While Goodman will enumerate the objects in a set, thereby giving an extensional account of the term, he will not give an account of what it is by virtue of which those objects are grouped together. In other words, we are given the predicate that is expressed by the painting, but we are not given an analysis of exactly what it is in virtue of which the predicate applies. As Goodman expresses the point:

> If we are pressed to say what sort of similarity must obtain between what a predicate applies to literally and what it applies to metaphorically, we might ask in return what sort of similarity must obtain among the things a predicate applies to literally. How must past and future things be alike for a given predicate, say "green", to apply literally to them all? Having some property or other in common is not enough; they must have a *certain* property in common. But what property? Obviously the property named by the predicate in question; that is, the predicate must apply to all the things it must apply to. The question why predicates apply as they do metaphorically is much the same as the question why they apply as they do literally. And if we have no good answer in either case, perhaps that is because there is no real question. At any rate, the general explanation why things have the properties, literal and metaphorical, that they do have – why things are as they are – is a task I am content to leave to the cosmologist.[1]

Goodman very clearly denies that aesthetic predicates can be given an intensional account. Though he never explicitly denied that there were such things as mental entities, he was also careful not to reference mental entities as something to which existential

[1]Nelson Goodman, *Languages of Art.* 2nd ed. (Indianapolis: Hackett Publishing Company, Inc., 1976), 78.

generalization would apply, and he did deny abstract objects, properties, and all other things that were not concrete individuals.

The question now turns to intentional objects. Leaving aside Frege's notion of propositions that are thought of as the intention of a mental act, and also leaving aside Meinong's *Aussersein* (though both concepts are related issues and both would also violate Goodman's nominalism), and using the term "intentional" in the way that it was defined in the beginning of this subsection, Goodman is clearly unwilling to allow that such things as "believing" or "desiring" are directed at objects such that the objects are to be entities for which the operation of existential generalization might apply, nor is he to claim that the desiring or the believing themselves are objects. It is to be remembered that Russell's multiple relation notion, which reified such intentional acts as 'believing', 'thinking', or 'judging', would not pass the nominalist's criterion for existence claims, and the nominalist is likely to counter that the theory of intentionality simply is mistaken in that it assumes that intentional verbs are analogous to perceptual verbs; the nominalist would counter that "believing" is not like "seeing", as the latter requires an accusative object whereas the former does not.

For Goodman, linguistic phrases that refer to such things as "believing" might be used in mention form, but the states of mind themselves will never be directly referred to as though they were existents. Clearly, this follows directly from his nominalism that rejected everything that could not be counted as an individual, construed extensionally. Since Goodman is willing to count as entities only those singular individuals at the lowest level, intentional objects would not be among those things he is willing to countenance. Reference is seen, therefore, as compatible with nominalism, as referential accounts can

more easily be given within extensional definitions of objects construed as individuals than can accounts of things such as believing and desiring, which are not in any specific time or place and hence are not concrete phenomenal entities. Individuals are such only if they are discrete from other entities, and clearly intentional accounts of experience do not yield entities that are either discrete from one another or locatable in a specific place and time.

The question is whether human cognition and behavior in general – or aesthetic experience in particular – can be accounted for in terms that are purely extensional and thus committed only to an ontology of physical objects and to linguistic symbols for nonphysical entities that, by referring only to the linguistic symbol, leave aside any reference to something not in a specific place and time and, hence, leave aside an ontological commitment to something non-physical. While abstract entities can be paraphrased into linguistic surrogates, e.g., the formalist can talk about numerals instead of numbers, the question remains whether or not a commitment to only concrete, non-abstract individuals is sufficient to explain the experience of art, even when the intentional objects are substituted by linguistic phrases. But, again, leaving that broader question aside for other times, the present point is clearly demonstrated: Goodman cannot, consistent with his metaphysics, countenance either intensional or intentional objects. His theory of art cannot employ an explanation that includes non-extensional entities nor can it include states of mind as part of the analysis. While idealism extols the first-person account, this can clearly not be an option for Goodman.

4.3 No Properties

It is not difficult to move from a rejection of intensional objects to a rejection of properties, as the latter are normally thought of as an example of the former, and therefore the relevant points can be made fairly briefly. For those maintaining this traditional notion of property, it is identified as being an essentialist characteristic and is suspect on a nominalist account. Since Goodman's "super-extentionalism" went even further than others, such things as classes, universals, abstract objects, and properties were all unacceptable. And as we saw in §III, "The Aesthetics", Goodman was often at pains to deny that his usage of the word "property" countenanced the typical platonist commitments. Instead, he would want to maintain a definition of "property" consistent with that given in his metaphysics, i.e., it is only the name that we give to the most frequently repeated qualia in an object. Leaving aside the question of whether or not Languages of Art can be read with that definition in mind, the present point I am making is clearly true: Goodman cannot use "property" in a way that gives to his aesthetics a role for property construed as a non-extensional quality. Of course, this negates traditional notions of beauty, but it also negates notions of emotion conceived as a non-extensional quality. It is, thus, a position that falls very automatically out of his nominalism and his epistemology.

4.4 No Referencing of General Terms or Fictive Entities

Another direct consequence of Goodman's nominalism and his epistemology is his position regarding the denotational function of subject terms in his aesthetics, i.e., that

such terms cannot refer to general or fictive entities. While both restrictions are of the same general form, I will explain each of them independently.

In many places Goodman reiterates two main points regarding his nominalism: 1) that it allows anything to be an individual and 2) that it strictly forbids classes. This becomes pertinent in his aesthetics because it restricts the denotative possibilities of the subject terms in the sentence describing the artwork, i.e., general terms cannot denote. The reason is as follows. General statements are contrasted with singular statements, and can be either of a universal form, e.g., "All cats are furry", or of a particular form, e.g., "Some cats are furry". In either case, the subject of the statement is not a concrete individual. Goodman treated general terms much the same way he treated classes, wherein the restriction on the usage of the term "class" springs, in part, from an opposition to the fallacious assumption that things in the class are alike, which, thus, is defining membership on the basis of a common property. But Goodman, like many others who began their work after Russell's paradox was formulated, argued that sets are defined by their members rather than by the characteristics required for membership, i.e., by extension rather than by intension. Thus the traditional notion of classes must be forbidden because they depend upon the recognition of essentialist traits. Furthermore, to have classes is to accept the further operations that give us classes of classes, etc. – a Platonism that Goodman would want to avoid.

Defined extensionally, Goodman only admits concrete particulars. As general terms are signs standing for or referring to sets of objects, the entity referred to by a general term itself cannot be said to exist as a concrete individual, nor do the general terms refer to independent entities that are "general" entities, as there is no such thing as, for

example, a "general" cat, just as there is, on a nominalist account, no such thing as a universal cat. Hence the restriction manifests itself in Goodman's aesthetics as a prohibition against, for example, a description of an etching by Rembrandt, entitled "Landscape with a Huntsman", that would claim that the etching denoted a particular man, for we do not know whom the etching is depicting and, therefore, the etching is properly said to denote a "man-representation". As Goodman states the issue: "In other words, the etching represents no man but is simply a man-picture, and more particularly a the-man-in-Rembrandt's-Landscape-with-a-Huntsman-picture."[1] This is consistent with Goodman's position in Structure of Appearance, where he argues that the phrase "belongs to some classes satisfying the function F' can be made into a single unbroken predicate and hence not involve platonic commitment.

The difficulty of referring to a non-entity is similar to the difficulty of referring to a general term: neither are concrete individuals, and hence no argument can be made for existence claims for such terms. The restriction Goodman has on fictive entities is analogous to his restriction on the null set, as both are at odds with both nominalism and extensionalism. As has been previously quoted, his explanation in Of Mind and Other Matters of the unbroken predicate applies equally well to aesthetics:

> …some names and descriptions and pictures – such as "Robinson Crusoe" or "winged horse" or a unicorn-picture – denote nothing although each belongs to a system along with other symbols that do denote one or many things. To hypostatize a realm of nonfactual entities for these empty symbols to denote seems to me pointless and confusing. When we speak of a picture as depicting a unicorn, even though there are no unicorns to depict, what we are saying in effect is rather that the picture is a unicorn-picture; we are saying not that the picture denotes anything but rather that it is denoted by the term "unicorn-picture". And we can

[1]Nelson Goodman, *Languages of Art.* 2nd ed. (Indianapolis: Hackett Publishing Company, Inc., 1976), 26.

> distinguish unicorn-pictures from centaur-pictures, as we distinguish desks from tables, with no regard to their denoting anything.[1]

The linguistic string of words can be made an 'unbreakable' single predicate, making the variable an individual whose value is the function it describes. Since terms function referentially, the unbreakable predicate has replaced the whole string of words, and the non-denoting term is replaced. In this unbroken one-place predicate the fictive object 'unicorn' becomes the real object, i.e., the 'unicorn-picture', and is thus a satisfactory subject for a referential relation. Therefore, the nominalist prohibition against classes, null sets, fictive entities, and general terms affects the kinds of terms and concepts available to him in his aesthetics, and necessitates the role of the unbreakable predicate in his aesthetics.

4.5 No Non-semantic Meanings

Goodman's epistemology, with its reliance on reference, is seen reflected in his particular brand of aesthetics, which also, as has been demonstrated, relies on reference. Thus Goodman's aesthetics is a referential account of semantics, and art is understood through the language that describes it. Though Goodman never claims that there exist no nonverbal forms of communication, e.g., he admits that things like shrugging one's shoulders clearly communicates though it is not verbal, he does argue that our knowledge of artworks is formulated semantically. We understand what the artwork is about once we have accurately ascertained the referential relations between the terms and what the

[1]Nelson Goodman, *Of Mind and Other Matters* (Cambridge: Harvard University Press, 1984), 60.

terms denote or what the terms are denoted by. Hence meaning results from reference, and there are no meanings outside reference; there are no non-semantic meanings.

As Goodman's epistemology is relativistic, it is, of course, true that the semantic account is relative only to the world under consideration/construction, but it is, even given that relativism, never the case that non-semantic meanings, such as essentialist definitions or other meanings derived from any kind of process other than referential, would be gained. Reference is the only source of epistemological understanding. Given this view in his epistemology, it is *de rigueur* that his aesthetics would likewise require a semantic view of knowledge acquisition. It is also *de rigueur* that induction would play an important role in understanding artworks, just as induction played an important role in his epistemology, as all understanding is accomplished by the projection of predicates within the system of social conformity upon which linguistic agreement is based. It is, thus, that the symbols in artworks, by referring to things outside themselves, thereby become meaningful symbols instead of merely decorative items. These symbols, in turn, pattern themselves in society into broader movements as they are governed by the natural result of induction, which gains adherents as the probabilistic accretion of the projection of predicates determines changes in the models for artmaking. In other words, art history is moved forward because of the changes in the patterns of predicates that are projected. While this semantic account combines with the role of induction to give us a version of cultural progress, it concomitantly denies the possibility of knowledge acquisition coming from any other sources, such as would be gained in a natural kinds doctrine or a causal account of knowledge. For Goodman, artworks communicate only those symbols

that have been assigned to the terms used in the semantic context that describes the artwork.

4.6 No Natural Symbols

It follows directly from both this referential constraint and from the constructionalism imposed by his epistemology that the aesthetics likewise provides only semantic and referential accounts of relativistic knowledge acquisition, and therefore it also follows that Goodman's aesthetics allows for no natural symbols. As I argued previously in §II, Chapter V, subsection 5.6 "Object Does Not Transmit Anything Other Than What the Symbol System Determines", Goodman is constrained in his usage of the term 'object', as it cannot be used in such a way as to presuppose its existence *a priori* to its adoption into a constructed symbol system, or apart from that adoption. A further consequence of this that I pointed out in the same subsection is that the object does not symbolize anything other than what it has been determined to symbolize based on the referential functions within the symbol system in use, except in those cases where new metaphors are being introduced. Since the subject metaphysically creates what the subject epistemologically experiences, and since Goodman's semantics is non-causal, non-natural, constructionalist, and relativist, there is not only no autonomous object, there are also no natural kinds and no natural symbols. Therefore, he does not have available to him any notion of non-constructed symbols in his aesthetics. Of course he embraces this position, since the Goodmanian object is constructed by those who are participating in the symbol system, and this must be true in aesthetics as in all other worlds. And since he states in several places that there are no epistemological natural kinds, therefore, of

course, this would be applicable in aesthetics as well. The projection of predicates – an operation done by social units – constructs the objects as it selects those predicates most frequently projected. But we are entirely free to choose predicates – and hence to choose kinds.

On a Goodmanian account, therefore, we cannot claim that our sensory faculties are constructed *a priori* to any symbol system such that the faculties would determine the inputted data, creating, thereby, a uniformly parsed experience. This makes his philosophy in contrast to most other philosophers, even to Quine, who begins with the neural input as the origin of epistemological data. In contradistinction, Goodman begins with no physiology determining uniform human responses. It is important to remember that Goodman's constructionalism begins with 'an uninterpreted system', which presumably also means that the body itself is not an 'interpreted' system. There are those who would rather argue that we are embedded in physical selves and understand one anothers' messages through the intuitive and instinctual interpretation of signals as voice intonation, facial expression, bodily movements, etc. In other words: *we begin with an interpreted system*. But for Goodman, the primary predicates are not yet a part of the constructionalism, and we are given only the very basic in phenomenal experience and those concrete individuals can cohere in any way that we determine they may. In other words, Goodman discards not only resemblance, but also all so-called natural responses to stimuli.

Therefore, in his aesthetics, there can be no claim that warm colors "naturally" make us feel a certain way, as he states in Languages of Art:

> Why does 'sad' apply to certain pictures and 'gay' to others? What is meant by saying that a metaphorical application is 'guided by' or 'patterned after' the literal

> one? Sometimes we can contrive a plausible history: warm colors are those of fire, cold colors those of ice. In other cases, we have only fanciful alternative legends. …Whatever the answer, these are all isolated questions of etymology.[1]

Goodman's theory states that such interpretations as these are relative to the symbol systems in which they exist, which then implies that they are relative to the culture in which they are formed, and, even if they seem to be broader than a particular culture, the reason for that would fall to "legend" and vaguely answered questions of "etymology". In other words, there are no natural reactions. It does, then, become difficult to explain how certain facts pattern themselves across all cultures, such as the reaction to warm and cool colors, or other basic design issues, such as the way diagonals cause viewers to react less placidly than do verticals or horizontals; thus, in response to such seemingly universal reactions, Goodman answers that the genetic answer is unprovable and, therefore, uninteresting.

But, be that as it may, the point I am making is that Goodman clearly cannot claim, if he is to be consistent with his epistemology, that any univocal reactions in aesthetics are biologically determined and, hence, natural. As he states it, we understand the symbols and value them because these are the meanings we have attached to these particular symbols, but they need not be the meanings – we could have attached other meanings. There are no natural kinds. This again separates him from the causal point of view, which is committed to an irremediably biological necessity in perception. And though the causal point of view is most frequently relied upon by both scientists and

[1]Nelson Goodman, *Of Mind and Other Matters* (Cambridge: Harvard University Press, 1984), 76.

artists, Goodman is unable to appeal to natural responses in either science or art; there are no natural kinds and there are no natural ways of seeing things.

4.7 No Central Role for Emotion

While many aesthetic theories rely on emotion as the centerpiece of the theory, it is, for Goodman, merely one of the things that an artwork might express, and it is neither a necessary nor sufficient cause determining whether or not something qualifies as art. But the reduced role of emotion is even greater than that obvious point. I would argue that one of the results of the prohibition on both general terms and intentional objects necessarily is a diminished role for emotion within Goodman's system, for emotion can seem ineluctably mental and general, hence, quite distinct from a concrete particular. And since current science characterizes emotion chemically, whereby the existence of an emotion is accomplished *not* through the activation of a particular neural pathway but through a flooding of areas of the brain with a chemical, which then only gradually diminishes over time, the emotion itself is difficult to locate in a particular time and place, and could probably not, therefore, be considered as a phenomenal *quale*.

Goodman, of course, never denies the existence of emotions; the truth is quite the contrary – he is eager to include emotions as part of cognition, in both science and in art. But while he argues this general point, he cannot argue the point within the referential and semantic framework that he has provided without violating his nominalism. The reason for this is as follows. Emotion itself, as distinct from the linguistic symbol for it, does not function as a concrete particular in Goodman's system and he cannot, consistent with the other parts of his philosophy, treat it as an existent. Metaphorical

exemplification serves to explain how epistemology is consistent with his nominalism, e.g. the swatch is a sample but not a paradigm. The exemplification is one case of something, in contradistinction to the usual interpretation of exemplification that gives the meaning of the term as a manifestation of an ideal paradigm. For Goodman, the metaphorical exemplification is a token like other tokens absent a type/token relationship. This is why the emotion is replaced with the linguistic symbol for it, i.e., the predicate, but whether it is the predicate "sadness" or the sadness itself is not always clearly referenced. While he is at pains not to have sadness itself be denoted by a term, i.e., the "sad painting" does not denote sadness, (remember his disclaimers regarding the word "property" in these contexts), he does state that "the painting expresses sadness" or – in alternative formulation – "the painting is denoted by the term 'sadness' ". But these two expressions, i.e., "the painting is denoted by the term 'sadness' " and "the painting expresses sadness", are not equivalent to the other two expressions, i.e., "the painting is denoted by the term 'sadness' " and "the painting refers to – through expression – the term 'sadness' ". These pairs are not the same. The lack of equivalence is between the two phrases "the painting expresses sadness" and "the painting refers to – through expression – the term 'sadness' ". I will try to clarify this issue with the following.

Expression is a kind of reference, but because he also says that the expression relation is a subrelation of the converse denotation, which exists only when the direction of the denotation is running in both directions, clearly, then, the terms that are linked by the double arrow need to be the same, whether one begins at the point of the painting or whether one begins at the point of the predicate. (Refer to the diagram in this section's Chapter I, 1.4 "Goodman on Expression") The pair of terms cannot be both sadness (as

a non-linguistic symbol) and “sadness” (as a linguistic symbol), i.e., the pair becomes {sadness, “sadness”} in one instance where the direction is going from the painting to the denoting term, and in the other case – where the direction is from the denoting term to the painting – the terms cannot then be changed such that the pair is {“sadness”,“sadness”}. In other words, one cannot begin with the linguistic expression “the painting expresses sadness”, having the referential arrow go from the painting to the denoting term “sadness”, *and*, when the process begins at the denoting term “sadness” then have it link with the phrase “the painting is denoted by the term ‘sadness’ ”, and thereby blur the distinction between the notion sadness and the linguistic substitute for that notion. The subrelation of the converse denotation must link a *pair* of terms, i.e., {“sadness”, “sadness”}, and not shift to a different pair of terms, i.e., {sadness, “sadness”}. These two pairs are not identical. The subrelation of converse denotation would only be the case if the related pairs were the same, and did not allow the term “sadness” to shift between its linguistic formation and its non-linguistic formation. It is like claiming that the pair {x,y} is equivalent to {x,z} without proof that y = z. Clearly, the last pair is not identical in meaning with the first pair.

Therefore, sadness as a non-linguistic term cannot be part of the referential relationship. And, thus, sadness as an emotion itself – not in the guise of its linguistic substitute – cannot be part of Goodman’s referential semantics. But when Goodman says the painting is expressing sadness, he is not saying the painting is expressing “sadness”. It is therefore not clear whether or not he is shifting between the linguistic sign for the entity and the entity itself, for if he were, then it would be an equivocation of terms. The point that I am making is only that if he were to be consistent, then the pairs of entities

related by the subrelation of the converse denotation could only be {“sadness”, “sadness”}, and the more general entity sadness (not its linguistic substitute) would be unavailable to him.

But even if Goodman were to not use only the linguistic substitute for sadness, it is unclear whether or not this is a sufficient explanation for expression. For if I were told that “the painting expresses sadness” I would not necessarily have understood anything, for two separate reasons.

Firstly, knowing that others legitimately attribute ‘sadness’ to the painting does not insure that the bearer of this information has the adequate emotional and psychological profile that makes normal cognitive functions possible. For much pathology is defined by the patient’s inability to properly experience emotion, even though the patient can be perfectly aware of others’ expectations, and thus, in this instance, the person may understand that the word “sadness” is the proper predicate, but nevertheless be unable to experience the painting, and, hence, understand the painting. Obviously, there are two different uses of the word “understand” and it is not clear whether or not Goodman has conflated them. In other words, we could say there is a knowing$_1$ and a knowing$_2$ such that “knowing$_1$” means awareness of linguistic agreement, i.e. knowing that the emotion predicate is applied in a particular instance, and knowing$_2$ would mean to experience the emotion oneself. Thus, “knowing” (read: knowing$_1$) that other people descriptively apply the term cannot be the sufficient condition for understanding (read: knowing$_2$) an artwork.

In addition to this definitional point, Goodman’s theory negates the possibility that the viewer is experiencing the work of art in ways that *directly* communicate the

psychological and emotional intent of the artist. As Richard Wollheim has stated the problem: "For the problem seems to be not, How can a work of art qua physical object of this or that kind express this or that emotion? But, How can a work of art qua physical object express emotion?"[1] Goodman is not interested in addressing this question, which, to those like Wollheim, seems an inadequacy of the theory. Thus, in conclusion, there are several ways that emotions do not serve a central role in Goodman's theory:

- They are only one of the things that may be expressed by an artwork; they are not *the* thing.
- They do not seem to be a concrete particular, and, hence, cannot be given ontological status within a referential account.
- The substitution of the predicate for the emotion itself ensures that the emotion itself is not part of the referential symbol system.
- Knowing that others use the predicate does not guarantee the viewer's own emotional experience.

4.8 No Relation to Universal Truth

Goodman's notion of truth is noticeably different from most philosophers. This is the joint consequence of several different strains in his philosophy: his pluralism, his relativism, his coherentism, and his constructionalism. As we have seen, Goodman does not completely abandon the traditional sense of the term "truth", but agrees with many other logicians that it be applied to verbal statements that have the strictly circumscribed relation of a predicate describing (or failing to describe) a subject. But since we are

[1]Richard Wollheim, *Art and its Objects: An Introduction to Aesthetics* (New York: Harper & Row, 1968), 19.

unable to appeal to an epistemology that gives either knowledge claims that presuppose universal, immutable human constructs or any external objective reality that would necessarily appear the same to all observers, and because there are metaphysically many worlds and, thus, many incompatible predicate/subject relations, Goodman's notion of truth becomes likewise relativistic. Furthermore, even though Goodman's epistemological relativism can't claim objective truth, it fails to force him to abandon notions of truth altogether, claiming both sentential truth and "right fit". As he states in Language of Art:

> Truth of a hypothesis after all is a matter of fit – fit with a body of theory, and fit of hypothesis and theory to the data at hand and the facts to be encountered…But such fitness, such aptness in conforming to and reforming our knowledge and our world, is equally relevant for the aesthetic symbol. Truth and its aesthetic counterpart amount to appropriateness under different names. If we speak of hypotheses but not of works of art as true, that is because we reserve the terms 'true' and 'false' for symbols in sentential form.[1]

The point that he is making is that truth exists within the confines of a particular system, and, hence, is a right fit for that particular system, though it would not necessarily be so in others. Though this notion of truth is significantly at odds with traditional substitutability definitions of truth, which does not require mere relativistic substitutability, it is important to remember that, for Goodman, apart from a system, an entity is indeterminate. As each definition is right within its own system, the notion of "rightness" serves as a kind of harness on relativism, such that not everything is acceptable, and thus consistency, coherence, appropriateness within the system, and

[1]Nelson Goodman, *Languages of Art.* 2nd ed. (Indianapolis: Hackett Publishing Company, Inc., 1976), 264.

accordance with past practice and antecedent projections, are all constraints he recognizes.

How this impacts on art is clear, as art does not consist of statements in sentential form. As he states it in the interview published in Of Mind and Other Things:

> I like to keep the term 'true' for statements. Statements in a language are true or they are false. I don't like to speak of a picture as being true or false, since it doesn't literally make a statement. But I would rather say that a picture can be right or wrong the way a design can be right or wrong.[2]

Hence, a picture cannot be true or false since it is not a statement, though even a statement is only relativistically true, and exactly how that differs from "a matter of fit – fit with a body of theory" is not clear, for if a statement is only true relative to a system and a painting is merely right because it fits with a body of theory, then the difference between the terms "true" and "right" becomes negligible.

Nevertheless, a pertinent and remaining point still remains to be stated. Goodman's relativistic epistemology and his pluralistic metaphysics commit him to an aesthetics that cannot allow artworks to reveal genuine truths about the human condition; a claim often made (by others) for art. Hence, Goodman's aesthetic commitments, again consequent to other facets of his thought, must deny some of those very traits most often thought of as associated with the enterprise. Therefore, art cannot give insightful truths about human nature, both because there is no such thing as human nature and also because art, as non-sentential, is unable to be either true or false.

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[2]Nelson Goodman, *Of Mind and Other Matters* (Cambridge: Harvard University Press, 1984), 196.

The ultimate question, of course, is whether the metaphysical and ontological commitments attendant upon Goodman's language do, in fact, sufficiently represent the aesthetic discourse. Many have argued that looking at art is not like reading a sentence, but leaving that criticism aside (as I do not think it has even been very well explicated), there is, I believe, another point worth looking at. Goodman's methodology of analyzing the artwork by means of analyzing the parts of the sentence that describe the artwork is, in effect, offering art as the first layer of meaning and the linguistic sentence as the second layer of symbolic meaning. In other words, we must see through the layer of visual symbolizing *and* the layer of linguistic symbolizing in order to understand what the artwork is "saying". Are these two scrims through which the viewer looks identical? One need only remember Russell's distinction between knowledge by acquaintance and knowledge by description to understand the latter point. The painting is actually referring *to something* – which just happens to be called, in English, "sadness", but 1) our word for what the painting is *pointing to* and 2) the painting's expression, (i.e. what it is that we are directly acquainted with when we perceive the painting), are not completely equivalent. What we are expecting from an aesthetic theory is an explanation of *what happens* the moment we are looking; not our verbal label that we attach to the painting after we have seen it. Rephrased, the question becomes: Is it the case that our understanding of art is gained through an analysis of the referencing, which is done by the words that describe the painting? It seems as though we still don't have any explanation of the internal character of expression. When Goodman asks, "But what is

the logical character of the relationship the picture bears to what it is said to express?"[1], he is right to focus on that as the essential question, but it is not clear if it is completely answered. And what we want to know is how to logically characterize the moment of experiencing the expression, not the terms we might use at a later date to describe, with linguistic shorthand, the thing experienced.

But the determination of that question is, in many ways, tangential to the dissertation, which is a demonstration of how Goodman's metaphysical commitments delimit his epistemological constructs, which, in turn, further affect his terminology and concepts available to him in his aesthetics. Clearly this has been demonstrated, as is shown in the restrictions on such concepts as intensional and intentional objects, the forbidding of properties, the prohibition of referencing general terms or fictive entities, the elimination of non-semantic meanings, the denial of natural symbols, the lack of central role for emotion, and the denial of art's relation to universal truth. In conclusion, Goodman's aesthetics cannot be understood either in isolation from his other writings, or merely by a comparison to other aestheticians; it is essential to look at the whole of Goodman's work in order to clearly understand his aesthetics.

[1]Nelson Goodman, *Languages of Art.* 2nd ed. (Indianapolis: Hackett Publishing Company, Inc., 1976), 50.

Bibliography

PUBLICATIONS BY NELSON GOODMAN:

BOOKS:

---- *The Structure of Appearance*. 3rd ed. Boston: Reidel, 1977. (First edition: 1951)

----*Fact, Fiction, and Forecast*. 4th ed. Cambridge: Harvard University Press, 1983. (First edition: 1954)

----*Languages of Art.* 2nd ed. Indianapolis: Hackett Publishing Company, Inc., 1976. (First edition: 1968)

----*Problems and Projects*. Indianapolis & NY: The Bobbs-Merrill Company, Inc., 1972.

----*Ways of Worldmaking*. *4th Printing*. Indianapolis: Hackett Publishing Company, Inc.,1985. (First published: 1978)

----*Of Mind and Other Matters*. Cambridge: Harvard University Press, 1984.

---*Reconceptions in Philosophy and Other Arts and Sciences.* Co-authored with Catherine Elgin. Indianapolis and Cambridge: Hackett Publishing Company, 1988.

ARTICLES:

---"A World of Individuals." In *Problems and Projects*. 155-172. Indianapolis & NY: The Bobbs-Merrill Company, Inc., 1972.

---"About." *Mind* 70 (1961): 1-24.

---"An Improvement in the Theory of Projectibility." *Journal of Philosophy* 67 (1970): 605-608.

---"Art and Inquiry." In *Proceedings and Addresses of the American Philosophical Association* 41 (1968): 5-19.

---“The Calculus of Individuals and Its Uses.” *Journal of Symbolic Logic* 5 (1940): 45-55.

---“The Epistemological Argument.” *Synthese* 17 (1967): 23-28.

---“Notes on the Well-Made World.” *Erkenntnis* 19 (1983): 99-108.

---“On Some Questions Concerning Quotation.” *Monist* 58 (1974): 294-306.

---"On Likeness of Meaning." *Analysis* 10 (1949): 1-7.

---“On Some Worldly Worries.” *Synthese* 95 (1993): 9-12.

---“On Relations That Generate.” *Philosophical Studies* 9 (1958): 65-66.

---“On Reconceiving Cognition.” *Monist* 58 (1974): 339-342.

---“Predicates Without Properties.” *Midwest Studies in Philosophy* 2 (1977): 212-213.

---“The Problem of Universals: A Symposium.” Notre Dame University Press (1956)

---“Safety, Strength, Simplicity.”*Philosophy of Sc ience* 28 (1961): 150-151.

---“Sense and Certainty.” *Philosophical Review* 61 (1952): 160-167.

---“Some Notes on Languages of Art.” *Journal of Philosophy* 67 (1970): 563-572.

---"Steps toward a Constructive Nominalism." (with Willard Van Orman Quine) *Journal of Symbolic Logic* 12 (1947): 105-122.

---“The Test of Simplicity.” *Science* Vol. 128 (1958): 1064-1069.

---“Truth About Jones.” *Journal of Philosophy* 74 (1977): 317-338.

---“The Way the World Is.” *Review of Metaphysics* 14 (1960): 48-56.

---"Words, Works, World." *Erkenntnis* 9 (1975): 57-73.

PUBLICATIONS BY OTHERS:

SYMPOSIA ON GOODMAN (in alphabetical order):

"General Topic: Languages of Art" Monist 58 (1974) pages 175-318:

Margolis, Joseph. "Art as Language." 175-186;

Sparshot, F. E. "Goodman on Expression." 187-202;

Tormey, Alan. "Indeterminacy and of Identity in Art." 203-215;

Kjorup Soren. "George Inness and the Battle of Hastings, or Doing Things with Pictures." 216-235;

Walton, Kendall L. "Are Representations Symbols?" 236-254;

Bennett, John G. "Depiction and Convention." 255-268;

Carrier, David. "A Reading of Goodman on Representation." 269-284;

Ross, Stephanie. "Caricature." 285-293;

Goodman, Nelson. "On Some Questions Concerning Quotation." 294-306;

Howard, V. A. "On Musical Quotation." 307-318.]

Gardner, Howard. "A Psychological Investigation of Nelson Goodman's Theory of Symbols." 319-326;

Wartowsky, Marx W. "Art, Action and Ambiguity" 327-338;

Goodman, Nelson. "On Reconceiving Cognition." 339-342.

"The Philosophy of Nelson Goodman Part 1", Erkenntnis 12 (1978) pages 3-179:

Eberle, Rolf A. "Goodman on Likeness and Difference of Meaning." 3-16;

Wartowsky, Marx W. "Rules and Representation: The Virtues of Constancy and Fidelity Put in Perspective." 17-36;

Robinson, Jenefer. "Two Theories of Representation." 37-53;

Kjørup, Søren. "Pictorial Speech Acts." 55-71;

Howard, V. A. "Music and Constant Comment." 73-82;

Sagoff, Mark. "Historical Authenticity." 83-93;

Beardsley, Monroe C. "Languages of Art and Art Criticism." 95-118;

Morawski, Stefan. "Three Observations on Languages of Art." 119-128;

Rudner, Richard S. "Show or Tell: Incoherence among Symbol Systems." 129-151;

Goodman, Nelson. "Replies." 153-179.

The Philosophy of Nelson Goodman Part 11, in Erkenntnis 12 (1978): 181-291.

Essler, Wilhelm. "Corrupted Concepts and Empiricism." 181-187;

von Kutschera, Franz. "Goodman on Induction." 189-207;

Hellman, G. "Accuracy and Actuality." 209-228;

Breitkopf, Alfred. "Axiomatisierung einiger Begriffe aus Nelson Goodman's The Structure of Appearance." 229-247;

Fox, Ivan. "Distance from Indifference." 249-279;

Goodman, Nelson, "Replies." 281-291.

"Aesthetics and Worldmaking: An Exchange with Nelson Goodman" Journal of Aesthetics and Art Criticism 39 (1981) pages 249-280:

Ackerman, James S. "Worldmaking and Practical Criticism" 249-254;

Kulenkampff, Jens. "Music Considered as a Way of Worldmaking." 254-258;

Martin, Richard. "On Some Aesthetic Relations." 258-264;

Nagel, Alan F. "'Or as a Blanket' Some Comments and Questions on Exemplification." 264-266;

Margolis, Joseph. "What is when? When is what? Two Questions for Nelson Goodman." 266-268;

Silvers, Anita. "The Secret of Style." 268-271;

Hernadi, Paul. "More Questions Concerning Quotations." 271-273;

Goodman, Nelson. "Replies." 273-280.

"More Ways of Worldmaking" Journal of Aesthetic Education 25, 1 (1991) pages 1-112:

Hernadi, Paul. "More Ways of Worldmaking" 1-4;

Goodman, Nelson. "On Capturing Cities" (reprinted from World Cities and the Metropolis, 1988) 5-9;

Elgin, Catherine Z. "Sign, Symbol and System" 11-21;

Mitchell, W.J.T. "Realism, Irrealism and Ideology — A Critique of Nelson Goodman." 23-35;

Wollheim, Richard. "The Core of Aesthetics" 37-45;

Hernadi, Paul. "Reconceiving Notation and Performance." 47-56;

Ullian, J.S. "Truth." 57-65;

Bruner, Jerome. "Self-Making and World-Making." 67-78;

Hawley, A. "A Venerable Museum Faces the Future — Guided Tour Through the Gardner and its Director's Mind." 79-88;

Elgin, Catherine Z. "What Goodman Leaves Out" 89-96;

Goodman, Nelson. "Retrospections." 97-98;

Berka, Sigrid. "An International Bibliography of Works by and Selected Works about Nelson Goodman." 99-112.

"Probing into Reconceptions" Synthese 95, 1 (1993) pages 1-128:

Scholz, Oliver R. "Introduction: Reconceptions in Context." 1-7;

Goodman, Nelson. "On Some Worldly Worries." 9-12;

Elgin, Catherine Z. "Understanding: Art and Science." 13-28.

Küng, Guido. "Ontology and the Construction of Systems." 29-53;

Rheinwald, Rosemarie. "An Epistemic Solution to Goodman's New Riddle of Induction." 55-76;

Heydrich, Wolfgang. "A Reconception of Meaning." 77-94;

Scholz, Oliver R. "When is a Picture?" 95-106;

Künne, Wolfgang. "Truth, Rightness and Permanent Acceptability." 107-117;

Koppelberg, Dirk. "Should We Replace Knowledge by

Understanding? — A Comment on Elgin and Goodman's Reconception of Epistemology." 119-128;

Elgin, Catherine Z. "Outstanding Problems — Replies to Critics" 129-140.

"Symposium: The Legacy of Nelson Goodman" The Journal of Aesthetics and Art Criticism 58, 3 (2000) pages 231-253:

Robinson, Jenefer *"Languages of Art* at the End of the Century" 213-218;

Elgin, Catherine. "Reorienting Aesthetics, Reconceiving Cognition" 219-225;

Lopes, Dominic McIver. "From *Languages of Art* to Art in Mind" 227-231;

Kivy, Peter. "How to Forge a Musical Work" 233-235.;

Cometti, Jean-Pierre. "Activating Art: A View from France" 237-243;

Gardner, Howard. "Project Zero: Nelson Goodman's Legacy in Arts Education" 245-249;

Carter, Curtis. "A Tribute to Nelson Goodman" 251-253;

Special Section on Nelson Goodman, in Erkenntnis 52, 2 (2000): 149-212:

Elgin, Catherine Z. "In Memoriam: Nelson Goodman" 149-150;

Schwartz, R. "Starting from Scratch: Making Worlds" 151-159;

Scheffler, Israel "A Plea for Pluralism" 161-173;

Elgin, Catherine Z. "Interpretation and Understanding" 175-183;

Gabriel, Gottfried "Kontinetales Erbe und Analytische Methode. Nelson Goodman und die Tradition" 185-198;

Scholz, Oliver R. "A Solid Sense of Syntax" 199-212.

RELEVANT PUBLICATIONS BY OTHER WRITERS:

Armstrong, D.M.. *A Theory of Universals: Universals and Scientific Realism,* Vol. II. Cambridge/London/New York/Melbourne: Cambridge University Press, 1978.

Audi, Robert. *Epistemology*. London & New York: Routledge, 2000.

Aune, Bruce. *Metaphysics: The Elements*. Minneapolis: University of Minneapolis Press, 1985.

Ayer, Alfred Jules. *Language, Truth and Logic*. New York: Dover Publications, 1952.

Baird, Forrest E. and Walter Kaufmann. Medieval Philosophy, 4th ed. Vol. II. Edited by Forrest E. Baird and Walter Kaufmann. Upper Saddle River, New Jersey: Prentice Hall, 2003.

Barrett, William and Aiken, Henry D., Editors. *Philosophy in the Twentieth Century: An Anthology.* Vol. 1-4. New York: Random House, 1962.

Bergmann, Gustav. "Ontological Alternatives." In *Essays on Frege*. Edited by E.D. Klemke. Urbana, Illinois: University of Chicago Press, 1968.

Black, Max. "Metaphor." In *Philosophy Looks at the Arts.* 3rd Ed. Edited by Joseph Margolis. Philadelphia: Temple University Press, 1987.

Bonjour, Laurence. "The Coherence Theory of Empirical Knowledge." In *Contemporary Readings in Epistemology.* Edited by Michael F. Goodman and Robert A. Snyder. Englewood Cliffs: New Jersey, 1993.

Brentano, Franz Clemens. *Psychologie vom empirischen Standpunkt* 3 v. Hamburg, Germany: F. Meiner, 1974.

Butchvarov, Panayot. *Resemblance and Identity: An Examination of the Problem of Universals.* Bloomington & London: Indiana University Press, 1966.

Collingwood, R.G. *An Essay on Philosophical Method*. London: Oxford University Press, 1970.

Collingwood, R.G. *The Principles of Art*. New York, Oxford University Press, 1958.

Danto, Arthur. *Beyond the Brillo Box*. New York: Farrar Straus Giroux, 1992.

Derrida, Jacques. *The Truth in Painting.* Translated by Geoff Bennington and Ian McLeod. Chicago and London: University of Chicago Press, 1987.

DeSousa, Ronald. *The Rationality of Emotion*. Cambridge, Mass: MIT Press, 1997.

Dretske, Fred. "The Mind's Awareness of Itself." In *Perception, Knowledge and Belief: Selected Essays*. Cambridge, UK: Cambridge University Press. 2000.

Dummett, Michael. "Nominalism." In *Essays on Frege*. Edited by E.D. Klemke. Urbana, Illinois: University of Chicago Press, 1968.

Elgin, Catherine. *With Reference to Reference.* Indianapolis, Indiana: Hackett Press, 1983.

Elton, William., Editor. *Aesthetics and Language*. Oxford: Blackwell Press, 1967.

Frege, Gottlob. *The Philosophical Writings of Gottlob Frege*. Edited by P.T. Geach and M. Black. Oxford: UK, Oxford University Press, 1952.

Fodor, Jerry and Lepore, Ernest. *Holism: A Shopper's Guide*. Cambridge, Mass: Blackwell, 1992.

Goldman, Alan. *Aesthetic Value*. Bolder, Colorado: Westview Press, 1995.

Goldman, Alan H. "The Aesthetic Value of Representational Painting". In *Philosophy and Phenomenological Research*, Vol. LV, No. 2, June 1995.

Gombrich, E.H. *Meditations on a Hobby Horse*. London and New York: Phaidon, 1978.

Gomrich, E.H. and Eribon, Didier. *Looking for Answers: Conversations on Art and Science.* New York: Harry N. Abrams, Inc., 1993.

Grossmann, Reinhardt. *Reflections on Frege's Philosophy.* Evanston, Ill: Northwestern University Press, 1969.

Hampshire, Stuart. "Logic and Appreciation." In *Aesthetics and Language*. London: Oxford University Press, 1954.

Hanfling, Oswald. *Ayer.* New York: Routledge, 1999.

Hausman, Alan. "Goodman's Nominalism." In *Studies in Logical Theory*, American Philosophy Quarterly Monograph Series #2, ed. By N. Rescher London: Blackwell, 1968.

Hausman, Alan. "Goodman's Perfect Communities." In *Synthese* 41 (1979): 185-237.

Hempel, Carl. "Comments on Goodman's Way of Worldmaking." In *Synthese* 45 (1980): 193-199.

Hiley, David R., James F. Bohman, and Richard Shusterman (editors). *The Interpretive Turn: Philosophy, Science, Culture*. Ithaca and London: Cornell University Press, 1994.

Hume, David. *A Treatise of Human Nature*. Edited by L.A.Selby-Bigge, 2nd edition. London: Oxford University Press, 1978.

Hume, David. *An Inquiry Concerning Human Understanding*. Edited by Eric Steinberg, 2nd edition. Indianapolis/Cambridge: Hackett Publishing Company, 1993.

James, William. *Esays in Radical Empiricism and A Pluralistic Universe*. Gloucester, Mass.: P. Smith Publishers, 1967.

Kant, Immanual. *Observations on the Feeling of the Beautiful and Sublime*. Translated by John T. Goldthwait. Berkelely, Los Angeles, London: University of California Press, 1960.

Kant, Immanual. *The Critique of Judgement*. Translated by James Creed Meredith. Oxford, UK: Clerendon Press, 1952.

Kivy, Peter. *Philosophies of Arts: An Essay in Differences*. Cambridge: Cambridge University Press, 1997.

Klemke, E.D. (editor). *Essays on Frege*, 2nd edition. Urbana, Chicago, and London: University of Illinois Press, 1968.

Landesman, Charles. *The Problem of Universals*. Edited by Charles Landesman. New York and London: Basic Books, Inc. 1971.

Langer, Suzanne K. *Philosophy in a New Key*. 3rd Edition. Cambridge and London: Harvard University Press, 1979.

Larson, Richard and Segal, Gabriel. *Knowledge of Meaning: an Introduction to Semantic Theory*. Cambridge: MIT Press, 1995.

LeDoux, Joseph. *The Emotional Brain*. New York: Simon & Schuster, 1996.

Lopes, Dominic. *Understanding Pictures*. New York: Oxford University Press, 1996.

Martin, Robert M. "It's Not That Easy Being Grue." In *The Philosophical Quarterly*, 299-315. Vol. 40, No. 3.

Martinich, A.P. and Sosa, David (editors). *Analytic Philosophy: An Anthology*. Malden, Mass. and Oxford, UK: Blackwell Publishers, 2001.

Orenstein, Alex. *W.V. Quine*. Princeton, New Jersey: Princeton University Press, 2002.

Putnam. Hilary. "Reflections on Goodman's Ways Of Worldmaking." In *The Journal of Philosohy*, Vol. LXXVI, No. II, 1979.

Quine, W.V. *The Roots of Reference*. Las Salle, Illinois: Open Court Press, 1973.

Quine, W.V. *Pursuit of Truth.* Revised edition. Cambridge, Mass: Harvard University Press, 1992.

Quine, W.V. *From Stimulus to Science*. Cambridge, Mass: Harvard University Press, 1995.

Quine, W.V. *The Web of Belief.* New York: Random House, 1987.

Quine, W.V. *From A Logical Point of View*. 3rd edition. Cambridge, Mass: Harvard University Press, 1980.

Quine, W.V. "Goodman's Ways of Worldmaking." In *Theories and Things*, 96-99. Cambridge, Mass: The Belknap Press of Harvard University Press, 1981.

Quine, W.V. *Word and Object*. Cambridge, Mass.: The MIT Press, 1960.

Russell, Bertrand. "Descriptions" in *Twentieth-century philosophy: The Analytic Tradition* . Edited by Weitz, Morris. New York: Free Press, 1966.

Russell, Bertrand. *Introduction to Mathematical Philosophy.* London & New York : Routledge, 1993.

Russell, Bertrand. "Logic as the Essence of Philosophy" in *Twentieth-century philosophy: The Analytic Tradition* . Edited by Weitz, Morris. New York: Free Press, 1966.

Russell, Bertrand. "On Denoting" in *Logic and knowledge: Essays, 1901-1950.* Edited by Robert Charles Marsh. London: G. *1901-1951.* Allen & Unwin; New York: Macmillan, 1956.

Russell, Bertrand. "On the Relations of Universals and Particulars" in *Logic and Knowledge*. Edited by R.C. March. London: G. Allen & Unwin; New York: Macmillan, 1956.

Russell, Bertrand and Alfred North Whitehead. *Principia Mathematica.* Cambridge, UK, ; New York, U.S.A.: Cambridge University Press, 1997.

Russell, Bertrand. "The Relation of Sense-Data to Physics" in *Mysticism and Logic and Other Essays,* 2nd ed., 1932 printing. London : George Allen & Unwin, 1917.

Schefler, Isreal. "The Wonderful Worlds of Goodman." in *Synthese* 45, (1980): 201-209.

Schier, Flint, *Deeper into Pictures.* Cambridge and New York: Cambridge University Press, 1986.

Schlick, Moritz, *Philosophical Papers*. Edited by Henk L. Mulder and Barbara F. B. van de Velde-Schlick, trans. Peter Heath. Boston: Dordrecht D. Reidel Publishing Company, 1979.

Scruton, Roger. *Art in Imagination*. South Bend, Indiana: St. Augustine's Press, 1998.

Siegel, Harvey. Review of "Reconceptions in Philosophy and Other Arts and Sciences." In *Philosophy and Phenomenological Research*, 710-713. Vol. 51, No. 3.

Spade, Paul Vincent. *Five Texts on the Mediaeval Problem of Universals*. Translated and edited by Paul Vincent Spade. Indianpolis/Cambridge: Hackett Publishing Company, Inc., 1994.

Stalker, Douglas. "Introduction." In *Grue! The New Riddle of Induction*. Edited by Douglas Stalker. Chicago and Las Salle, Illinois: Open Court Publishing Company, 1994.

Steinberg, Leo. "The Eye Is a Part of the Mind." In *Reflections on Art*. Edited by Suzanne K. Langer. Oxford, UK: Oxford University Press, 1961.

Stocker, Michael. *Valuing Emotions*. New York: Cambridge Press, 1966.

Stroud, Barry. "The Significance of Naturalized Epistemology." In *Midwest Studies in Philosophy*, 455-471. Vol. VI (1981).

Tarsky, Afred. "The Semantic Conception of Truth and the Foundations of Semantics." In *Contemporary Readings in Epistemology.* Edited by Michael F. Goodman and Robert A. Snyder, 186-197. Englewood Cliffs, New Jersey: Prentice Hall, 1993.

Wartofsky, Marx W. "Picturing and Representing." In *Philosophy Looks at the Arts*. 3rd Edition. Edited by Joseph Margolis, 307-318. Philadelphia: Temple University Press, 1987.

Wartofsky, Marx W. "Art History and Perception." In *Perceiving Artworks*. Edited by John Fischer. Philadelphia: Temple University Press, 1980.

Wollheim, Richard. *Art and its Objects: An Introduction to Aesthetics*. New York: Harper & Row, 1968. Harmondsworth: Penguin Books, 1970. Harper Torch book, 1971.

Wollheim, Richard. "Nelson Goodman's Languages of Art." In *On Art and the Mind.* Cambridge, Mass.: Harvard University Press, 1974.

Wollheim, Richard. *Painting as an Art*. The A.W. Mellon Lectures in the Fine Arts, 1984, delivered at the National Gallery of Art, Washington, DC. London: Thames and Hudson, 1987 . Bollingen Series. Princeton, NJ: Princeton University Press, 1987.

Wolterstorff, Nicholas. *On Universals: An Essay in Ontology.* Chicago and London: The University of Chicago Press, 1970.

Zabludowski, Andrzej. "Concerning a Fiction About How Facts Are Forecast." In *Grue: The New riddle of Induction*. Edited by Douglas Stalker, 57-78. Chicago and LaSalle, Illinois: Open Court Press, 1994.