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Language and Ontology in Early Chinese Thought*

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Brief Summary for Table of Contents

The paper critiques Hansen's "mass noun hypothesis," arguing that though most Classical Chinese nouns do function as mass nouns, this fact does not support the claim that pre-Qín thinkers treat the extensions of common nouns as mereological wholes, nor does it explain why they adopt nominalist semantic theories. The paper shows that early texts explain the use of common nouns by appeal to similarity relations, not mereological relations. However, it further argues that some early texts do characterize the relation between individuals and collections as a mereological relation.

Abstract

According to Chad Hansen's "mass noun hypothesis," the semantics of Classical Chinese nouns is similar to that of English mass nouns, and this helps to explain why ancient Chinese theories of language are nominalist. Mass nouns, Hansen suggests, are most naturally interpreted as denoting mereological wholes, a construal that intuitively tends to motivate a nominalist theory of language. The paper argues that most instances of Classical Chinese nouns indeed function as mass nouns. However, this fact does not support the claim that ancient Chinese thinkers regarded the extensions of common nouns as mereological wholes, nor does it explain why Chinese semantic theories take nominalism for granted. Hence Hansen's interpretive argument from mass nouns is unsound: His observations about the Chinese language do not support his interpretive conclusions about ancient Chinese semantic and ontological views. The paper shows that in fact pre-Qín philosophers of language explain the use of common nouns by appeal to similarity relations, not mereological relations. The paper then reviews the textual evidence for Hansen's thesis that early Chinese thinkers employ a mereological ontology, concluding that some early texts do characterize the relation between individual things and the collections to which they belong as a part-whole relation, rather than a member-set relation.

Language and Ontology in Early Chinese Thought

1. Introduction

In *Language and Logic in Ancient China* (1983), Chad Hansen proposes that the semantics of Classical Chinese nouns is similar to that of English mass nouns, a view he calls the "mass noun hypothesis." He contends that this hypothesis helps to explain why ancient Chinese theories of language are nominalist. Mass nouns, he suggests, are most naturally interpreted as denoting mereological wholes, a construal that intuitively tends to motivate a nominalist theory of language. Hansen's views have incited much controversy among scholars of early Chinese thought. They raise important questions concerning interpretive methodology, because as he expounds them, they represent an attempt to justify interpretive hypotheses by appeal not to the content of the texts under study, but to grammatical features of the language used by their writers.

In this paper, I review critical responses to Hansen and present a new critique of my own. Following Robins (2000), I contend that, given crucial qualifications, most instances of Classical Chinese nouns indeed function as mass nouns. Thus one premise in Hansen's argument from mass nouns is justified. However, contrary to his claims, this point provides no reason to accept his interpretive hypotheses. It does not support the claim that Chinese thinkers regarded the extensions of general terms as mereological wholes, nor does it explain why Chinese semantic theories take nominalism for granted. Hence Hansen's interpretive argument from the pervasiveness of mass nouns in Classical Chinese is unsound: Even if correct, his observations about the Chinese language do not support his interpretive conclusions about early Chinese semantic and ontological theories. Moreover, as I will show, pre-Qín philosophers of language in fact did not appeal to part-whole relations to explain

the use of general terms. Thus as an instance of a language-to-thought argument—one from features of a thinker's language to interpretive conclusions about the content of his thought—Hansen's argument fails. This failure raises doubts about the justificatory power of such arguments in general, which I explore in my conclusion.

After presenting this critique of Hansen's views, I consider textual evidence for his hypothesis that early Chinese thinkers employ a mereological ontology. I conclude that the hypothesis is highly plausible. The grounds for it are limited and mostly confined to Mohist and Daoist texts, and the exact extent and nature of Chinese mereological views are unclear. But at least some pre-Qín philosophers do seem to have conceived of the relation between individual things and the collections to which they belong as a part-whole relation, rather than a member-set relation.

Section 2 summarizes the two core interpretive hypotheses Hansen presents in chapter 2 of *Language and Logic* and distinguishes them from two distinct, less plausible claims with which they are run together. The next pair of sections lay the groundwork for my subsequent arguments by explaining the distinction between word class and word function (section 3) and clarifying key features of mass nouns and their semantics (section 4). Section 5 presents and evaluates Hansen's argument from mass nouns, concluding that it is unsound. Sections 6 and 7 review critical responses to Hansen, attempting to clear up several misunderstandings and clarify where his critics were on the mark and where not. Section 7 also briefly rebuts two competing accounts of the nature of Classical Chinese nouns. Section 8 summarizes the Mohists' and Xúnzǐ's accounts of the relation between things and the kinds to which they belong, showing that the considerations Hansen cites in fact play no role in their theories. Section 9 reviews textual evidence for attributing mereological views to early Chinese thinkers, concluding that the evidence is limited but credible.

2. Hansen's Interpretive Hypotheses

In chapter 2 of *Language and Logic in Ancient China,* Hansen proposes two interpretive hypotheses about the early Chinese view of language and the world (30-32, 53).

1. *The mereological worldview.* Early Chinese thinkers implicitly accepted a mereological[1] ontology, on which collections of things are regarded as wholes of which the things that constitute the collection are parts. For instance, instead of thinking of all the horses in the world as elements of the set or class of horses, ancient Chinese philosophers thought of them as spatially scattered parts of the concrete whole that is the sum of all horses.

2. *Behavioral nominalism.* Early Chinese philosophy of language is nominalistic, in that it is not committed to recognizing any entities other than words, or "names" (*míng* 名), and the things that form their extensions. It does not appeal to universals, essences, concepts, meanings, Lockean ideas, or Platonic forms to explain the semantics of general terms or the relation between a particular thing and its kind. Early Chinese views of the mind are "behavioral" in that they explain thought and understanding by appeal to the ability to discriminate things and act in appropriate ways. Understanding a word (such as "horse") is not a matter of having a certain abstract object in one's mind, but of having the practical ability to distinguish the things denoted by the word.

Both of these hypotheses are highly plausible. The proposal that pre-Qín philosophers applied a mereological ontology is an important, credible interpretive hypothesis for which, as I will argue, there is solid, though limited textual evidence. Some version of behavioral nominalism is overwhelmingly likely to be a correct

interpretation of ancient Chinese philosophy of language, as I have argued elsewhere (1999, 2002, 2005). I will review some of the grounds for this contention in section 8. Along the way, I will explain why the statement of it given above is incomplete, requiring an account of the features by which things count as "similar" and thus as part of the extension of the same general term.[2]

In presenting these hypotheses, Hansen (1983) combines them with the following claims, from which they are in fact conceptually distinct.

1′. *The stuff ontology.* On the mereological worldview, the world is regarded as an aggregate of overlapping and interpenetrating "mass stuffs" (32).

2′. *The singular term claim.* Ancient Chinese behavioral nominalism regards terms for kinds of things, such as "water" and "horse," roughly as singular terms (35).[3] A term such as "horse" is regarded as the name of the discontinuous totality of the stuff "horse" (35–37). The word "horse" is correctly used of individual horses because in a sense it is their proper name: they are parts of the whole named "horse."

Both of these claims are mistaken. The first wrongly assumes that only things that are unstructured masses, such as liquids, can stand in part-whole relations. Hansen describes the mereological worldview in this way because he attributes it to Chinese thinkers partly on the basis of the prevalence of mass nouns in Classical Chinese. Some paradigm mass nouns, such as "water," "metal," and "mud," do refer to "mass stuffs." But in general, using a mass noun to refer to something does not entail conceiving of it as an unstructured mass or stuff. ("Luggage," for instance, does not refer to unstructured stuff. I will clarify this point further in section 4.) Nor does treating collections of things as mereological wholes entail regarding them as masses. The wholes constituted by all the footwear in my closet and all the books on my shelf

are not "overlapping and interpenetrating mass stuffs."

The second point is inspired by the grammar of mass nouns, by the fact that the Classical Chinese word for "word," *míng* 名, literally means "name," and by the mereological worldview. Hansen suggests that "mass nouns…play the same role in sentences that proper nouns do" (35). This is false, of course, as he himself points out (35). Unlike proper nouns, mass nouns can be modified, can refer to more than one thing, and can be used to form predicates. Presumably, what Hansen has in mind is that, like proper nouns, English mass nouns can stand alone as the subject of a sentence, without requiring an article or pluralization. Moreover, in Classical Chinese, both proper nouns and common nouns are referred to as "names" (*míng* 名). Hence, Hansen contends, if we ask what *mǎ* 馬 "horse" is the name of, in ancient Chinese thought the natural answer was that it is the name of "horse-stuff," a concrete mereological whole scattered in space-time (35). Accordingly, for Chinese thinkers the one-many problem does not arise. They do not need to explain the relation between a thing and the kind it belongs to, by which one and the same word denotes the many instances of a kind. For on this view, words stand in a one-to-one relation with wholes, of which particular bits, such as individual horses, are parts (36). There are no questions to raise about the relation between particular things and the kinds to which they belong, because *there are no kinds.* There are only vast, spatiotemporally discontinuous individuals, such as "horse-stuff," all of which bears the name "horse." Learning to use a word is not a matter of learning how to identify the kind of thing denoted by that word, but of learning how to reidentify (parts of) the bearer of a proper name. There is thus no motivation for Platonic realism or Lockean conceptualism, both of which were developed as responses to the one-many problem.

This "singular term" view of the semantics of common nouns is deeply

implausible—so much so that no reasonably competent thinker is likely to have held it. To do so, a thinker would need to overlook the fundamental functional differences between proper nouns and general terms. He would have no concept of a kind, as distinct from an individual, and would be unable to explain how we are able to say that the black horse before us is a different horse from the white one we saw yesterday. In any case, we have compelling reasons to reject this view as an interpretation of early Chinese thought. As section 8 will explain, the later Mohists explicitly distinguish general terms for *lèi* 類 (kinds), such as *mǎ* 馬 (horse), from what they call *sī míng* 私名 (personal names, proper nouns), such as "Jack," which are singular terms referring to a single individual. The proposal that early thinkers regarded kind terms such as *mǎ* 馬 (horse) as akin to singular terms cannot explain why the Mohists would draw this distinction. The only reasonable explanation is that they recognize that *mǎ* 馬 (horse) typically functions as a general term.[4]

Hypotheses 1 and 2 are seminal contributions to the study of ancient Chinese thought, but they must be distinguished from hypotheses 1′ and 2′, which are false. Unfortunately, the arguments Hansen gives in his initial presentation of hypotheses 1 and 2 are unsound (1983: 30–54). He has other evidence, collected mainly in chapters 4 and 5 of his (1983), that is more convincing. In section 5, I will review and critique his initial arguments, before moving on in sections 8 and 9 to explore some of the other, more compelling evidence for the hypotheses.

3. Word Class and Word Function

Much confusion has surrounded Hansen's argument from mass nouns because of a widespread failure to mark the crucial distinction between word class and word function. As a result, scholars have devoted much energy to discussing whether "Classical Chinese nouns" are mass nouns or count nouns, without realizing that the

question is ill formed.

The distinction is important because paradigmatic count nouns are commonly used as mass nouns and vice versa. To borrow an example from Quine (1960), the English word "apple" is typically used as a count noun, but it can also be used as a mass noun, as when we say, "Put some apple in the salad." "Coffee" is typically a mass noun, but we can say to a restaurant waiter, "Three coffees, please." Such examples show that the mass/count distinction is generally not usefully applied at the level of the *word class,* or general category of word, such as "noun" or "verb." Few nouns can be classified as strictly mass or count nouns at the level of the word class. Rather, the distinction usually holds at the level of *word function,* the grammatical role a word plays in a particular sentence. Given the class/function distinction, we can say that though "apple" typically functions as a count noun, it functions as a mass noun in the salad example, and the converse for "coffee." Another way of making the point is to distinguish *word type* from *word occurrence*. A word type is a word as identified generally, apart from its use in any particular context: "apple" is a word type. A word occurrence is a particular instance of a word in a particular sentence: "apple" in the sentence "Put some apple in the salad" is one occurrence of the word type "apple."[5] As a word type, "apple" may not be strictly classifiable as either a count or a mass noun. But particular occurrences of words can be so classified: the occurrence of "apple" in the salad example is a mass noun.

Among early responses to Hansen's work, only one, Boltz (1985), recognized the word class/function distinction (312), plausibly suggesting that at the level of word class, Classical Chinese nouns should be considered neutral with respect to the count/mass dichotomy (310). Boltz was responding to Hansen's suggestion that Classical Chinese nouns "seemed like hybrids" between count and mass nouns, since

"they functioned as basic term expressions" but could take numerals (1983: 33). There is of course no such thing as a "hybrid" count/mass noun. (Presumably, this would be one whose occurrences functioned simultaneously as both count and mass nouns.) What Hansen was noticing, and Boltz made explicit, was that at the level of word class or word type, Chinese nouns generally cannot be classified as count or mass nouns, because in particular contexts they can function as either. The noun *rén* 人 "people" in *rén néng hóng dào, fēi dào hóng rén* 人能弘道，非道弘人 "People can broaden the way, it's not that the way broadens people" functions as a mass noun. But the same noun in *sān rén xíng bì yǒu wǒ shī yān* 三人行必有我師焉 "Among three people walking, there is surely one who can serve as my teacher" functions as a count noun.

As Robins's (2000) detailed study shows, most or all Classical Chinese nouns can function as mass nouns, and probably the majority of occurrences of Classical Chinese nouns do in fact function as mass nouns. At the same time, many Classical Chinese nouns can and regularly do function as count nouns. So one could justifiably say that "Classical Chinese nouns are mass nouns," insofar as many or most of them are frequently used as mass nouns. But it is a mistake to think that they therefore are not count nouns, since many of them are also routinely used as count nouns. And in fact neither of these points has much relevance to classical Chinese ontology and semantic theory, as I will explain in section 5. To pave the way for that explanation, let me first clarify the criteria by which particular occurrences of nouns should be distinguished as count or mass nouns.

4. What is a Mass Noun?

The count/mass noun distinction can be conceived of in at least three ways, corresponding to three types of distinctions associated with count and mass nouns.

Two of these have consequences for semantics, or how we conceive of the referents of a noun. One does not. So which of the three we take to be the hallmark of the count/mass noun distinction will partly determine what consequences, if any, that distinction has for semantics. Here I will briefly explain the three distinctions and argue that only one of them, that between instances of nouns that do or do not divide their reference, reliably marks the difference between count and mass nouns. As I will show, this distinction has no consequences at all for how we construe the referents of mass nouns. Therefore the fact that most occurrences of Classical Chinese nouns are mass nouns tells us nothing about how classical Chinese philosophers thought about the world.

My account of the count noun/mass noun distinction will follow Dan Robins's closely, and this entire section borrows extensively from his (2000: 148–54).

We generally tend to think of the count noun/mass noun distinction as the difference between construing the reference of a noun as one or more distinct individual items, such as tables or shoes, and construing it as an undivided mass or heap, such as water or flour. One way of articulating this distinction more precisely is by saying, in Quine's terminology (1960: 90–95), that in the first case, but not the second, the noun *divides its reference* into individual items. Contexts in which English nouns divide their reference, and thus function as count nouns, include when they are pluralized and when they are used with an indefinite article, a numeral, or a quantifier such as "each" or "every." To understand a sentence in which a noun with divided reference occurs, such as "Each table was covered with books," we must know how to divide and count the things it refers to, in this case tables and books. When we do so, we appeal (usually implicitly) to what we can call a *principle of individuation* associated with that noun.[6] This is a principle that stipulates—or would

stipulate, if we formulated it explicitly—for some noun "*x*," what counts as one *x*. To understand a sentence in which a noun does not divide its reference, we need not appeal to such a principle.

Any context in which a noun divides its reference invokes a principle of individuation, and in applying such a principle to understand a noun, we thereby treat it as a count noun, which refers to one or more individual items. Paradigm English count nouns, such as "table," divide their reference in most or all contexts, and thus occurrences of these nouns typically invoke a principle of individuation. But a noun can be associated with a principle of individuation without every occurrence of the noun invoking the principle. Consider "sound." To understand the statement "They heard a strange sound coming from the next room," we must grasp what it is for something to count as *one* sound and thus must know how to apply a principle of individuation for sounds. But to understand "Sound travels at 1100 feet per second," we do not need to know what counts as a single sound. In the first context, "sound" divides its reference into individual sounds and functions as a count noun, but in the second, it does not divide its reference, and it functions as a mass noun. Hence the question of whether a noun is associated with a principle of individuation (as "sound" is) is distinct from that of whether a particular occurrence of the noun divides its reference (in the first example, "sound" does, but in the second, it does not).

That the two questions are distinct also becomes clear when we recognize that many paradigm mass nouns, such as "water," are in fact associated with principles of individuation, though these are invoked only rarely. Most occurrences of "water" are mass nouns; they do not divide their reference, and no principle of individuation is needed to understand them. Nevertheless, we can speak of "three waters," referring, for example, to three varieties or three servings of bottled water, to cite just two

possible principles of individuation.

These examples show that the count noun/mass noun distinction does not coincide with the distinction between nouns that are or are not associated with a principle of individuation. From section 3, this is what we should expect, since principles of individuation are associated with nouns at the level of the word type, and the count/mass noun distinction is usually operative at the level of the word occurrence. Occurrences of nouns that are associated with a principle of individuation can sometimes function as mass nouns, while nouns whose occurrences typically function as mass nouns may nevertheless be associated with a principle of individuation.[7] Association with a principle of individuation at the level of the word type is thus a necessary but not sufficient condition for an occurrence of a noun to function as a count noun. What corresponds to the count/mass noun distinction is the distinction between whether or not a particular occurrence of a noun *invokes* a principle of individuation—that is, whether or not we must *apply* such a principle in order to understand the sentence in which the noun appears. But that distinction is just the distinction between occurrences of nouns that do or do not divide their reference. A principle of individuation is simply a guideline we follow in determining *how* a noun divides its reference. So of these two potential criteria for marking the count/mass noun distinction, it is divided reference, not association with a principle of individuation, that captures the distinction.

Many people's intuitions about mass nouns are driven by thinking about nouns that refer to unstructured stuffs, such as "water" or "flour." Such nouns pick out their referents solely on the basis of the kind of substance they are made of. In this respect, they contrast with paradigm count nouns, such as "table," which pick out their referents partly or wholly on the basis of other features, such as their structure or

function. Let us refer to any features beyond merely the kind of substance a thing is made of as *formal features*.[8] Then when a noun picks out its referents at least partly on the basis of their formal features, we can say that the noun is associated with a *formal criterion.*[9] Only things that meet the formal criterion qualify as part of the extension of the noun.

Paradigm count nouns, such as "table" and "shoe," are associated with formal criteria. Many paradigm mass nouns, such as "water," are not—at least not at the macroscopic level.[10] Intuitively, this absence of formal criteria can be thought of as explaining why these nouns are mass nouns. Since the unstructured substances that form their extension need meet no formal criteria, these substances do not by themselves divide into any sort of regular structural or functional units. The nouns denoting them thus typically do not divide their reference, since in most contexts there is nothing to divide into.

Given this difference between paradigm count nouns and some paradigm mass nouns, one might be tempted to propose that the mark of the count/mass noun distinction is that count nouns, but not mass nouns, are associated with formal criteria. But this cannot be right, for many mass nouns too are associated with formal criteria. Examples in English include "footwear," "furniture," "luggage," "livestock," and "machinery." None of these nouns are associated with principles of individuation, and thus none can function as a count noun. In no context can we correctly say "two luggages" or "three machineries." But each of these nouns is associated with a formal criterion. To qualify as luggage or machinery, a thing must have a certain structure and function, and not merely be made out of a certain substance.

Conversely, there are also nouns that are *not* associated with formal criteria, but *are* associated with principles of individuation. Occurrences of these nouns can

function as mass nouns, or they can divide their reference and function as count nouns. We saw one example, "apple," in section 3. A bit of mashed apple can correctly be referred to as "apple," using the word as a mass noun. But obviously we invoke a principle of individuation when we count individual whole apples. Robins cites the English "onion" and "culture" and Classical Chinese *mù* 木 "wood, log" and *shŭi* 水 "water" as further examples (153). Like the English noun "water," *shŭi* 水 can be used as a mass noun to denote any or all water, no matter what its form. Thus it invokes no formal criteria. But in Classical Chinese, *shŭi* 水 can be counted: 二水 *èr shŭi* "two rivers, two floods, two flows of water." Association with a formal criterion, then, is neither necessary nor sufficient for a noun to function as a count noun.[11]

We have examined three possible ways of drawing the count/mass noun distinction and found that only one of them—the distinction between particular occurrences of nouns that do or do not divide their reference—provides a necessary and sufficient condition for distinguishing count from mass nouns. This condition is applicable only at the level of the word occurrence, not the word type. As Robins explains (154), in English, there may nevertheless be reasons to classify some words as count nouns or mass nouns at the level of the word type. For example, there may be some nouns all of whose occurrences divide their reference, or there may be nouns whose different functions in the same syntactic context are best explained by classifying them as count nouns or mass nouns.[12] By contrast, he argues, neither of these reasons holds for Classical Chinese nouns. All Classical Chinese nouns can function as mass nouns in some contexts, and there are no contexts in which one class of Classical Chinese nouns invariably function as count nouns and another as mass nouns (154). Robins argues (170ff.) that in "neutral" syntactic contexts—those in which no syntactic features force the noun to function as either a count noun or a mass

noun[13]—most Classical Chinese nouns function as mass nouns. As any reader of the language will be aware, neutral contexts are far more frequent in Classical Chinese than contexts which force individuation, causing nouns to divide their reference. Hence most occurrences of nouns in Classical Chinese function as mass nouns.

Robins's work shows that a paradigm Classical Chinese noun corresponding to a paradigm English count noun functions very differently from its English counterpart (155). Consider the Classical Chinese noun *mǎ* 馬, corresponding to the English noun "horse," typically used as a count noun. The Chinese noun can function as a count noun or as a mass noun, depending on its context (as can the English "noise"); it is associated with a principle of individuation, and so when functioning as a count noun divides its reference into distinct, countable individual units (as does the English "apple");[14] and it is associated with a formal criterion, so even when functioning as a mass noun it refers only to things that have a certain sort of structure or function (as does the English "luggage"). The principle of individuation explains why *mǎ* 馬 can directly take numerals, and the formal criterion explains why a single horse-leg does not count as *mǎ* 馬.[15]

The association of principles of individuation and formal criteria with such nouns plays an important role in determining their semantics, or how we construe their referents. As we have seen, the count/mass noun distinction coincides with the distinction between whether or not a particular occurrence of a noun divides its reference, and not with whether or not a noun is associated with a principle of individuation or a formal criterion. But it is the latter two features, not the count/mass distinction, that affect how we think of the referent of a noun—whether or not we think of it as naturally dividing into countable units, or having a certain sort of structure, or being an unstructured mass. Nouns functioning as mass nouns may be

associated with a principle of individuation, a formal criterion, both, or neither. In other words, the mere fact that a noun functions as a mass noun has *no consequences whatsoever* for how we conceive of the thing referred to by that noun. Using a mass noun to refer to something does not commit us to conceiving of that thing as an unstructured mass or as something that in itself does not divide naturally into countable units (cf. Robins 2000: 174). Hence even if most noun occurrences in Classical Chinese function as mass nouns, this does not entail that ancient Chinese thinkers regarded people, horses, and medium-sized dry goods as unstructured, unindividuated "mass stuffs" like water and flour. Indeed, it entails nothing at all about their ontological views.[16]

5. The Mass Noun Argument

In this section, I will reconstruct and critique Hansen's argument from the prevalence of mass nouns in Classical Chinese to hypotheses 1 and 2, the mereological worldview and behavioral nominalism (1983: 30–37). Strictly speaking, Hansen's account is not an argument so much as a hypothetical explanation of how early Chinese thinkers could have been led to hold these views. Primarily, it is not an attempt to prove that they held them, but to explain why it would have been natural for them to do so, and thereby to strengthen the case for an interpretation that attributes these views to them.[17] However, like many causal explanations, this explanation is formally symmetrical to an argument, and Hansen does refer to it as "the first step" and "the initial phase" of his overall argument for hypotheses 1 and 2 (39, 54). So I will present and discuss it in premises-conclusion form and refer to it alternatively as the "argument from mass nouns" or "the mass noun argument." Instead of summarizing the argument as Hansen presents it, I will reconstruct it as a series of discrete claims, attempting to express all of the steps in the argument

explicitly. I will then evaluate these claims one by one.

Let me begin by sketching the basic structure of the argument. I suggest that it comprises eight basic steps, from which Hansen infers the mereological worldview and behavioral nominalism.

1. Classical Chinese nouns typically function as mass nouns.
2. Mass nouns are naturally interpreted as referring to unstructured, unindividuated "mass stuffs."
3. Mass stuffs are naturally thought of as standing in part-whole relations, not member-set relations.
4. Therefore, by steps 1 through 3, since ancient Chinese thinkers would have thought of collections of things as aggregates of mass stuffs, they conceived of such collections as mereological wholes.
5. The extension of a common noun—all instances of the kind of thing it denotes—can be thought of as a collection of things. Therefore, by step 4, ancient Chinese thinkers thought of the extensions of common nouns as mereological wholes.
6. Therefore they regarded the instance-kind relation as a part-whole relation.
7. Therefore they found it natural to think of common nouns as singular terms that name wholes, of which all the referents of the noun are parts.
8. Therefore they were nominalists.

Steps 1 through 4 form what we can call the *mass-noun-to-mereology inference*. They purport to explain, by appeal to features of the Chinese language, why pre-Qín thinkers regarded collections of things as mereological wholes, and thus to explain the mereological worldview. Steps 5 through 8 form the *mereology-to-nominalism inference*. They purport to explain why pre-Qín thinkers held nominalist semantic

theories.

Overall, there are two main problems with the argument. First, speaking a language with mostly mass nouns need not incline thinkers to construe things as unindividuated, unstructured masses, and thus need not incline them to adopt a part-whole worldview. Specifically, step 2 is false. Thus the mass-noun-to-mereology inference collapses, as does the move from step 1 to steps 5 and 6, the claims that pre-Qín thinkers viewed kinds as mereological wholes and the instance-kind relation as a part-whole relation. Second, conceiving of collections of things as mereological wholes need not lead to nominalism. I will argue that step 6 is false and that the inference from step 6 to step 7 is illegitimate. I have already argued, in section 2, that step 7 is false, and here I will add further considerations against it. So the inference from step 7 to step 8 is also unsound.

Now for the details. The eight claims that follow are more detailed versions of the eight steps above. For clarity, I have given each a title.

1. *The mass noun hypothesis.* Most instances of common nouns in Classical Chinese function as mass nouns (Hansen 1983: 32). Their syntax is similar to that of English mass nouns, and we do not need to be able to divide and count the things they refer to in order to understand the sentences in which they occur.[18]

As we have seen in sections 3 and 4, this claim is probably true.

2. *Mass-stuff semantics.* Mass nouns are most naturally interpreted semantically as referring to unstructured, unindividuated masses or stuffs (Hansen, 35), such as liquids or powders.

As we saw in section 4, this claim is false. We construe the referent of a mass

noun as an unstructured stuff only when that noun is not associated with a formal criterion. But many mass nouns in both English and Chinese are associated with formal criteria, and thus their referents are naturally thought of as having a distinctive structure or functional organization. Moreover, many mass nouns are associated with principles of individuation. The referents of these nouns are construed as naturally dividing into countable individual units.

3. *Stuffs are mereological.* Instances of an unstructured stuff are more naturally conceived of as parts of wholes than as countable members of sets (35).

I am unsure whether this claim is true. It seems plausible for certain stuffs, such as water. Against it, though, we can recall that if a noun denoting an unstructured stuff is associated with a principle of individuation, it might be equally natural for users of the noun to think of individual units of the stuff as members of a set.

4. *Collections are mereological wholes.* By premises 1 through 3, ancient Chinese thinkers would have regarded collections of the things denoted by common nouns as aggregates of mass stuffs, which they would have conceived of as mereological wholes.

The first half of this claim rests mainly on claims 2 and 3. Since 2 is false and 3 is questionable, the inference to this claim is unsound, and in the form stated here the claim is false. Classical Chinese thinkers may have viewed collections as mereological wholes, but probably not for the reasons given here.

5. *The extensions-as-wholes view.* By claim 4, classical Chinese thinkers tended to treat any collection of things as a mereological whole. The extension of a common noun—all instances of the kind of thing it denotes—can be regarded as a collection of things. So ancient Chinese thinkers probably regarded the

extensions of common nouns as mereological wholes.

As with claim 4, the inference to this claim is unsound, so the argument gives no reason to accept it. Yet claim 5 seems plausible in itself, and it is conceptually independent of any hypothesis about Classical Chinese nouns and their semantics. If classical thinkers did regard collections as mereological wholes—for whatever reason—then it would have been natural for them to treat the extensions of nouns as mereological wholes. Such a stance is philosophically defensible and involves no obvious error or confusion.

6. *Wholes instead of kinds.* Since, by claim 5, they considered the extensions of common nouns to be mereological wholes, ancient Chinese theorists would have found it natural to identify the instance-kind relation with the part-whole relation. That is, they would have regarded the relation between particular things denoted by a noun "*x*" and the kind of thing *x* of which these particulars are instances as a relation of parts to a whole (Hansen 1983: 35). On this view, the reason individual instances of *x* all count as *x* is that they are parts of the mereological whole denoted by "*x*." Particulars are instances of a kind because they are parts of the whole that is that kind.

The argument for claims 4 and 5 is unsound, and so the inference to 6 is unsound as well. Even if we were to accept all of the preceding steps, however, the "wholes instead of kinds" view still would not follow, simply because the part-whole relation and the instance-kind relation are two distinct types of relations, and there is no indication that Chinese thinkers confused them. The part-whole relation concerns how things (of any kind) can be combined into collections or totalities. The instance-kind relation concerns how different particular things can be instances of the same kind. There is no reason to think that in the case of unstructured masses—or anything

else—the second relation can be collapsed into the first. To see this, consider how we are able to identify the whole comprising all water or the whole comprising all horses. We can do so only because we are antecedently able to pick out instances of those kinds. If we did not distinguish the instance-kind relation from the part-whole relation, the only way to learn how to pick out the extension of "water" or "horse" would be by ostension. We would be unable to recognize new instances of water or horses as such unless we were explicitly informed that they were parts of the whole named "water" or "horse." Since it is physically impossible to learn about every instance of a thing by ostension, a theory that accepted the "wholes instead of kinds" view would be unable to explain how we learn to use words such as "water" or "horse."

Collapsing the two relations into one thus results in an implausible theory of language—one so untenable that it should have seemed counterintuitive to philosophers in any milieu. In any case, as I will explain in section 8, later Mohist texts do distinguish part-whole from instance-kind relations, and both they and the *Xúnzǐ* explain the use of general terms—and thus the instance-kind relation—by appeal to similarity relations, not part-whole relations. There is thus no reason to think the "wholes instead of kinds" view played a role in motivating early Chinese theories of language.

The "wholes instead of kinds" view should be distinguished from the following interpretive hypothesis, which by contrast is highly plausible.

6′. *Kinds as wholes.* Without confusing the instance-kind relation with the part-whole relation, early Chinese thinkers regarded kinds as mereological wholes. That is, they did not regard kinds as anything over and above the mereological sum or fusion of the particulars denoted by the term for the kind.

In commenting on claims 4 and 5, I suggested that early Chinese thinkers might have treated collections of things and the extensions of common nouns as mereological wholes, though not for the reasons given by the argument from mass nouns. If so, it would be natural for these thinkers to accept the "kinds as wholes" view. In section 9, I will argue that we have moderately good reasons to believe that the Mohists, at least, did hold it. Unlike claim 6, the "kinds as wholes" view does not entail that Chinese thinkers wrongly collapsed the instance-kind relation into the part-whole relation, nor that they mistakenly appealed to the part-whole relation to explain the semantics of general terms. Claim 6 is in effect a hypothesis about early Chinese semantic theory. Hypothesis 6′ is not, and it is unrelated to the question of whether Classical Chinese nouns are mass nouns. It is merely a hypothesis about how early Chinese thinkers conceived of collections of things.

Again, if 6′ is true, it does *not* entail that Chinese thinkers regarded everything as consisting of unstructured "mass stuffs." Treating the individual-collection relation as a part-whole relation entails nothing about the nature of the parts in question. They could be composed of unstructured atomless gunk, or they could be identified by some principle of individuation or formal criterion. They may be abstract or concrete.

7. *The singular term claim, revisited.* By claim 6, early Chinese thinkers probably regarded kinds as unitary mereological wholes and the instance-kind relation as a form of part-whole relation. So in their eyes terms for kinds of things probably functioned as singular terms (Hansen 1983: 35). They probably found it natural to think of common nouns for kinds of things, such as "ox" or "horse," as singular terms that name mereological wholes, and thus denote all the particular things in their extension by virtue of those things' being parts of the whole.

In section 2, I explained why the singular term claim (labeled "2′" there) is implausible and gave reasons to deny that the Mohists accepted it. So we already have reasons to believe claim 7 is false. Beyond these, let me add two further considerations. First, our discussion of claim 6 and the distinction we drew between it and hypothesis 6′ show that conceiving of collections of things as mereological wholes need not entail anything that supports the singular term view. So the inference from claim 5 through 6 to 7 is faulty and does not support 7.

Second, the claim that, for ancient Chinese thinkers, nouns for kinds of things functioned as singular terms might be plausible in contexts in which nouns such as *mǎ* 馬 "horse" function as kind terms—contexts in which a noun refers to its entire extension, understood as a kind of thing, rather than as one or more individual things.[19] But claim 7 goes on to contend that such kind terms denote particular instances of a kind *by virtue of* their being parts of the kind. This claim is ambiguous, and on the reading needed to support the mass noun argument, it is false. One way to read the claim is that when kind terms function as singular terms, they refer to the entire kind, including all its instances. This is of course true. But if the claim is interpreted to be that the kind term functions as a singular term that denotes each instance of the kind *considered individually,* then it is false. Kind terms refer to the entire kind at once, not to individual instances of the kind one by one. If a noun divides its reference into individual instances, then it is functioning as a general term, not a kind term.[20] A consequence of this point is that if early Chinese texts display any awareness of the phenomenon of divided reference, they thereby display a grasp of the distinction between individuals and the kinds to which they belong, and thus a grasp of the difference between general terms and singular terms denoting entire kinds. I suggest that use of common nouns with numerals or with modifiers such as *gè* 各

"each" or *shù* 數 "several" is sufficient to demonstrate an implicit grasp of the distinction between individuals and kinds. Moreover, probably only an explicit grasp of this distinction could explain the statement in the later Mohist *Xǐaoqǔ* 小取 that "horse four legs" 馬四足者 refers to "one horse and four legs, not two horses and four legs" 一馬而四足也，非兩馬而四足也. The latter two instances of *mǎ* 馬 "horse" can only be interpreted as general terms denoting any individual horse. (The instances of *zú* 足 "leg" must be interpreted as general terms as well.) Given that the text is explicitly clarifying a statement about the kind *horse* by explaining its consequences with respect to individual horses, it is overwhelmingly likely that the writers recognize these general terms as such and do not regard them as singular terms denoting kinds.[21]

8. *Nominalism, or the absence of "abstraction."* For ancient Chinese thinkers, the instance-kind relation is explained by part-whole relations and the singular term view. Therefore, these thinkers had no need to posit abstract concepts or entities, such as universals, to explain what different instances of a kind of thing have in common by which they belong to the same kind and are denoted by the term for that kind. So they held nominalist views of language (36–37).

The inference to this claim is unsound, because claims 6 and 7 are both false. Early Chinese philosophers of language may have held nominalist views, but not for the reasons given here.

Thus, by Hansen's reasoning, we arrive at the following pair of conclusions:

C1. *The mereological worldview.* Classical Chinese nouns are mass nouns (claim 1), so by claims 2, 3, and 4, pre-Qín thinkers held a mereological worldview.

C2. *Behavioral nominalism.* Early Chinese thinkers held a mereological worldview (claim 4), so by claims 5 through 8, they held nominalist views of language.

I have contended that the argument for the mereological worldview is unsound, because claim 2 is false and the move from 2 and 3 to claim 4 is illegitimate. The argument for behavioral nominalism is also unsound, because the argument from claims 1 through 4 to claim 5 is unsound, and because claims 6 and 7 are false. The argument from mass nouns thus fails to support either conclusion. The grammar and semantics of Classical Chinese nouns do not in themselves provide any reason to attribute a part-whole ontology to pre-Qín thinkers. Nor does a part-whole ontology provide any reason to suppose these thinkers held nominalist semantic theories.

Considered very generally, this result should be unsurprising. A characteristic feature of mass nouns is that they refer cumulatively: any amount of water is still water. This property of cumulative reference might lead us to suppose that we typically think of the referents of mass nouns along part-whole lines. But using mass nouns—even nouns that lack principles of individuation—does not automatically entail thinking of things on a part-whole model. "Art" and "plastic" are such mass nouns, but in using them we are not thereby inevitably led to view collections of artwork or plastic items along part-whole lines. We may do so, but we may also treat individual instances of these things as countable units that are members of sets. Neither syntactic structure nor the semantics of these nouns fixes in advance how we will think about such collections.

Nor does thinking about masses and part-whole relations intuitively lead to nominalism. Mereology is neutral between nominalism, conceptualism, and Platonism.[22] Plato himself was a leading theorist of mereological relations,[23] and at

least one scholar has proposed that Plato's theory of forms was in fact motivated by considerations involving mass nouns (Smith, 1978).[24] Obviously Plato and Locke spoke languages in which they used mass nouns daily, but were not thereby led to embrace behavioral nominalism. A philosopher who thinks countable instances of *x* are *x* by virtue of instantiating the abstract property of *x*-ness will see no problem in extending this explanation to unstructured stuffs and saying that, for example, instances of water are such by virtue of instantiating "wateriness." Nor need he see any problem in holding that the parts of a whole are so by virtue of instantiating some abstract property that characterizes the whole.

6. Confusion About Abstraction

In this section and the next, I hope to help clear up several misunderstandings and controversies arising from critical responses to Hansen's mass noun hypothesis. Since Hansen's views sparked a debate that by now has spanned more than two decades, it seems worthwhile to try to clarify the issues raised by his critics and point out where their responses were on target and where not.

Several critical responses to Hansen have mistakenly taken the point of his argument to be that ancient Chinese thought lacks abstract concepts, and thus Chinese philosophical theories invoke no abstract entities and must be nominalist. One early critic, Bao Zhiming, took Hansen to be claiming that Classical Chinese grammar shows that "Chinese thought lacks abstract entities such as ideas and concepts," and, "because there are no abstract entities, Chinese philosophy is nominalistic" (1985a: 203). Cheng (1983), Fung (1995), and Fang (1997) have also interpreted Hansen as contending that Chinese thought refers to no abstract notions or entities. These writers have responded by arguing, undoubtedly correctly, that there are indeed abstract concepts in Chinese philosophy. Obvious examples include *dé* 德 (virtue) and the

names for particular virtues (Cheng 1983: 348).

As we have seen, the crux of Hansen's argument in fact does not concern the presence or absence in early Chinese thought of abstract concepts, including concepts for abstract entities. Bao misconstrues Hansen's claims, as do others who interpret him as contending that ancient Chinese thought lacks abstract concepts. This confusion is to some extent understandable. Hansen can be criticized for using the word "abstraction" imprecisely and for muddying the waters by describing his topic as "does Chinese have abstractions?" (37) and his position as a "denial of abstraction in China" (38). The title of the chapter that presents his views is "The Mass Noun Hypothesis and Abstraction in Chinese Language and Thought." He also alludes briefly to the ill-conceived debate earlier in the 20th century over whether Classical Chinese had abstract nouns or could express abstract concepts (39).[25] (As his critics insist, of course it does and can. Besides the examples just given, consider *yǒu* 有 "presence" and *wú* 無 "absence.") Moreover, Hansen includes a potentially misleading discussion of whether Chinese nouns and adjectives should be translated as abstract nouns in English (40–41). This was presumably aimed at answering a hypothetical critic who maintained that Chinese thinkers were committed to Lockean conceptualism or Platonism because words such as *bái* 白 "white" refer to the abstract concept or entity *whiteness,* rather than simply to all white things. But some readers might have taken the argument to be that there are no abstract nouns in Chinese.

On the other hand, the first section of the chapter in question indicates explicitly that by "the abstraction model," Hansen means either "a Platonic scheme" or the view that the mind knows or contains "'meanings' or intelligible abstract objects" (30–31). The discussion of abstraction clearly states that he is arguing "for the claim that no Chinese philosophical system of the classical period in China was

committed to the existence of or had roles for abstract (universal) entities in any of the traditionally important ways that Western semantics, epistemology, ontology, or philosophy of mind had roles for abstractions" (37–38). After sketching Plato's theory of forms and the Cartesian-Empiricist view of meanings as a kind of mental entity, Hansen says that "my denial of abstraction in China amounts to a denial that there is any similar interlocking set of philosophical theories" (38–39).[26] All of these remarks make it clear that he is not arguing that ancient Chinese philosophy had no abstract nouns or concepts.[27] That issue is irrelevant to the main point of his discussion.[28]

Ivanhoe (1987) helps to clarify the "abstraction" issue while avoiding the misunderstandings of previous critics. He correctly notes that Hansen's discussion misleadingly conflates "abstraction" with Platonic realism or Lockean conceptualism, Hansen's main aim being to argue that Chinese thinkers never developed theories similar to these traditional Western views (117). As Ivanhoe points out, avoiding these views does not entail avoiding all abstraction. Indeed, any reasonable theory of language will need to apply abstract notions such as shape, color, and size to explain how to distinguish different individuals and kinds from one another.

7. Rival Accounts of Classical Chinese Nouns

Several critical responses to Hansen's interpretive proposals have rested on alternative accounts of the nature of Classical Chinese nouns. Two have challenged his contention that Classical Chinese nouns are mass nouns, but without examining his claim that mass nouns are associated with an ontology of unstructured stuffs, which in turn is reliably associated with nominalist ontological views.[29] Surprisingly, none of the critical responses to Hansen have examined the relevant sections of the Mohist *Canons* and the *Xúnzǐ* to see how well Hansen's proposals explain the semantic theories presented there.

Harbsmeier (1998) proposes a threefold classification of Classical Chinese nouns into count, generic, and mass nouns, which he claims refutes Hansen's proposal that early Chinese thinkers regarded the referents of common nouns such as "horse" as "stuff-kinds" (320).[30] As we have seen, the issue of whether the extension of a noun is construed as an unstructured or unindividuated stuff is in fact distinct from that of whether the noun functions a mass noun. Beyond this point, Harbsmeier's classification is vitiated by a failure to distinguish word class from word function and by his assumption of an essential semantic distinction between nouns that individuate into kinds (his so-called "generic" nouns) and those that individuate into single units (his count nouns), despite the fact that many nouns, such as "thing" and "horse," can individuate into either. Since Harbsmeier's account is rebutted at length by Robins (2000: 155–70), I will not discuss it in detail here. For our purposes, its key weakness is that Harbsmeier does not question Hansen's assumption that noun syntax tends to determine how thinkers construe the referents of nouns. Instead, he accepts this assumption and attempts to show that Chinese nouns are not mass nouns after all.

Mou (1999) proposes that Chinese nouns typically function, syntactically and semantically, as collective nouns (47), though he too fails to recognize the word class/function distinction. He suggests that "the implicit ontology of Chinese nouns is a mereological ontology of collection-of-individuals both with the part-whole structure and with the member-class structure" (47). Like Ivanhoe (1987), he correctly points out that if particular individuals are to be classified into aggregates, whether conceived as wholes or as sets, some process of abstraction is needed. We must be able to identify general features possessed by each individual in a collection, and this generalization from particular features of particular individuals involves abstraction (53). Mou follows Hansen in taking his account of noun semantics to explain Chinese

nominalism and thus the absence of a one-many problem in early Chinese thought (47). As we have seen, this line of explanation is untenable.

Mou's constructive proposal founders as soon as we review what a collective noun is. He himself does not discuss in detail what collective nouns are, though he mistakenly says that they cannot be pluralized (49). He gives only three examples, the English nouns "people," "cattle," and "police" (49), none of which are in fact collective nouns. These nouns typically function as plurals, taking plural verbs, and when counted ("two people," "several police") divide their reference into individuals, not collections. By contrast, collective nouns normally function as count nouns that denote a group of persons or things considered as a single unit. Typical examples are "team," "jury," "committee," "herd," "orchestra," and "family." They may be used in singular form, taking an article and a singular verb, or they may be pluralized. Unlike paradigm Chinese nouns, such as *mǎ* 馬 "horse," collective nouns typically divide their reference into collections, not the individuals that constitute the collections.[31] Prefixing the Chinese noun *mǎ* 馬 with the numeral *èr* 二 "two" yields a noun phrase referring to two individual horses (or, in some contexts, two kinds of horses). Prefixing the English collective noun "herd" with "two" yields "two herds," a noun phrase referring to two *groups* of horses. So the syntax and semantics of collective nouns are unlike those of paradigm Classical Chinese nouns.[32]

Mou follows Hansen in thinking that the semantics of Classical Chinese nouns entails a certain sort of mereological view, in his case a "collection-of-individuals" that apparently is compatible with either a part-whole relation or a member-set relation. This characterization is so vague that it probably cannot fail to be approximately correct for many instances of Chinese nouns, though presumably it does not apply to nouns functioning as kind terms, nor perhaps to those referring to

unstructured masses. Indeed, Mou's description of the semantics of his "collective" nouns is so nebulous that it probably collapses into holding—correctly—that syntax does not determine semantics.

Robins (2000) is the most detailed and convincing study of the syntax and semantics of Classical Chinese nouns to date, and the only commentator on Hansen besides Boltz (1985) to recognize the distinction between word class and word function. Hansen's hypotheses are not the focus of Robins's work, but in the penultimate section of his paper (182–83) he addresses them briefly, touching on two of the criticisms developed in this paper. First, he points out that the issue Hansen is concerned with, in attributing nominalist views to Chinese thinkers, is the relation between things and the kinds to which they belong—specifically, what it is about two instances of some thing *x* that make them both *x*. The mass/count noun distinction, he suggests, probably has nothing to do with this issue. Instead, it concerns the issue of whether to understand an instance of a noun "*x*" we need to know how much *x* counts as one *x*. Second, he observes that Hansen is in effect claiming that early Chinese folk linguistics treated all nouns as singular terms—the singular term claim—but, for reasons we have seen, mass nouns are not singular terms, any more than count nouns are. A direct consequence of this pair of observations, though Robins does not state the point explicitly, is that the argument from mass nouns fails.

8. Particulars and Kinds in Pre-Qín Thought

In section 5, I argued that the "wholes instead of kinds" view and the singular term claim constitute an implausible interpretation of pre-Qín thought. In this section, I will marshal textual evidence from the Mohist *Dialectics* (*Mò Biàn* 墨辯) and the *Xúnzǐ* 荀子 to establish conclusively that this interpretation is untenable. For brevity, I will not discuss all the relevant passages, but only a selection sufficient to support

three interpretive claims: Pre-Qín thinkers distinguished clearly between the part-whole relation and the instance-kind relation, did not regard common nouns as singular terms,[33] and explained the relation between a particular and its kind by appeal to similarity between particulars, not part-whole relations.

The notions of "same" or "similar" (*tóng* 同) and "different" (*yì* 異) play a central role in later Mohist philosophy of language, epistemology, and argumentation. Accordingly, the Mohist *Dialectics* devotes much attention to exploring the relations of "same" and "different." One pair of canons and explanations, A86–87, presents a taxonomy of four types of sameness and difference.[34] Of particular interest here are the second and fourth of these, which refer to sameness and difference in being part of the same *tǐ* 體 (unit, body) and in being part of the same *lèi* 類 (kind). The relevant lines of Explanations A86 and A87 read:

> 不外於兼，體同也。……有以同，類同也。(A86)
>
> Not being excluded from a *jiān* (collection, aggregate) is being of the same *tǐ* (unit).… Having a respect in which they are the same is being of the same *lèi* (kind). (A86)
>
> 不連屬，不體也。……不有同，不類也。(A87)
>
> Not being connected or belonging is being not the same *tǐ* (unit).… Not the same in some respect is being not of the same *lèi* (kind). (A87)

We will explore the notions of *tǐ* 體 (unit, body) and *jiān* 兼 (collection, aggregate, whole) in the next section. For our purposes here it is enough to point out that the first of these two types of sameness and difference is either equivalent to or includes the part-whole relation, while the second refers to the instance-kind relation. Clearly, then, the Mohists distinguished these two sorts of relations from each other.

In rebutting the singular term claim in sections 2 and 5, I alluded to evidence

that the Mohists distinguished general terms from singular terms. Here is the key passage:

Canon A78:

名。達，類，私。

Names. Reaching, kind, personal.

Explanation A78:

(名)。物，達也。有實，必待之名也。命之馬，類也。若實也者，必以是名也。命之臧，私也。是名也止於是實也。

(Names.) "Thing" is "reaching." There being stuff,[35] it must take this name. Calling it "horse" is "kind." As to that which is similar to the stuff,[36] one must use this name. Calling him "Jack" is "personal." This name stops in this stuff.

For our purposes, there are two main observations to draw from this passage. The first is that it clearly distinguishes three levels of generality of reference: "reaching" names, such as "thing," which may apply to any object, event, or situation; "kind" names, such as "horse," which apply to all things similar to each other in some respect; and "personal" names, such as the proper noun "Jack," which apply to one thing only, the individual who bears the name. The text states that "personal" names refer to one thing only, and thus are singular terms, whereas kind names refer to anything that is similar to a paradigm of the kind in question, such as a horse, and thus are general terms. So the Mohists explicitly distinguish general from singular terms.

The second observation is how the text explains the relation between a thing and its kind. A name for a kind is established by dubbing a paradigm with some name, such as "horse." Having named the object "horse," we are committed to applying the same name to all similar things. This passage thus already indicates how the Mohists explain the instance-kind relation: particular things belong to a kind, and fall within

the extension of a general term for the kind, by virtue of being "similar" (*rùo* 若) to a paradigm of that kind. This interpretation is reinforced by how well it coheres with Canon A70:

Canon A70:

法，所若而然也。

Models are what something is similar to and thereby is "so."

Explanation A70:

(法)。意規員三也，俱可以為法。

(Models.) Thought, compass, circle are three. All can be used as models.

With respect to a general term, such as "horse," to determine whether or not something is "so"—whether it falls within the extension of the term—we compare the thing to a "model" (*fǎ* 法) or paradigm of that kind of thing to see whether they are similar. Models may include a mental image of the thing, measuring tools or other devices for identifying it, or concrete exemplars.

So the Mohists do not explain the instance-kind relation by appeal to the instance's being part of a whole. Nor do they appeal to meanings, abstract concepts, essences, universals, or Platonic forms. They hold the nominalist view that things are instances of a kind by virtue of being similar "in a respect" (A86) to a model or paradigm. The respects in which they may be similar include "shape and look" (*xíng mào* 形貌), "residence and migration" (*jū yùn* 居運), and "amount and number" (*liàng shù* 量數).[37] For the case of "shape and look," at least, descriptions of the use of models in other Mohist texts, such as "Heaven's Intention" (*tiān zhì* 天志), indicate that they were treated as standards for a perceptual comparison of similarity, as when a carpenter or wheelwright holds a L-square or compass against an object and thereby

judges it square or round. This suggests that application of models is a practical skill, learned by training in a practice for judging when a thing matches a model. For the Mohists, the shared judgments of similarity issuing from such practices explain our ability to communicate: When you tell me that something is an *x,* I understand you because I know what paradigms of *x* are like, according to standards of similarity that we share (cf. Canons A31 and B70).

The discussion of semantics in *Xúnzǐ,* Book 22, "Correcting Names" (*Zhèng Míng* 正名), is less explicit in distinguishing the part-whole from the instance-kind relation. But it clearly indicates that the semantics of general terms is based on distinguishing similar and different features of particular things as they affect the sense organs of human beings. The features considered include shape, color, pattern, sound, odor, flavor, texture, and weight (22.2d).[38] On the basis of such features, we compare particulars, finding similarities and "connecting them as one" (*tōng* 通) (22.2c). Particulars are then named by assigning the same term to similar ones and different terms to different ones (22.2f). A central outcome of "discriminating and explaining" (*biàn shūo* 辨說) is "extending kinds without contradiction" (*tūi lèi ér bù bèi* 推類而不悖) (22.3d). So, contrary to the singular term claim, the order of explanation is from the particular up to the kind, not from the whole down to the part, and the process of distinguishing similar and different aims at discriminating kinds, not wholes. Like the Mohist theory, the Xúnzian semantic theory is nominalist, in that it does not appeal to meanings, abstract concepts, essences, universals, or Platonic forms to explain the relation between a thing and its kind.

This cursory review of the two major classical Chinese semantic theories suggests that Hansen's "behavioral nominalism" indeed captures important features of ancient Chinese philosophy of language and mind. However, the formulation of it

presented in section 2—and in chapter 2 of Hansen (1983)—must be supplemented by an account of the Mohist and Xúnzian views of the basis for similarity relations, since similarity or "sameness" (*tóng* 同) is the fundamental explanatory notion in the overall theoretical framework. (Such an account is beyond the scope of this paper.)

At the same time, these texts confirm that a mereological worldview is not the primary motivation for early Chinese nominalism. If a mereological ontology did explain why Chinese thinkers developed the semantic theories they did, we would expect their texts to indicate that nouns (*míng* 名) name wholes, and that particular objects are denoted by certain nouns because they are parts of the corresponding wholes. Instead, they explain the use of common nouns by appeal to the concepts of kinds (*lèi* 類) of individual things, or "stuff" (*shí* 實), which are collected together on the basis of similarity relations. The Mohists explain the relevant similarity relations by brute similarity between particulars and by the practice of comparing things to a model or paradigm. Xúnzǐ explains them by the inherent tendency of animals of the same species, having the same sense organs, to perceive things similarly (22.2c), and by naming practices established by political leaders and cultural traditions (22.1a). Early Chinese nominalistic semantics is thus based on the notion of similarity between particulars, as determined by practices for comparing and grouping them into kinds.

9. Evidence for a Mereological Worldview in Early Chinese Thought

As we have seen, whether pre-Qín philosophers construe the extensions of general terms as mereological wholes is irrelevant to whether they adopt a nominalist or a Platonic ontology. Still, the question of to what extent they did apply mereological notions is interesting in itself. Did they regard the cosmos as a whole out

of which individual things are divided, or did they treat individual particulars as ontologically and conceptually primary? Did they conceive of a group or collection as itself a distinct type of object, or as just the sum of its components? How did they conceive of the relation between individuals and the groups to which they belong—as a membership relation or a part-whole relation? Or might they have applied a vaguer, more general notion that allowed them to shift between these two more specific conceptions in different contexts?

This section will survey the textual evidence for attributing a mereological ontology to early Chinese thinkers. By a "mereological ontology," I mean that the texts construe collections of things as wholes, not sets, and the relation between a thing and a collection to which it belongs as a part-whole relation, not a member-set relation. I will concentrate on the relevant sections of the Mohist *Dialectics,* discussing other texts only briefly.

The key notions we need to examine in the Mohist texts are *jiān* 兼 (collection, aggregate, whole), *tǐ* 體 (unit, part, body), and *lèi* 類 (kind).[39] There are two obvious ways we might interpret the relationship between *jiān* and *tǐ:* as a relation between a class or set and its members, or as one between a whole and its parts. As we will see, it is clear that in some contexts *jiān* 兼 refers to unitary physical objects and in others to collections of one or more individual items. Unitary objects cannot plausibly be construed as sets. So our main interpretive question is whether *jiān* is best interpreted roughly as "whole" in all these contexts, or whether it is better interpreted as a more general concept—call it an "aggregate"—that comprises both set-member relations and part-whole relations.

I will argue for the part-whole interpretation, suggesting that *jiān* is probably best explained as denoting a mereological whole whenever it is used as noun in the

later Mohist texts. Thus I suggest that the Mohists probably employed a mereological ontology: they regarded collections of things as wholes constituted by the items in the collection. Because the textual sources on which this hypothesis rests are limited, however, we can consider it only moderately justified.

The first passage to examine is Canon A2, which characterizes a *tǐ* as a part or "division" (*fēn* 分) of a *jiān*.

Canon A2:

體，分於兼也。

A unit is a division from a *jiān*.

Explanation A2:

（體）。若二之一，尺之端也。

(Unit.) Like one of two or the starting-point of a measured length.

Of special interest are the two examples given to unpack the notion of a division or part of a *jiān:* one of a pair of items and the tip of a measured length. In the first example, the *jiān* is a collection of two discrete items, something that could be described as a set. But in the second, it is a unitary object, such as a line or a measuring stick. This instance of a *jiān* cannot plausibly be interpreted as a set—for instance, the set of points in a line—because the example given of a *tǐ* 體 (part) is *dūan* 端 (tip), which refers not to points in general, but specifically to a starting point.[40] Both examples can be explained by interpreting *jiān* as "whole" and attributing a mereological ontology to the Mohists. On this interpretation, the pair of objects is regarded as a whole with two parts, not a set with two members. But the examples could also be explained by interpreting *jiān* as "aggregate," here understood as a more general notion covering both "whole" and "set." Commonsense, pre-theoretical discourse about the relations between things and their components might

apply both part-whole and set membership relations. So it is possible that the notions of *jiān* and *tǐ* might be general enough to cover both of these sorts of relations, without distinguishing sufficiently finely between them to count as exclusively mereological or set-theoretical notions.

This interpretation was Graham's view (1978: 335). Against it, I suggest that the argument for the part-whole interpretation is strong enough to justify it over the "aggregate" view. Three considerations seem particularly compelling.

First, Canon A2 treats the notion of *jiān* (whole, total) as conceptually prior to that of *tǐ* (part, individual), which is a division out of it. It seems to me that this conception corresponds poorly to the set-member relation. In the set-member relation, the conceptual priority typically goes the other way: The individuals that are members of the set are conceptually prior, and the set is constituted from them by a membership relation. It is difficult to see how *jiān* can correspond to sets and *tǐ* to their members if *tǐ* are defined by dividing *down* from *jiān.*

Second, the notions of *jiān* and *tǐ* seem interchangeable in a way that those of a set and its members are not. According to Canon A2, a starting-point (*dūan*) is a *tǐ* that is part of a measured length, while according to Canon A61 it is the dimensionless tip of something that is itself a *tǐ*. Apparently an object such as a measured length can be either a *jiān* or a *tǐ,* depending on the context; any *jiān* can in turn be treated as a *tǐ* and treated as part of some larger *jiān*.[41] The same is true of sets, of course: a set can be a member of another set. But *tǐ* and *jiān* are not merely context-relative. They can also function as two ways of referring to the same thing in a single context. In section 8, we saw that Explanations A86–87 explain "being the same *tǐ*" as "not being excluded from a *jiān*" and "being connected or belonging." Thus being one and the same *tǐ* is in effect *equivalent* to being one and the same *jiān.*[42] The

hypothesis that the *tǐ-jiān* relation is a general "aggregation" relation comprising both member-set and part-whole relations has difficulty explaining this characterization. For instance, interpreted in terms of the member-set relation, A86 seems to have the absurd consequence that any two members of the same set are the same member. On the other hand, taking *tǐ* and *jiān* to refer exclusively to part-whole relations yields a compelling interpretation of A86–87. It is intuitively plausible to think of one and the same thing, such as one's body, simultaneously as both a single unit or part (*tǐ*) and a single whole (*jiān*).

Third, even on the "aggregate" construal of the *tǐ-jiān* relation, there are contexts in which *tǐ* must refer to a group or set. This use of *tǐ* is difficult to reconcile with the word's basic meaning—roughly, "body"—and its use to denote the human body (Graham 1978: 473) or individual physical objects (A61, A67). It also seems inconsistent with the original motivation for the aggregate interpretation. The reasoning was that when *tǐ* is used to refer to each of a number of discrete items, perhaps *jiān* and *tǐ* are construed roughly as a set and its members. If so, then in contexts referring to groups of distinct items, rather than parts of a single object, we would expect to find *tǐ* used of the items and *jiān* of the group. But if *tǐ* is sometimes used to refer to the group, not the individual items, then the case for the aggregate interpretation collapses, and only the part-whole interpretation satisfactorily explains all uses of *tǐ* and *jiān.*

The passage in which the Mohists use *tǐ* to refer to a group of things, rather than individual items in a group, is Canon B12. Canons B11 and B12 explain that any items grouped together and separated off from other things can be considered a single *tǐ*. Hence the extension of a general term such as *mǎ* 馬 "horse" or of a compound such as "oxen-and-horses" 牛馬 can be considered a single "unit" or "body" (*tǐ*).

Canon B11:

合與一，或復[或]否。說在(拒)[樞]。[43]

Together or one thing, in one case compound, in the other not. Explained by: Separating off.

Canon B12:

歐物一體也。說在俱一、惟是。

Separated-off things form one unit (*tǐ*). Explained by: Both being as one, or being just "this."

Explanation B12:

((俱)[傴])。俱一，若牛馬四足。惟是，當牛馬。數牛數馬，則牛馬二。數牛馬，則牛馬一。若數指，指五而五一。

(Separating-off.) "Both being as one": Like oxen and horses having four feet. "Being just 'this'": Fitting "ox" or "horse."[44] If we count oxen and count horses, then oxen and horses are two. If we count oxen-and-horses, then oxen-and-horses are one. Like counting the fingers. The fingers are five yet the five are one.

Things can be "separated-off" or distinguished from other things in one of two ways. The "one" of B11 and "both being as one" of B12 seem to refer to cases in which things are distinguished by sharing a single feature, denoted by a single term, such as "four-footed." Things that share a feature in this way can be taken to form a single *tǐ*. The other sort of case is "just this," in which something belongs to a certain kind, such as *ox* or *horse.* Two kinds of things, such as oxen and horses, can be regarded either as two *tǐ,* in which case they are two items, or as a single, joint *tǐ,* in which case they are viewed "together" as forming a single item denoted by the "compound" name "oxen-and-horses."[45]

Depending on how we choose to count, then, the "one *tǐ*" of Canon B12 can refer to the collection of all oxen and horses, to that of all oxen, or to that of all horses. In any case, a phrase that normally means "one body" or "one unit" is here used to refer to a collection of items, be it the five fingers, all the individuals belonging to a kind, all the individuals belonging to two kinds, or, if "ox" and "horse" are being used as kind terms, two kinds. This use of the term *tǐ* seems best explained by the hypothesis that the Mohists think of collections as forming mereological fusions or wholes, which can be referred to as "units" or "bodies," employing *tǐ,* the same word used to designate parts. Moreover, since in Canon B67 the text refers to the aggregate of oxen and horses as a *jiān,* we have further evidence that the term *tǐ* can be used to refer to what in a different context might be treated as a collection of different items. The examples of horses and oxen also indicate that entire *lèi* 類, or kinds of things, can be regarded as *tǐ,* or single units. This suggests that the Mohists do not regard kinds or sets as abstract objects above and beyond the aggregate of all the particulars that belong to them.

To sum up, the Mohists' use of the terms *tǐ* 體 and *jiān* 兼 seems best explained by the hypothesis that they employed a mereological conception of the relation between items and collections of items.[46]

The Mohist texts provide our strongest grounds for attributing mereological views to classical Chinese thinkers. Outside of Mohist thought, the evidence for such views is sparse and mainly suggestive rather than explicit. I will not attempt an exhaustive survey of such evidence, but will only cite several possible indications of mereological ideas.

The first hint of a mereological view I will consider is a brief remark in paragraph 22.2h of *Xúnzǐ*, Book 22, "Correcting Names," that addresses the

individuation of things—or, as the text says, "how to examine stuff/reality (*shí* 實) and determine number." The text distinguishes two potentially problematic sorts of cases in which we must individuate *shí* 實 (stuff, objects, events, situations). We need consider only the first, things that have "the same characteristics but different location." By "same characteristics" (*tóng zhùang* 同狀), the text is most likely referring to things with similar physical features, such as two items of the same kind. The issue is how to individuate similar items located in different places, such as two horses standing at different ends of a field. The text gives the following rule for counting such *shí:* "As to those with the same characteristics but different locations, though they can be combined, we call them 'two *shí*'" (狀同而為異所者，雖可合，謂之二實).

This remark provides plausible, though weak, evidence for a mereological view. For the rule presented seems motivated by the unspoken assumption that distinct individuals of the same kind can sometimes be regarded as constituting a single item, most likely a mereological sum. Without this assumption, it is difficult to see how the issue the text addresses would arise. The principle that two individuals in different places should count as two distinct items, not one, would be otiose for anyone who viewed the world as fundamentally a collection of discrete, countable individuals. Only someone who took a mereological view for granted would be tempted to regard two separate horses as a single item.

The second bit of evidence I want to call attention to is the conception, expressed in a number of passages in early texts, of the cosmos as a single unit or body. The most prominent expression of this view is probably Hùi Shī's 惠施 claim, recorded in the *Zhūangzǐ* 莊子 "Under Heaven" essay, that "Heaven and earth are

one *tǐ* (unit, body)" (天地一體也).[47] The same passage ascribes to Hùi Shī the related idea that "The ultimately great has no outside, call it the Great One" (至大無外，謂之大一).[48] A similar view seems to be expressed in the *Lǚshì Chūnqīu* 呂氏春秋, section 13.1: "Heaven, earth, and the myriad things are the body of one person, this is called the Great Identity" (天地萬物，一人之身也，此之謂大同).[49] To these passages, we can perhaps add the references in several texts to the *Dào* 道 or the Great Unity 太一 as a primordial whole that gives rise to the myriad things of the cosmos. These would include such well-known passages as *Dàodéjīng* 道德經 chapter 25, "There is a thing formed of a mixture, born before heaven and earth," and chapter 42, "The *Dào* gives rise to one; one gives rise to two; two gives rise to three; and three gives rise to the myriad things."[50] Other relevant passages include *Lǚshì Chūnqīu* 5.2, "That from which the myriad things emerge is created by the Great One and transformed by Yin and Yang" (萬物所出，造於太一，化於陰陽),[51] and the brief Gūo Dìan 郭店 manuscript *Tài Yī Shēng Shŭi* 太一生水 ("The Great One Gives Rise to Water").[52] The "one body" view and the cosmological idea that the myriad things arose through division out of a primordial whole both seem best explained by attributing a rough kind of mereological worldview to ancient Chinese thinkers.

Finally, the "Discourse on Equalizing Things," Book 2 of the *Zhūangzǐ,* presents a set of ideas closely related to the "one body" and primal unity views, but with a focus on the agent's psychological attitudes, rather than cosmology. The text claims that things (*wù* 物) are formed (*chéng* 成) by conceptual discrimination that divides them out of the *Dào* 道, which in itself is an undivided whole. The *Dào* "has never begun to have borders"; it is only by our deeming things "this" as opposed to "that" that boundaries between things begin to be marked. The text credits wise "men

of old" with the "ultimate" form of knowledge: to them "there had not yet begun to be things," since they drew no distinctions and divided nothing out of the *Dào*.[53] As with the passages in the preceding paragraph, a rough mereological worldview seems to provide the best explanation of these statements, in particular the claim that things come into existence as things only by some process of dividing them out of an original unity.[54]

10. Conclusion

I conclude that, though the textual evidence is limited and less explicit than one might hope, some pre-Qín thinkers probably conceived of collections of things and the structure of the world along mereological lines. However, mereological views played no role in early Chinese theories about the semantics of general terms or the relation between a particular thing and its kind. Platonic realism and Enlightenment conceptualism are absent from early Chinese thought because pre-Qín thinkers explained the relation between particulars and kinds by appeal to brute similarities between particulars, the similarity of human perceptual responses to them, and social practices. Their explanations did not appeal to part-whole relations.

Platonic realism and Enlightenment conceptualism were probably not motivated mainly or directly—and perhaps not at all—by grammatical features of Greek or European languages, nor by a view of the world as consisting of countable individuals. Both sorts of theories issued from a complex network of philosophical and religious beliefs about mind, knowledge, and the human-independent world. Hansen himself emphasizes this point and rightly claims that a whole set of theories common to many thinkers in the Western tradition is absent in early Chinese thought (1983: 38). But then, by parity of reasoning, we should expect that Chinese semantic theories will be part of a rich web of interrelated theories about mind, knowledge, and

the world. This is one of the lessons of the insightful holistic interpretive methodology, grounded in the principle of humanity, that Hansen presents (1983: 5).[55] Indeed, chapters 3 and 4 of his work (1983) made many contributions to our understanding of this web of beliefs. But the richness of the discussion in those chapters weighs against the idea that ontological intuitions inspired by features of Classical Chinese grammar could have played a major role, if any, in motivating Chinese behavioral nominalism. It makes it difficult to see why the argument from mass nouns is assigned such a prominent place in Hansen's early work.

Ironically, in one respect the argument from mass nouns grows out of Hansen's holistic interpretive method, while in another it represents a failure to apply the method rigorously enough. On Hansen's highly compelling methodology, the meaning of what a thinker says and her reasons for saying it are taken to be fixed by a holistic web of inferential and causal relations that tie together her thoughts, utterances (as recorded in a text), actions, social and historical context, and physical environment. Hence an interpretation of a text must be supported by an account of the holistic network of factors that jointly determine its meaning. The best interpretation of a text is the one that reconstructs this network of relations in the most coherent and intelligible way. Any part of the network can potentially play a role in fixing the meaning of a text and the content of the theories it presents. The grammar of a thinker's language could certainly be a relevant factor in such a network, were it to provide reasons for or exert a causal influence on the formation of the thinker's beliefs. On this approach to interpretation, then, the "very idea" of a language-to-thought argument is not untenable, and the shortcomings of the argument from mass nouns by no means categorically invalidate such arguments.

On the other hand, there is no particular reason to expect a thinker's language

to play a role in shaping interesting aspects of her thought, just as there is no particular reason to expect her diet or hometown climate to do so. Without clear signs of such an influence in a text—for instance, evidence of the writer explicitly drawing philosophical conclusions from a discussion of grammar—the hypothesis that language played a role in determining the content of a writer's thought will probably be difficult to justify. For it is unlikely to provide a better explanation than rival interpretive hypotheses, such as that the writer's views were simply a creative solution to a particular philosophical puzzle, that she just happened to have a certain set of interests and beliefs, or that she happened to avoid a particular mistake or faulty assumption.[56] The problem is not with the notion of a language-to-thought connection *per se,* but with the plausibility of the language-to-thought claim in a particular case. In most cases, it will be difficult to justify the claim that linguistic features make it more likely that thought will develop in one direction rather than another.

To be compelling, a language-to-thought hypothesis—or any hypothesis about how historical or material conditions affected a thinker's work—must show two things. (1) It must explain how causal or inferential relations between the linguistic features or other conditions in question and the thinker's thought processes could have produced the beliefs ascribed to the thinker. (2) It must show that the content of the text under study is best explained by the hypothesis that these features in fact played such a causal role or that the thinker in fact took them as reasons. That is, the features were not merely *available* as a *potential* cause or reason, but *actually functioned* as a cause or reason in the case at hand.

In satisfying the second demand, a language-to-thought hypothesis must link up with a broad-based, holistic interpretation of a text's content and a plausible, detailed account of precisely how aspects of a thinker's language supposedly shaped

her thought. To the extent that the details of this process remain obscure, a language-to-thought hypothesis is likely to sound objectionably deterministic. For it will tend to depict the language-to-thought influence as something mysterious and inevitable, rather than the contingent result of an explicable chain of events that could just as easily have gone another way.

A major defect in Hansen's presentation of the mass noun argument—one that strikes many readers as implying a sort of linguistic determinism—is that it does not link up in this way with a holistic yet concrete interpretation of the texts. Instead, it is presented in isolation from other interpretive considerations, as if linguistic features alone were enough to establish the plausibility of Hansen's two key interpretive hypotheses, the mereological worldview and behavioral nominalism.[57] But even if the mass noun argument were sound, it would establish at most that features of pre-Qín thinkers' language *could have* influenced their philosophical views. It gives no reason to think these features *did* influence them. The argument thus does not really meet the demands of Hansen's own holistic method.

Hansen's descriptions of early Chinese mereological ontology and behavioral nominalism marked a major advance in our understanding of pre-Qín thought. Indeed, his entire discussion of background theories of language in ancient China is an exceptional contribution (1983: 57–99). But the argument from mass nouns is untenable. It should be distinguished from the hypotheses of the mereological worldview and behavioral nominalism and rejected.

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Notes

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[1] Mereology (from the Greek *meros,* or "part") is the theory of part-whole relations, which explores the general principles governing the relationship between entities and their parts. Mereology is sometimes thought of as an ontologically spare alternative to set theory, since it is not committed to the existence of abstract entities such as sets. A set is itself an entity distinct from its members; by contrast, the counterpart mereological notion, the whole or sum, is simply the totality of its parts, not an entity distinct from them. For instance, the whole that is my body is the sum of all my body parts, and the whole that is all the world's water is the concrete, scattered object constituted by the sum of all the water in the world. However, as we will mention again in responding to Hansen's argument below (section 5), mereology is in fact ontologically neutral, committed neither to abstract entities nor to nominalism. Mereological wholes can be formed out of either concrete or abstract parts and thus can be either concrete or abstract. For an introduction to mereology, see Achilles Varzi, "Mereology," *Stanford Encyclopedia of Philosophy,* http://plato.edu.stanford/mereology.

[2] The version stated here is probably also too strong. The ability to discriminate things and guide action is a central part of ancient Chinese explanations of thought and understanding, but probably not the whole story. The concept of *yì* 意 (thought, intention) also has an important role, for example.

[3] A singular term is one that purports to refer to a single object, as a proper name or definite description does. "Miles Davis" and "The author of *Word and Object*" are

examples of singular terms. Singular terms contrast with general terms, which can refer to two or more objects without implying that the objects are identical. "Musician" and "professor" are examples of general terms.

[4] It remains possible that early thinkers sometimes regarded words such as *mǎ* 馬 as singular terms in contexts where the word functions as a "kind term"—that is, it refers to its entire extension, understood as a kind, not as individual instances of the kind. An example of such a context in English is the sentence "The tiger is carnivorous." Here "the tiger" refers to a kind of animal, not to one or more individual tigers. (One way of determining that "tiger" here refers to a kind is that the existence of a small number of counterexamples does not falsify the sentence: that a handful of tigers eat vegetables does not refute the claim that, as a rule, the kind of animal referred to by "tiger" eats meat.) A likely example of a word functioning as a kind term in Classical Chinese is *mǎ* "horse" in *mǎ sì zú* 馬四足 "[the] horse has four feet." A key point to note, however, is that even if nouns can function as singular terms referring to entire kinds, in such contexts the referent of the singular term is the kind, not its individual instances. In other words, a noun used to refer to a single horse is no longer functioning as a kind term, and thus is not functioning as a singular term. I will return to this point in discussing premise 7 in section 5 below. (The semantics of kind terms is extremely complex; for a discussion, see the Introduction to *The Generic Book,* Gregory Carlson and Francis Jeffry Pelletier, eds. (Chicago: University of Chicago Press, 1995). To my knowledge, kind terms in Classical Chinese have yet to be investigated in detail.) (My thanks to Dan Robins for bringing these points to my attention.)

[5] The type/occurrence distinction is not the same as the type/token distinction. A word occurrence is one use of a word type, such as the use of "coffee" in the sentence

"I want some coffee." A word token is a single physical instantiation of a word type, such as in print or in speech. If multiple tokens are produced of a single sentence type in which a word is used once, then we have multiple tokens of the word, but only a single occurrence. For instance, the following are two tokens of the same sentence type, which together contain two tokens, but only one occurrence, of the word "coffee": I want some coffee. I want some coffee.

[6] Many nouns are in fact associated with more than one principle of individuation (cf. Robins 2000: 149, n. 8), but for simplicity I will ignore this point in most of what follows.

[7] As Robins explains (2000: 151), some scholars attribute these differences in word function to ambiguity at the level of the word type: they take occurrences of a noun that invoke a principle of individuation to differ in meaning from occurrences of the same noun that do not. Like him, I think this explanation is counterintuitive and unnecessarily complex. It entails, for example, that the meaning of the noun "pizza" in "I ate pizza" is different from its meaning in "I ate a pizza." A more plausible explanation is simply that not every occurrence of a noun need invoke the principle of individuation associated with it.

[8] Formal features in this broad sense may include organizational, structural, functional, or quantitative features (cf. Robins 2000: 150, n. 9).

[9] A formal criterion is equivalent to what Robins calls a "structural threshold" (2000: 150). As with principles of individuation, it is a simplification to speak of nouns being associated with *a* formal criterion. Probably many nouns are associated with more than one.

[10] One could argue that they have formal criteria at the microscopic level—e.g., they must have a certain atomic structure. This complication has no effect on my argument, however, so I will ignore it.

[11] A complex relation holds between principles of individuation and formal criteria. For a noun that is associated with both a principle of individuation and a formal criterion, in most contexts where the noun divides its reference the two will pick out exactly the same things. In the case of the English "horses," for example, the principle of individuation picks out just those individuals that also meet the formal criterion. But since some mass nouns, such as "machinery," may have formal criteria without principles of individuation, and other nouns, such as "apple," may have principles of individuation without formal criteria, there is no general relation between the two.

[12] An example, again adapted from Robins (2000: 154): In English, "luggage" in "her luggage" functions as a mass noun, while "car" in "her car" functions as a count noun. The context is the same, but the function of the two nouns is different. One plausible explanation of the difference is that "luggage" is a mass noun, while "car" is a count noun.

[13] Examples of syntactic features that force a noun to function as a count noun include the presence of a numeral or the modifier *gè* 各 "each." A noun is forced to function as a mass noun when used with a classifier, such as *hú* 壺 "pot" or *jū* 車 "cart."

[14] In a footnote, Hansen himself pointed out that since many Classical Chinese nouns could take numerals, they must have been associated with principles of individuation (1983: 176, n. 5).

[15] On this point, consider the Mohists' claim that "one human finger is not one human" 一人指非一人也. (See Graham 1978/2003, "Names and Objects," section 1.)

[16] Several previous critics of Hansen have argued that the grammatical features of nouns do not directly determine their semantics—specifically, the fact that a noun is a mass noun does not entail that we construe its referent as an unstructured mass—and thus the prevalence of mass nouns in Classical Chinese need not have led ancient thinkers toward a mereological ontology. See Cheng (1983), Fung (1993), and Fang (1997). However, none of these critical responses has recognized the word class/function distinction, nor given a systematic account of the sorts of factors that bear on how we interpret the referents of mass nouns. Hence none has pinpointed the fundamental problems with Hansen's argument.

[17] I thank Chad Hansen for emphasizing this point.

[18] This statement of the mass noun hypothesis is slightly different from Hansen's (1983: 32), which is that the *semantics* of Classical Chinese nouns is similar to that of mass nouns. In section 4, I argued that mass nouns have no distinctive semantics, since they may be associated with a principle of individuation, a formal criterion, both, or neither.

[19] On kind terms, see footnote 4.

[20] To reiterate a point made in footnote 4, this distinction can be seen by considering the semantic difference between the statement "Like many mammals, the horse has four legs," in which "the horse" functions as a kind term, and "All horses have four legs," in which "horses" functions as a universally quantified general term referring to every individual horse. The existence of three-legged horses—due to injury or birth defects, for example—falsifies the second statement. But it does not

falsify the first, which asserts a claim not about every individual horse, but about normal instances of the kind *horse*.

[21] Fang (1997) insightfully calls attention to the counterintuitive consequences of the singular term claim, suggesting that if it were true, Chinese thinkers might be unable to explain how we learn language (215), for reasons similar to those we sketched in evaluating premise 6 above. He also notes that certain syntactic contexts, such as universal quantification over individuals, force Classical Chinese nouns to function as general terms denoting collections of individuals (216–17), not singular terms for kinds. Robins (2000: 182–83) also remarks on the implausibility of the singular term claim.

[22] As Varzi (2003) comments, "There is no necessary link between the analysis of parthood relations and the philosophical position of nominalism…Unlike set theory, mereology is not committed to the existence of *abstracta*: the whole can be as concrete as the parts. But mereology carries no nominalistic commitment either: the parts can be as abstract as the whole."

[23] Harte (2002) is an important recent study of Plato's mereology.

[24] Indeed, as Dan Robins has pointed out to me, many of the notions that most interest Plato are denoted by mass nouns: piety, justice, courage, love, and so on. Someone could suggest that the motivation for Plato's search for abstract forms is not count nouns at all but mass nouns that lack principles of individuation. (I thank Robins for calling my intention to Smith's (1978) work.)

[25] For some of the positions in this debate, see, e.g., F. S. C. Northrop, *The Meeting of East and West* (New York: Macmillan, 1953), Liou Kia-hway, "The Configuration of Chinese Reasoning," *Diogenes* 49 (1965), and Hajime Nakamura,

Ways of Thinking of Eastern Peoples, Philip Wiener, ed. (Honolulu: University Press of Hawaii, 1964).

[26] Beyond this, in his reply to Bao, Hansen indicates that what he means by a "non-abstract" interpretation is that pre-Han thinkers did not adopt Platonic or Lockean theories of language (1985: 423), theories that explain language by appeal to universals or to "an inner mental realm of thought [that] contains ideas, beliefs, and subjective experiences" (421).

[27] It is tempting to suggest that Hansen's critics assumed the Lockean picture that meanings are abstract ideas in the mind, and so in their eyes arguing that Chinese thinkers do not explain language by appeal to such mental entities is tantamount to claiming that Chinese thinkers have no abstract concepts. But his view implies no such thing, and I doubt that any of the critics really drew this inference. Instead, the misunderstanding probably arose from a combination of insufficiently clear exposition on the writer's part and uncharitable reading on some of the critics'.

[28] The critics' misunderstanding perhaps also arose from the placement of the mass noun discussion in first substantive chapter of the book, following an opening chapter on methodology. The prominence of the mass noun hypothesis led readers such as Cheng and Bao to view it as the crux of Hansen's argument for his interpretation of ancient Chinese philosophy. Yet Hansen indicates at least three times in his discussion that the main burden of justification for his hypotheses is to be borne by the interpretive arguments of chapters 3–5 (31, 39, 54), not the discussion of mass nouns, which is only the "first step" (39) or "initial phase" (54).

[29] Another early reviewer of Hansen's work, A. C. Graham, enthusiastically endorsed the mass noun hypothesis, including the philosophical consequences Hansen drew from it (1985: 694–95). Graham later cautiously adopted Harbsmeier's three-

way classification into mass, count, and "generic" nouns (1989: 402), albeit with some caveats (1991: 275–76).

[30] Harbsmeier has published his account three times. A preliminary version appeared in his (1989). A revised version appeared in his (1991) and was reprinted, with minor differences in detail, in his (1998: 311–21).

[31] A well-known exception to this rule is when the members of the collective unit are acting as individuals, not as a single unit. In North American English, we say "The team is playing today," because the team is playing as a unit, but "The team are on their way home," because the individual members are returning to their separate homes. Similarly, we say "The committee is meeting," because the committee is functioning as a unit, but "The committee are unable to agree on a policy," because the individual members are unable to reach agreement. (A further complication is that in British English "are" may be used even when the collective functions as a unit.)

[32] Of course, Classical Chinese also has nouns that can function as collective nouns. Presumably, *sì* 駟 ("team of four"), *jīa* 家 ("family, clan"), and *qún* 群 ("herd") are examples.

[33] Again, the one exception may be in contexts where the nouns are functioning as kind terms.

[34] All references to the Mohist *Canons* and *Explanations* follow the numbering in Graham 1978/2003. The translations are my own, though indebted to Graham.

[35] I translate the Chinese *shí* 實 as "stuff," with the proviso that the word may refer to objects, events, or factual situations.

[36] Graham (1978/2003: 140) interprets the expression *yě zhě* 也者 as a quotation device, on the grounds that all instances of single words followed by *yě zhě* in the

Mohist *Explanations* are repeated from the corresponding canons and thus appear to be quotations. I suggest that in a writing system with no or minimal punctuation, this observation is more simply explained by interpreting *yě zhě* as a topicalization device. The grammatical function of the expression, I suggest, is simply that of *yě* compounded with that of *zhě,* in some contexts a nominalization of a nominalization, in others a nominalization of a predication. The expression is often used to clarify that the topic is the notion expressed by the term preceding *yě zhě,* and not an object that the term is predicated of.

[37] See the passages Graham labels "NO 1" and "NO 2" (1978/2003: 470).

[38] Notice that in talking about comparing general types of features, such as shape and color, the *Xúnzǐ* is already treating such features as abstract concepts and thus is committed to applying a form of abstraction in its semantic theory. However, applying abstract concepts in this way does not at all commit one to realism or Platonism. Merely applying the abstract concept of shape is not at all the same thing as appealing to the concrete instantiation of abstract properties to explain why different particulars belong to the same kind. (Citations to *Xúnzǐ* refer to the section numbers in John Knoblock, *Xunzi: A Translation and Study of the Complete Works*, Vol. 3 [Stanford: Stanford University Press, 1994].)

[39] Hansen treats several of the passages discussed below in his (1983: 151–58), where the case he makes for the mereological worldview is much stronger than that provided by the argument from mass nouns. Nevertheless, he tends to assume, rather than argue in detail, that these passages are best interpreted as applying mereological notions. Here I will try to make the grounds for this interpretation as explicit as possible.

[40] The word for points in general is "the dimensionless" (*wú hòu* 無厚). Canon A61 characterizes *dūan* as "what, of a unit, is dimensionless and is frontmost" 端，體之無(序)[厚]而最前者也. That is, among the points on a unit, *dūan* is specifically the tip or starting point.

[41] Graham (1978: 265) and Hansen (1983: 152) both make this observation. A simple way to bring home the context-relativity of the part-whole relation is simply to note that any part of a whole may itself have parts.

[42] Another, remote possibility is that when it refers to "*tǐ* sameness" 體同, Explanation A86 is explaining sameness in the sense of being different parts of a single whole. But this interpretation cannot explain A87, which specifies that the difference in question is difference in being *bù tǐ* 不體 "not unit," or not one and the same part.

[43] Following Graham, I insert a parallel 或 after 復 and emend 拒 to 樞. The Explanation to Cn. B 11 is lost. Graham (1978) attempts to reconstruct one, but I find the result too speculative to rely on.

[44] An alternative interpretation of this sentence would be, "Fitting 'oxen-and-horses'"—that is, falling within the extension of the compound term "oxen-and-horses," rather than that of one of the component terms "ox" or "horse." I will pass over this interpretive issue, since it is irrelevant to the main point of the section.

[45] My interpretation of B11 is tentative. I interpret *fù* 復 (compounding) on the basis of my understanding of this word throughout the *Dialectics* and in the *Gōngsūn Lóngzǐ* 公孫龍子 (see Tan 1963: 27). However, since the word is used only three times in the *Dialectics* and not at all in *Xúnzǐ,* Book 22, any interpretation of it is somewhat speculative. I am also not completely convinced of my interpretation of the

various uses of *hé* 合 (conjoining) in the Mohist *Dialectics, Xúnzǐ,* and *Gōngsūn Lóngzǐ*. It is possible that the Mohists, for example, use *hé* in more than one way (for example, in A86 and B65).

[46] Responding to Hansen's hypothesis that early Chinese thinkers have a mereological worldview, Harbsmeier declares that "nothing in traditional Chinese literature" even "remotely suggests" the concept of a mereological whole (1998: 312) and demands to see "philological evidence" of such an idea (1989: 155–56). I trust that this section has provided such evidence—much of which is also presented in Hansen (1983: 151–55).

[47] Cf. A. C. Graham, *Chuang tzu: The Inner Chapters* (London: George Allen & Unwin, 1981), p. 284.

[48] To these passages we might add the statement in the *Zhūangzǐ*—intended to mock Gōngsūn Lóng 公孫龍—that "Heaven and Earth are one pointing; the myriad things are one horse" (天地一指也，萬物一馬也). (Cf. Graham, *Chuang tzu,* p. 53.)

[49] Compare John Knoblock and Jeffrey Riegel, *The Annals of Lü Buwei* (Stanford: Stanford University Press, 2000), p. 282.

[50] Compare D. C. Lau, *Lao Tzu Tao Te Ching* (London: Penguin, 1963), pp. 30, 49.

[51] Compare John Knoblock and Jeffrey Riegel, *The Annals of Lü Buwei* (Stanford: Stanford University Press, 2000), p. 137.

[52] See Jingmen City Museum 荊門市博物館, ed., *Guodian Chumu Zhujian* 郭店楚墓竹簡 (Beijing: Wenwu 文物, 1998).

[53] The passages alluded to are these: "Thus in deeming things 'this,' one mentions a stalk or a pillar, a hag or a beauty, things incongruous or bizarre, [but]

Dào connects them as one. Their dividing is formation; their formation is destruction. When all things neither form nor destruct, they return to being connected as one." (Compare Graham, *Chuang tzu,* 53.) "*Dào* has never begun to have borders, language has never begun to have constancy; it is by deeming 'this' that there are boundaries." (Cf. Graham, 57.) "The men of old, their knowledge had arrived somewhere. Where had it arrived? There were some who took it that there had not yet begun to be things—the ultimate! The exhaustive! Nothing more to add! The next-best ones took it that there were things, but there had not yet begun to be borders. The ones after that took it that there were borders to them, but there had not yet begun to be 'this' and 'not this.' The coming about of 'this' and 'not-this' is that by which the *Dào* is damaged." (Cf. Graham, 54.)

[54] Graham (1989: 402) and Hansen (1992: 50) both seem to ascribe a rough mereological worldview to ancient Chinese thinkers on the basis of textual evidence of the sort presented in this section.

[55] The principle of humanity is that among two otherwise equally adequate interpretations of a set of utterances or inscriptions, we should prefer the one that exhibits a pattern of inferential relations among intentional states and between them and the world as similar to our own as possible. The principle is an attempt to articulate a criterion of comparative intelligibility, which is distinct from truth (others' beliefs can be intelligible even when false) and reasonableness (they can be intelligible even when mildly incoherent). See Richard Grandy, "Reference, Meaning, and Belief," *Journal of Philosophy* 70.14 (1973): 439–52.

[56] As Hansen says, many differences between philosophical traditions must be accepted simply as "starting contingencies": "Our accounts must simply accept that

philosophy starts with certain interests dominant. Thales is interested in explanation; Confucius is interested in social activism" (1983: 55).

[57] Of course, Hansen presents further evidence for these hypotheses in later chapters of his (1983). But this evidence does not dovetail with the mass noun argument in a way that supports the latter. Indeed, in light of the textual passages discussed in sections 8 and 9 above, it could not, since Chinese thinkers simply did not appeal to noun syntax to support their mereological views or to the part-whole relation to support their nominalism.