THE FORMULARITY OF THE
PLACE PHRASES OF THE ILIAD

WILLIAM MERRITT SALE
Washington University

When Milman Parry studied groups of formulae, his organizing principles were usually syntactic and metrical rather than semantic. Noun-plus-epithet was the preferred grammatical unit, and systems of formulae tended to be based upon the same metrical shape. But occasionally the meaning of formulae became the common factor: Parry studied noun-epithet formulae for the ships, for example, and showed how extensive they were (how many metrical and syntactical situations they covered), and also how economical (how very seldom they overlapped).[1] Later Dorothea Gray examined the sea and the helmet, and carried forward Parry's work on the shield.[2] Denys Page added Hector, the Achaeans, the Trojans, wine, and the sky.[3] These scholars normally continued to concentrate on the noun-plus-epithet formulae, and neglected such structures as verb-plus-noun; but despite these lacunae the sets of formulae were securely shown to be extensive and economical, and therefore traditional. This helped make it possible to get a rough sense of the time when a given essential idea was taken up by the epic tradition.[4]

[1] M. Parry, *The Making of Homeric Verse* (Oxford 1971) 106-117.

[2] D. Gray, "Homeric Epithets for Things," *CQ* 61 (1947) =G. S. Kirk, *Language and Background of Homer* (Cambridge: Heffer 1964) 55-67.

[3] D. Page, *History and Homeric Iliad* (Berkeley: Univ. Calif. Press 1959) 225-253.

[4] For a critique of the principle of economy, see David Shive, *Naming Achilles* (Oxford 1987). For a full bibliography of formula studies before 1974 see J. Russo, "Homer's Formulaic Style," in B. A. Stolz and R. S. Shannon, *Oral Literature and the Formula* (Ann Arbor: Center for the Coordination of Ancient and Modern Studies 1976). Still fuller, but only partly published, is Mark W. Edwards, "Homer and Oral Tradition," *Oral Tradition* 1/2 (1986): 171-230. See also J. M. Foley, *Oral Formulaic Theory and Research* (New York 1985). Recent work I have found especially helpful includes J. B. Hainsworth, "Good and Bad Formulae," in B. C. Fenik, *Homer, Tradition and Invention* (Leiden 1978), and N. Austin's *Archery at the Dark of the Moon* (Berkeley, Los Angeles, London: Univ. Calif. Press 1975). Austin has an important discussion of the formulae for "Odysseus" and his family; but it is incomplete, since it does not cover, e.g.,

In 1983, in the precursor of the present paper, I discussed the place-phrases in the *Iliad,* and urged that some were much more formulaic than others and were therefore considerably older.[5] Then in 1984, I argued that we could give a relative date for the entrance into the epic tradition of Olympus and Ouranos as the divine home by comparing their formulae.[6] The Olympus formulaic sets are far more extensive than the Ouranos sets, which seem to have been adjusted to the Olympus sets after the latter evolved. Therefore I concluded that Olympus is the earlier divine home, at least in the epic tradition. I want now to return to the place-phrases of the *Iliad* and the problem of their relative dating.

My earlier discussion of these phrases was based on a somewhat unsystematic analysis of the relative frequency with which an essential idea, such as "to Troy," or "in the Greek camp," is expressed formulaically. In moving now to a more precise formulation, I shall term the relative frequency of the formulaic occurrences of an idea its "formularity," to be expressed as a percentage of *all* the occurrences. Thus, the essential idea "in the Greek camp" is expressed 133 times altogether in the *Iliad.* 115 of these use a formula, for a relative frequency, a formularity, of 86%. Most of our place-phrases show a formularity of 65–89%. One is a little higher; two or three are dramatically lower.

This is an arresting fact, one with implications which this paper cannot attempt to discuss completely. Mostly we must set forth the fact itself in a systematic way, and offer a hypothesis which merely begins the discussion. First, we establish that most of our ideas show a uniformly high formularity. When Homer could employ a formula to express any one of these, he usually did. This permits us to say that an idea which has low formularity is genuinely deviant; and this can be verified by close examination of the ways in which such an idea is expressed, as well as by statistical tests. Therefore when Homer does not use formulae, there is something connected with the idea which prevents him.

This is the fact; the hypothesis is that formularity is a measure not only of the relative frequency of Homer's employment of formulae, but also of the number of formulae available to him when he composed the *Iliad.* High formularity for a given idea means that formulae to express it were on hand in abundance. Low formularity means that few or no formulae were available. Of course Homer, in the course of his life, will have invented formulae:

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verb-plus-noun combinations. I single out also A. Hoekstra's wonderful volume, *Homeric Modifications of Formulaic Prototypes* (Amsterdam 1965), J. B. Hainsworth's seminal study, *The Flexibility of the Homeric Formula* (Oxford 1968), and H. A. Paraskevaides, *The Use of Synonymns in Homeric Formulaic Diction* (Amsterdam 1984).

[5] At the meeting of the American Philological Association in Cincinnati; see APA *Abstracts* (Chico: Scholars' Press 1983) 37.

[6] W. Sale, "Homeric Olympus and its Formulae," *AJP* 105 (1984) 1-28.

"available" means "available when the *Iliad* was composed," not necessarily "traditional." As for *why* none were available—about that we shall speculate briefly a little at the close.

Before we can make any comparisons, we must have criteria for what we are to regard as formulaic. It is obvious that for our purposes the criteria must include "phrases which express the same *meaning*," since we are looking for the formularity not of a line or a passage, but an idea. Of the 5 levels that Joseph Russo distinguishes, the one that is most appropriate for the present study is his first, the "verbatim or 'straight' formula, the exact repeat."[7] We can accept a few formulae on Russo's level 2, where one of the terms varies. But the variations will have to be slight if the essential idea is to be preserved. The reader should keep this restriction in mind while perusing the lists of data below: several phrases which seem formulaic must nonetheless be excluded.

The ideas under discussion in this paper cannot be expressed without the use of at least one noun. When the noun is combined with an adjective, we have our familiar "noun-plus-epithet" formula, and are on safe ground. Word-groups which combine the noun with a verb, an adverb, or another noun are almost as familiar. We can identify all of these as "full formulae."[8] But when we have only noun-plus-preposition or postposition, we may hesitate to speak of formulae. How can the poet say what he wants to—e.g., 'to the ships'—*without* using a preposition and a noun? Therefore, only if the noun-plus-preposition phrase occurs regularly at a certain position in the line—after the trochaic caesura, say—do I grant it formulaic status. For such cases I use the term "minimal formula." I have also coined the term "semi-formula" for doubtful cases—instances, say, where a phrase is repeated only once, and soon after its first occurrence.

Before setting forth in greater detail the criteria for full, minimal and semi-formulae, I wish to introduce two other concepts: the *group* of *semantic* occurrences, and the *formulaic set*.[9] The group contains all references, formulaic and non-formulaic, made by the poet to a given essential idea (person, place, god, or thing) in a given grammatical case (or in another case if the

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[7] Russo (above, note 4). Russo's Level 1 corresponds to Parry's first definition (above, note 1, p. 21). The other levels entail: (2) one variable term; (3) two variable terms (structural formula); (4) single-term structural; (5) metrical word-types. To these 5 levels I should add M. Nagler's pre-verbal Gestalt.

[8] In sets with proper names of gods and mortals, I count a single proper noun in fixed position as a minimal formula. For, as one referee of this paper points out, "the noun-plus-preposition cluster might be described as a phonetic word in the spoken language."

[9] The concept of a set, more or less precisely defined, is found in Parry, Gray, Page and Paraskevaides (above, notes 1–4); I gave it fuller definition in 1984 (above, note 5). The term "group" gives us a semantic domain, within which lies the formulaic set, the instances of verbatim repetition. Almost all the groups in Homer contain non-formulaic instances. These, of course, may satisfy one of the other criteria for a formula indicated in note 7 above, but not Russo level 1.

other case is used to express exactly the same sense). A group need not use the same noun—the set meaning "camp" includes both νηῦς and στρατός, for instance. A group may include two cases—the locative idea, for example, usually expressed with the dative ending, sometimes employs the genitive or accusative. The formula *set* is a subset of a group, and contains all formulaic references to an idea; it contains only formulaic ways of saying a thing, while a group contains all ways. Thus when we come to calculate formularity, we can express this as the ratio of the occurrences in a set to the occurrences in a group. Let us look at the set of locative formulae meaning "in the Greek camp."[10] It is convenient to begin with the subset of formulae which use the word νηῦς in this sense.[11]

In the right-hand column I give totals: (1) all the time νηυσί occurs in the *Iliad* with the appropriate sense; A the non-formulaic instances of νηυσί meaning, "in the Greek camp;" (2) the totals for νήεσσι, with two full formulae; (3) νέεσσι, with one; and (4) νεῶν, with three.[12] At the end I put the grand totals, and the percentage of full formulae (61%), minimals (26%), semi-formulae (7%), and non-formulaic instances (7%). Eventually we shall have to make a decision as to how to group these four categories to calculate formularity; for the moment we can simply present the percentages for each one.

(1) νηυσί: total 154x; non-locative-camp 62x;
    locative camp   92x
    A. locative-camp non-formulaic   4x

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[10] See also B. Alexanderson, "Homeric formulae for ships," *Eranos* 68 (1970) 1–46. Alexander arranges the formulae according to meter and *case,* and he naturally includes the *Odyssey,* so that his picture looks somewhat, though not vastly, different from mine. He finds more instances of violation of the law of economy than I (pp. 41-43): for example he cites νηυσὶν ἐπὶ γλαφυρῇσιν and 'Αργείων παρὰ νηυσίν as overlapping. As he himself points out, however, a formula meaning "Achaean ships" cannot invariably be substituted for one meaning "ships", though of course there will be overlaps. My own tables were constructed before Professor Edwards drew my attention to Alexanderson's careful study, so that the two sets of data can be used as a check against each other. All the discrepancies I myself have detected can be attributed either to my stress on meaning rather than case, my not including the *Odyssey,* or to the fact that I remain chiefly on Russo level 1; it is regrettable that lack of space precludes detailed discussion of each discrepancy here.

[11] Since it may seem odd to speak of νηῦς as meaning the Greek camp and not the ships, we can say that νηῦς *denotes* a ship, but in the plural, in context, and (usually) with a preposition, it *connotes* the camp. The *reference* of νηῦς is the ship, the *sense* of the phrase is "the Greek camp."

[12] The reason for giving so detailed a breakdown is to make it easier for the reader to check the statistics. Occasionally, as under νη(ε)ῶν below, where the number of total instances is much vaster than those for all locative-camp instances, formulaic and not, I have not given the larger total. It is not possible to defend all choices as to what is non-formulaic or semi-formulaic, but I have given the line number in each case.

B. locative-camp formulae 88x
  a. Full formulae[13] 55x
    1. Hephthemimeral caes., vowel ἐπὶ νηυσὶν Ἀχαιῶν 6x
    2. Hepthemimeral caes., consonant:
      παρὰ νηυσὶν Ἀχαιῶν 2x
    3. Trochaic caesura: θοῆς ἐπὶ νηυσὶ 4x
    4. Penthemimeral caesura: κοιλῆς ἐπὶ νηυσὶ 4x
    5. Second foot: νηυσὶν ἐπὶ πρύμνῃσι 4x
    6. Second foot:
      νηυσὶν ∪ – ∪ ∪ ὠκυπόροισιν 2x
    7. Trithemimeral caes., cons.:
      παρὰ νηυσὶ κορώνισιν – ∪ ∪ – ∪ 8x
    8. Trithemimeral caes. vowel:
      ἐπὶ νηυσὶ ∪ – – ποντοπόροισιν 1x (cf. 9)
    9. Trithemimeral caes. cons.:
      παρὰ νηυσὶ ∪ – – ποντοπόροισιν 1x (cf. 8)
    10. Trithemimeral caes. cons.:
      παρὰ νηυσί ∪ – – – ∪ θοῇσιν 1x (cf. 2)
    11. First syllable: – ἐπὶ νηυσὶ θοῇσι 4x
    12. First syllable: – παρὰ νηυσὶ θοῇσι 1x (cf. 2)
    13. Initial: νηυσὶν ἐπὶ γλαφυρῇσιν 7x
    14. Initial: Ἀργείων παρὰ νηυσὶν 5x
    15. Initial: νηυσὶν ἔπ' Ἀργείων 2x
    16. Whole line:
      ἐν νηυσὶν κέαται βεβλημένοι οὐτάμενοί τε 3x
  b. Minimal formulae
    (ἐπί, παρά at the trithemimeral caesura) 28x
  c. Semi-formulae (1.26, 1.305, 7.29, 13.69, 13.778) 5x
(2) νήεσσι: total 26x; non-locative-camp 18x;
  locative-camp 8x
  A. Locative-camp-non-formulaic 0x

[13] "Hepthemimeral caes., vowel", means, "after the hepthemimeral caesura, the formula itself beginning with a vowel." An initial vowel creates a different metrical situation from an initial consonant. The reader will observe that in this set, ἐπί and παρά are, in effect, synonymous; in other sets, ἀνά and κατά. I have employed the old-fashioned terminology rather than Fränkel's system because the latter, though inherently clearer and more precise, is less well known. I hope I may be forgiven the neologism "trithemimeral"; I am unable to find a substitute that sounds consistent with the other terms employed.

    A few of the formulae below occur with variations which pose problems as to whether or not they should be counted: alongside Ἀργείων παρὰ νηυσί (3x) we have Ἀργεῖοι and Ἀργείους παρὰ νηυσί (1x each). I have elected to include such variants among the total instances wherever the meter and locative sense remain unchanged and *exact* repetition occurs at least once.

B. Locative formulae	8x
a. Full formula:	4x
1. After first foot (complementary to	
νηυσί formulae):	
ἐν νήεσσι κορώνισι ποντοπόροισι	2x
2. Initial (complementary): κεῖτο γὰρ ἐν νήεσσι	2x
b. Minimal formulae (ἐν νήεσσι after the first foot)	2x
c. Semi-formulae (13.742?, 15.603)	2x
(3) νέεσσι: total 9x; non-locative-camp 3x; locative-camp	6x
A. Locative-camp, non-formulaic (15.409, 15.414)	2x
B. Locative formula	4x
a. Full formulae	
1. after trochaic caesura with vowel	4x
(complementary to νηυσί!): ἐπὶ πρύμνῃσι νέεσσι	
b. Minimal formulae	0x
(4) νη(ε)ῶν total locative-camp	11x
A. Locative-camp, non-formulaic (9.708, 24.141)	2x
B. Locative formulae	9x
a. Full formulae	6x
1. Hephthemimeral caesura (overlaps 1Ba2):	1x (cf. 4Ba)
νηῶν ἐν ἀγῶνι	
2. Trochaic caesura (overlaps 1Ba3):	
νεῶν ἐν ἀγῶνι ⌣ – –	3x
3. Trithemimeral caesura (complements 1Ba7-10):	2x
προπάροιθε νεῶν ὀρθοκραιράων	
b. Minimal formula	
(ἐγγύθι νηῶν after the Bucolic diaeresis)	2x
c. Semi-formula (9.232)	1x
Total locatives for "at the ships"	
(lines 1 plus 2 plus 3 plus 4)	117x
Full formulae (61%) (total of lines Ba)	69x
Minimals (26%) (total of lines Bb)	32x
Semi-formulae (7%) (total of lines Bc)	8x
Non-formulaic (7%) (total of lines A)	8x

This set exhibits elegantly the fundamental Parryan principle of *extension:* on almost every conceivable metrical occasion, Homer has a formula at hand to express the idea, "in the Greek camp." Parry's other basic concept, that of *economy,* can be equally easily seen: only two of these formulae could replace another, those marked "overlaps" under 4Ba1 and 4Ba2.[14] And this may be the result of intentional slight semantic variation: the reference of

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[14] The fact that formulaic sets, like Parry's formulaic systems based on formula-type (above,

4Ba1 and 2 is the congregation of ships, rather than the shore alongside (see also note 10).

These phrases meaning "at the ships" are the commonest way to say "in the Greek camp"; the other way is to use the word στρατός.[15] It is useful to set out the στρατός formulaic set here, then give the grand totals for νηῦς and στρατός. For the percentages scarcely alter: it becomes clear that when Homer mentions being in the Greek camp, he almost always does so formulaically.

1. στρατός total 46; non-locative-camp 30x; locative camp	16x
A. Locative-camp non-formulaic	1x
B. Locative-camp formulae	15x
a. Full formulae	6x
1. Trochaic caesura cons.: κατὰ στρατὸν εὐρὺν Ἀχαιῶν	4x
2. Trochaic caesura vowel: ἀνὰ στρατὸν εὐρὺν Ἀχαιῶν	2x
b. Minimal formula (ἀνά, κατά at the trochaic caesura)	8x
c. Semi-formula	1x

2. στρατῷ locative occurs 4x. One place does not refer to the Trojan plain. One place is non-formulaic and appears in the total below. Twice we have the formula ἄρισται ἐνὶ στρατῷ—but this is not a formula meaning "in the Greek camp." Hence I have not counted it one way or the other.

Grand total νηῦς and στρατός	133x
Full formulae (56%)	75x
Minimals (30%)	40x
Semi-formulae (7%)	9x
Non-formulaic (7%)	9x

I have presented this elaborate set—or pair of subsets—at length in order that readers may see, not merely what is meant by "formulaic set," but what an example of a really elegant set looks like in detail—how many metrical possibilities are covered, and with what economy. The set contains 29 different formulae, just two of which may be guilty of overlapping. It is a thing of beauty, and if Parry's arguments are right, it must be very ancient.[16]

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note 1, p. 17), also display economy and extension is very striking. Sets and systems are not based on the same criterion. The decisive criterion for a system is metrical, while that for a set is semantic; and I do not see any logical necessity that economy and extension, if observed by one criterion, should be observed by the other. Since in fact they are, what is suggested is that the poets learning their trade will have memorized *both* sets and systems, and learned only what was useful. They doubtless did not do this entirely by rote: they learned patterns; and they generated formulae as they memorized them. (Cf. A. Lord, *The Singer of Tales* [Cambridge: Harvard 1960] 20-37.) And in the end they had extensive and economical sets and systems at their command.

[15] It may appear surprising that ἐν κλισίῃσι is not included. But so far as I can see this phrase always refers to the buildings themselves, not the encampment, and indeed usually means the shelters of a single chieftain.

[16] The conclusion that the set is ancient does not tell us anything about the age of any individual formula. In this respect the set somewhat resembles a Saussurean system of differen-

We can now proceed to set forth with greater rigor and detail our criteria for "formula" and "formularity." *Full formulae* must:

1. Consist of or contain a repeated word-group. Word-groups must include at least: verb plus noun, adjective plus noun, adverb plus noun, noun plus noun.

2. Occupy the same position in the line each time they are used. Repeated word-groups occupying different positions are counted as different formulae (#3 below); word-groups never repeated in the same position are on the whole not counted as full formulae at all (except as under #4 below).

3. Be counted as different formulae if they undergo Hainsworth-alteration (separation, expansion, modification, displacement).[17] By employing this criterion, we can show the extensiveness of the formulaic set, the number of metrical needs it fills.

4. Appear at least twice in the same position; or be a Hainsworth-alteration of a full formula which satisfies this condition. (Several formulae in the νηυσί set occur only once in the *Iliad;* I have indicated that they are separations, displacements and modifications of phrases occurring more than once.) A phrase occurring twice or even three times, each time in a different position, is counted as a semi-formula.

5. Be allowed to count as members of different sets only if they occur at least twice in each set. This can only happen, of course, if a formula has two different meanings: εἰς Ἴλιον ἴρην "to Troy-city" and "to the Troad," for instance.[18]

Minimal formulae are phrases which occur in a fixed or preferred position and consist of only a noun and a preposition or postposition: e.g., ἐπὶ, παρὰ νηυσί at the trithemimeral caesura. Lacking fixed position, these cannot count as formulae, since they are frequently no more than a perfectly ordinary way to express the idea.

Semi-formulae are doubtful cases. The following is a list, not so much of criteria for a category, as of reasons to doubt:

ces without positive terms (*Course in General Linguistics,* trans. Wade Baskin [New York 1959] 120).

[17] Hainsworth (above, note 4). Modifications which do not affect either the position of a word-group in the line, or what can come before or after, I do not count as different formulae. In no sense am I consciously engaged in significant intellectual disagreement with Hainsworth, except perhaps on very subtle problems. As will be seen in 4 below, word-groups which appear in different positions will count as formulae, provided—and here I differ in procedure from Hainsworth—they also appear twice in a given position. In making this proviso, I have elected to be more conservative simply to reduce the chance of counting what may be accidental. None of the Troy-city locatives are affected by this proviso; without it we might possibly have a Troy-city motion-from formula (below, p. 36, lines 21.563 and 24.329).

[18] The usual meaning is "to Troy-city," but in *Iliad* 11.196 and 15.169 Iris descends from Ida to the battlefield, not the city, yet goes εἰς Ἴλιον ἱρήν. Naturally one could argue that this is synecdoche, or that εἰς means "towards;" but the connotation of the phrase is the Troad, and I feel that it therefore belongs in the "to-the-Troad" set. Similarly *Odyssey* 11.86 and 19.293.

1. Phrases used only once in a given set, and with an unusual meaning, which belong naturally to a different set with a different meaning: ῎Ιλιον εἴσω with locative meaning, for instance (*Iliad* 24.145).[19]

2. Repetitions that only occur close to one another in the text and thus may be deliberate echoes: 8.505=8.545.

3. Whole lines repeated once which seem too specific to be freely usable as formulae: 2.809–10=8.58–59.

4. Repetitions occurring only in long repeated passages which appear to be deliberate echoes (e.g., the Descent of Hera and Athena in *Iliad* 5 and 8).

5. Phrases repeated only in significantly different forms (e.g., κατὰ ἄστυ ἐέλμεθα, κατὰ ἄστυ ἀλήμεναι).[20]

6. Phrases repeated only once, in a different position.

Formularity is calculated by adding the occurrences of full and minimal formulae and stating the sum as a percentage of the total occurrences. This means, in effect, that the semi-formulae are classified with non-formulae. In the chart which follows, however, I keep "semi-formulae" as a distinct category. The reader needs to be able to see that if our criteria for "formula" were altered so as to allow some or all of the semi-formulae to be considered formulaic, at least two of the phrases on the chart would still be significantly deviant.

Our criterion for "formula" and "formularity" can now be used to classify the place-phrases of the *Iliad*: the Greek camp at the ships, the battlefield, the Troad itself, Olympus, and Troy-city. The chart on page 31 gives a summary of the totals. Each row, from 1–21, represents a semantic *group* of all the occurrences of an idea, formulaic and otherwise. Column J gives the total number of occurrences: on line 1 we record the fact that the idea "motion-to the Greek camp," is expressed 147 times in the *Iliad*. Column A gives the number of times the idea is expressed in a full formula; column B the number of minimals. Column C then totals A and B, while column D gives the percentage for column C; the rest are self-explanatory. In the rows I have included

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[19] The line must be translated "announce to Priam in Ilion." It is possible that the choice of phrase is affected by βάσκ' ἴθι in the previous line; but in context it is far safer to acknowledge the locative sense.

It follows from this criterion that whether a phrase is formulaic may depend on its belonging to one set or another: "formulaic set" helps to define "formula," just as "formula" helps to define "formulaic set." This is not really circular, though, because both "set" and "formula" depend upon the same independent criterion: a formula is a repeated word group expressing the same essential idea, a set is *all* the repeated word groups expressing the same idea.

[20] This example is important because it means "huddle in Troy-city." I feel that it is not fully formulaic for several reasons. It not only sounds different, but, much more importantly, it has a different syntax in each appearance. And it is one of several phrases meaning "huddle in(to) Troy-city"; see above, note 10. Homer seems to be in the process of making formulae. But to be on the safe side, in making my totals (p. 34) I have counted the example cited in the text both ways, once as semi-formula and once as full formula.

Olympus and the Troad in both *Iliad* and *Odyssey,* since some of the figures
for these ideas in the *Iliad* alone may appear uncomfortably small. But they
are here to support the formularity of the *Iliad* figures; in the statistical
comparisons only the *Iliad* is considered.[21]

    Let us look first at the motion-to groups. Here are all the places in which
the main narrative of the *Iliad* is set, and the totals of all the times the poet
speaks of going to those places. We observe a consistently high formularity,
of 72% to 86%, for all our motion-to groups. The formularity is indeed
uniformly high: the difference in formularity among the sets is not significant
statistically (see Statistical Appendix). The average formularity for all the
Iliad occurrences in the Motion-to groups is 77%: 261 *Iliad* total occurrences
in column C divided by 339 *Iliad* total occurrences in Column F. Thus when
Homer wanted to say "to a place," three times out of four he would use a
formula—a formula as we have rigorously and indeed narrowly defined it.
Moreover, the sets of formulae display the Parryan features of economy and
extension. This is especially evident in the two largest sets: each has over 20
different members, and only one or two formulae per set which overlap.
Unless Parry and his followers are wrong from start to finish, the ideas which
make up these two sets are part of the old traditional poetic vocabulary, used
long before Homer. The other three sets are probably as traditional. They
have fewer members, 9–11; but then the ideas are expressed less often. Their
ratio of formulae to occurrences is even higher than "to Troy" and "to the
Greek camp."

    Granted, it comes as no surprise that the epic tradition said "to Troy"
and "to the Greek camp" and so on. How else could it have talked about the
battles on the Trojan plain? We are stating quantitatively what we already
know. But in so doing, we are observing also a correlation between extension-
economy and formularity. We are seeing that if an idea is indeed traditional, it
is expressed by Homer in a formula most of the time, and that this is uni-
formly true of the Motion-to groups. It is natural therefore to suppose the
converse: if an idea shows high formularity, th? reason is that it was expressed
in formulae before the composition of the *Iliad.* In order for Homer to use
such a wide range of formulae—at least 9 for every one of these ideas—such a
high percentage of the time, he had to be drawing from pre-existing sets.

    If this is so, we naturally wonder about other ideas, ideas not on the
chart, which we feel on different grounds to be ancient: the names of the great
gods and familiar mortals in the nominative case, for instance. These names
entail some complexities which cannot be set out in detail here, but they
reveal a formularity comparable to what we have seen. There are 11 *divine*
figures who are mentioned more than 20 times. Their average formularity is

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[21] The groups and formulaic sets for all the ideas in the chart except for Olympus are given on
pp. 24–26 above and 33 and 36 below, and in the second appendix. Most of the data for Olympus
can be found

	A FULL FORMULAIC	B MINIMAL FORMULAIC	C MINIMAL PLUS FULL	D FORMULARITY	E SEMI FORMULAIC	F PER CENT	G NON-FORMULAIC	H PER CENT	J TOTAL OCCURRENCES
Motion-to									
1. Greek camp	96	19	115	78%	13	9%	20	14%	148
2. Battlefield[22]	17	12	29	73%	0	0%	11	27%	40
3. Troad (both)	26	10	36	86%	0	0%	6	14%	42
4. Troad (*Iliad*)	12	6	18	86%	0	0%	3	14%	21
5. Olympus (both)	28	2	30	83%	0	0%	6	17%	36
6. Olympus (*Iliad*)	25	2	27	87%	0	0%	4	13%	31
7. Troy-city	53	19	72	71%	11	11%	18	19%	101
Locative									
8. Greek camp	75	40	115	86%	9	7%	9	7%	133
9. Battlefield	13	9	22	85%	0	0%	4	15%	26
10. Troad (both)	19	6	25	86%	2	7%	2	7%	29
11. Troad (*Iliad*)	12	4	16	89%	2	11%	0	0%	18
12. Olympus (both)	11	2	13	72%	2	11%	3	17%	18
13. Olympus (*Iliad*)	10	1	11	73%	2	13%	2	13%	15
14. Troy-city	5	6	11	32%	2	6%	21	62%	34
Motion-from									
15. Greek camp	13	0	13	41%	5	16%	14	44%	32
16. Battlefield	28	6	34	66%	7	13%	11	21%	52
17. Troad (both)	8	3	11	65%	0	0%	6	35%	17
18. Troad (*Iliad*)	4	1	5	84%	0	0%	1	16%	6
19. Olympus (both)	20	10	30	81%	3	8%	4	11%	37
20. Olympus (*Iliad*)	14	10	24	80%	3	10%	4	10%	31
21. Troy-city	0	0	0	0%	6	33%	12	67%	18

22 The words for "battlefield" are πόλεμος and μαχή; naturally the choice as to whether the word has the right meaning in a given line will often be open

84%. Aphrodite, with 27 occurrences altogether, is 100% formular; Athena, with 241 total occurrences, is 98%; Hermes (37) 97%; Thetis (28) 96%; Apollo (121) 93%; at the lower end, Hephaestus (36) is 64%; Ares, (50) the lowest, is 38%. (Perhaps Ares, the Thracian, is a relative newcomer to the epic tradition.) There are 21 *mortals* who are mentioned more than 20 times; they have an average formularity of 82%. Of the more important figures, Odysseus and Achilles are each 86% formular; Diomede and Menelaus 95%, Agamemnon 95%, Penelope 98%; at the lower end, Hector is 64% and Meriones 63%. Of the two *peoples* mentioned more than 20 times the Achaeans, under their three names, are 91% formular, the Trojans only 50%; none of the Trojan formulae are used more than a few times, while most of the other figures and people have three or four regular recurring formulae (such as πόδας ὠκὺς Ἀχιλλεύς, ἐϋκνημῖδες Ἀχαιοί). Whatever the significance of this, the fact we are interested in now is the *average* formularity: 84% for the gods, 82% for the mortals, 82% for all figures (including peoples) in the nominative case. Our place phrases are obviously very similar.[23]

Let us turn now to the locatives. First we examine the first three ideas on lines 8–11 and note the uniformly high formularity: 85-89 percent. Probably such precise uniformity is accidental, and the slightly lower formularity in lines 12 and 13 is not significant. (Statistical tests will bear this out.) We have approximately the same uniform formularity that we found in the Motion-to groups, and on the ground of extension and economy we can argue for approximately the same high antiquity for the ideas. Again we say that the high formularity is due to the fact that these formulaic sets antedated the Iliad. We might have expected this: after all, if one goes to a place, then surely one will be in it. But this turns out not to be not at all sure: it works for other places, but not for Troy-city. One goes to Troy with formulae; but line 14 reveals that we usually do not use formulae to say that one is *in* it. The divergence between line 14 and the preceding 13 lines will pass any appropriate statistical test: this idea does not belong to the same traditional population (see the Statistical Appendix).

Before attempting to assess the meaning of this phenomenon, let us look at the situation upon which it is based. The Troy-city locative group includes occurrences of the words ἄστυ, πόλις, Ἴλιος, πτόλις, πύργοι, Τροίη, and τεῖχος in the meaning "Troy-city":

to question. For my criteria, see note 39 below. The word πεδίον provides two problems which persuaded me to leave it out of consideration here. Many of its formulae are partitives of πεδίοιο and mean "motion-through." We have no comparable partitive sets within our Greek-camp and Troy-city groups. And πεδίῳ, which shows almost no full formula, has two strong candidates for the minimal formula, such that the choice between them is arbitrary.

[23] I set forth some of these data at the meeting of the American Philological Association in San Antonio; see APA *Abstracts* (Decatur, Georgia: Scholars Press 1986) 108.

A. Full formula: κατὰ ἄστυ μέγα Πριάμοιο   2x
B. Minimal formulae: κατά, ἀνὰ πτόλιν after trochaic caesura   6x
C. Semi-formulae: 5x
    1. κατὰ ἄστυ εἴλω—see note 20—(18.286, 21.225, 24.662)   3x
    2. Ἴλιον εἴσω (24.145)   1x
    3. ἐν Τροίῃ εὐρείῃ (24.774)   1x
D. Non-formulaic   21x
    1. κατὰ ἄστυ in occurrences other than above[24]   7x
      a. Trithemimeral caesura (22.1, 22.394, 22.433)   3x
      b. Hephthemimeral caesura (6.287)   1x
      c. Final: (22.049, 24.703, 24.740)   3x
    2. Other   14x

    5.686:   ἐν πόλει ὑμετέρῃ, ἐπεὶ οὐκ ἄρ'ἔμελλον ἔγωγε
    6.364:   ὥς κεν ἔμ'ἔντοσθεν πόλιος καταμάρψῃ ἐόντα
    7.345:[25] Τρώων αὐτ' ἀγορὴ γένετ''Ιλίου ἐν πόλει ἄκρῃ
    8.131:   καὶ νύ κε σήκασθεν κατὰ Ἴλιον ἠΰτε ἄρνες
    8.517:   κήρυκες δ'ἀνὰ ἄστυ διΐφιλοι ἀγγελόντων
   13.764: οἱ δ'ἐν τείχει ἔσαν βεβλημένοι οὐτάμενοί τε
   18.287: ἠ οὔ πω κεκόρησθε ἐελμένοι ἔνδοθι πύργων
   21.295: πρὶν κατὰ 'Ιλιόφι κλυτὰ τείχεα λαόν ἐέλσαι
   22.85:   τείχεος ἐντὸς ἐών, μηδὲ πρόμος ἵστασο τούτῳ
   22.237: τείχεος ἐξελθεῖν, ἄλλοι δ' ἔντοσθε μένουσι
   22.299: ἀλλ'ὁ μὲν ἐν τείχει, ἐμὲ δ'ἐξαπάτησεν Ἀθήνη
   22.478: ἀμφότεροι, σὺ μὲν ἐν Τροίῃ Πριάμου κατὰ δῶμα
   24.67:[26] φίλτατος ἔσκε θεοῖσι βροτῶν, οἱ ἐν 'Ιλίῳ εἰσίν
   24.707: ὡς ἔφατ' οὐδέ τις αὐτόθ' ἐνὶ πτόλει λίπετ' ἀνήρ

I have quoted the above non-formulaic instances so that readers can evaluate the data for themselves. It may be that Semi-formula 1C should

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[24] Naturally I do not count as phrases meaning "in Troy-city" those meaning "through the city" (e.g., ἀνὰ ἄστυ 3.245, 6.505; κατὰ ἄστυ 24.327). But I have counted cases were κατά might be translated "throughout the city" as well as "in the city." Similarly—and this is especially appropriate to 7.345 in the list below—I do not count phrases referring to parts of the city except in synecdoche.

[25] The phrase ἐν πόλει ἄκρῃ in final position occurs also in 6.88, 297 and 317. In these three places it is a formula for *part* of the city, not the whole. Formulae for such parts present a special problem which cannot be considered here, since they must obviously be compared with the large number of non-formulaic phrases for parts of Troy. Note that ἐν πόλει ἄκρῃ is a *minimal* formula, since the adjective is defining, not descriptive—and certainly not ornamental: you cannot say what you mean, "Troy's acropolis," without it.

I have put line 7.345 among the non-formulaic locatives for Troy-city solely because of the word 'Ιλίου preceding ἐν πόλει ἄκρῃ. This noun allows the whole phrase including it to mean "In Troy-city."

[26] Cf. the phrase τοὶ 'Ιλίῳ ἐγγεγάασιν (2x), itself a formula, meaning "Trojan." The single word 'Ιλίῳ cannot be counted as a minimal formula; but in the full formula meaning "Trojan" it cannot be counted as non-formulaic either. Hence I omit it.

count as a full formula. It appears twice in the same position after the trithemimeral caesura, once as κατὰ ἄστυ ἐέλμεθα and once as κατὰ ἄστυ, ἀλήμεναι. On its third appearance it is modified (see above, note 20). The following totals are given for both counting the phrase as a formula and not counting it; even when we do count it, the percentage of full formulae is very low. (In the accompanying table and in the statistical analysis I do indeed count it as a full formula, in order to be absolutely safe.)

Totals:	34x
Full formulae (6%)	2x
Minimal formulae (18%)	2x
Semi-formulae (15%)	5x
Non-formulaic (62%)	21x
Counting C1 as a full formula:	
Full formulae (15%)	5x
Minimal formulae (15%)	6x
Semi-formulae (6%)	2x
Non-formulaic (62%)	21x

The reader who works through the large formulaic sets for "motion to" and "in" the Greek camp, or even the smaller sets for "on the battlefield," and "to the Troad," will be struck by how meager the Troy-city locative set *feels*. As we move to a clear statement of the meaning of this fact, we should keep in mind how astonishing it is. There is just one certain full formula, and it is an extension of another formula not used in a locative sense, ἄστυ μέγα Πριάμοιο. The semi-formula Ἴλιον εἴσω is not properly locative, but motion-to; the semi-formula ἐν Τροίῃ εὐρείῃ really ought not to refer to the city. There is no formula which was invented to say "in Troy-city"; and the semi-formulae seem to attest to the lack of a pre-existing formula with the right meaning. Moreover we feel that formulae could have been coined easily. The fourth citation on page 11, for instance could have been κατὰ Ἴλιον ἠνεμόεσ-σαν; and so on.[27] The facts are startling; but readers can satisfy themselves that they are the facts. Both statistically and from personal inspection we are struck by the difference between the way in which Homer says "in Troy" and the way he says "to" or "in" any other place.

I have no theory as to why Homer did not coin many formulae for "in Troy." Presumably he did not feel the need. This may seem surprising: does

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[27] Actually we see indications that formulae are being forged. "Huddled in Troy" is not only expressed by Semi-formula C1 on page 5, but occurs on page 12 in 18.287 and 21.295 amidst the non-formulaic occurrences. Note also the motion-to phrases, ἐς τεῖχος ἀλῆναι (Appendix 2, p. 47) and the semi-formulaic εἰς ἄστυ ἄλεν (22.12, 47, 24.696); here too we feel that formulae are coming into being. Similarly, κατὰ ἄστυ is struggling to find a fixed position at the tri-themimeral caesura.

not the high formularity of the other locatives and the motion-to phrases show that Homer needed formulae to express these ideas? I do not think so. The high formularity means only that *if* pre-existing formulae exist, Homer will use them (perhaps adding a few to their number) most of the time. If there were no pre-existing Troy-city locative formulae, Homer may have coined the two or three we see, and thereby met his needs. And if there had been pre-existing formulae, Homer would have used them, as he used formulae for the other ideas we have looked at.

This means that when Homer was composing the *Iliad* there were few or no formulae available to him meaning "in Troy-city." Since the implications of this assertion may be very far-reaching, it is important to be clear as to how we get to it. Three points are virtually certain. First, the idea "in Troy" is not formulaic, is mostly not expressed in formulae, while our other ideas are; and this difference is statistically significant. Second, the formulae for "to the Greek camp," "to Troy," and "in the Greek camp"—the big sets—are traditional and indeed ancient; and the formulae for the battlefield, the Troad, and Olympus are probably also old. Certainly all of these ideas were expressed formulaically before the *Iliad* was composed. Third, all these ideas exhibit uniformly high formularity, while "in Troy" stands in marked contrast. It is in order to explain this contrast that we advance the hypothesis that formularity—the relative frequency with which Homer uses formulae—indicates what formulae were available for him to use. "In-Troy-city" has a low formularity because few or no formulae were available to say it.

The reader may feel that this rather complex argumentation is superfluous: if Homer uses few formulae for "in Troy-city" out of a reasonably large number of times that he expresses the idea, clearly that is because he had no formulae at hand. But we really do need the measure of formularity for the other sets. It shows that when formulae exist, Homer uses them. It rules out of court the supposition that there were numerous locative formulae, and Homer happened by chance not to use them.

Is there no other explanation? Is there an aesthetic reason to avoid formulae when saying "in Troy-city"? I can think of none. If "to windy (sacred) Troy" is artistically satisfying, can there be any objection to "in windy (sacred) Troy?" Was Homer perhaps a pen-poet who inherited most of the *Iliad,* but an *Iliad* without the occasions in which one said "in Troy"? Those occasions are mostly the Trojan scenes themselves, and their scenes contain plenty of formulae. Why would only the formulae for "in Troy" be eschewed?

Let us look now at the motion-from groups. First, we notice that there is much less uniformity among the groups referring to the camp, the battlefield, the Troad and Olympus. "From the Greek camp" is the villain—as it is when we compare it with "to" and "in the Greek camp." Judging from the relatively low formularity of the set, there must have been relatively few formulae in existence for Homer to use. This is confirmed by the fact that the actual

number of different formulae that Homer uses for this idea is only four. "From Olympus," which is said slightly fewer times in the *Iliad,* has eight formulae; "To Olympus," said 31 times in the *Iliad,* has ten or eleven. Still, there probably were some formulae in existence, or the formularity would not have been as high as it is.

When we move to line 21, "from Troy-city," the formularity drops to zero. There are no formulae for leaving Troy.[28] The formulaic tradition does not speak of leaving the city, any more than it spoke with any frequency of being in it. One can go *to* Troy with a formula, and does so frequently. But motion-to need not imply motion-*into,* much less being-in or motion-from. Let us examine the motion-from group more closely.

Troy-city motion from total	18x
A. Semi-formulae (33%)	6x
1. 2.809-10–8.58-59:	2x

πᾶσαι δ' ὠΐγνυντο πύλαι, ἐκ δ' ἔσσυτο λαός
πεζοί θ' ἱππῆές τε· πολὺς δ' ὀρυμαγδὸς ὀρώρει
This is too long and too specific to be freely usable as a
formula expressing the essential idea, "they left Troy"; while
ἐκ δ' ἔσσυτο λαός (not found elsewhere) does not mention
Troy or contain a word meaning "city."

2. 8.505–8.545 (too close together)	2x
3. 22.413 πυλάων Δαρδανιάων	
(only once in "motion-from" sense)	1x
4. 24.383 καταλείπετε Ἴλιον ἱρην	1x
B. Non-formulaic (67%):	12x

2.230 Τρώων ἱπποδάμων ἐξ Ἰλίου υἱὸς ἄποινα
3.263 τὼ δὲ διὰ Σκαιῶν *πεδίον* δ'ἔχον ὠκέας ἵππους
4.514 ὡς φατ' ἀπὸ πτόλιος δεινὸς θεός · αὐτὰρ Ἀχαιοὺς
6.393 Σκαιάς, τῇ ἄρ' ἔμελλε *διεξίμεναι πεδίονδε*
7.1 ὡς εἰπὼν πυλέων ἐξέσσυτο φαίδιμος Ἕκτωρ
14.251 ἔπλεεν Ἰλιόθεν, Τρώων πόλιν ἐξαλαπάξας
21.360 ἄστεος ἐξελάσειε · τί μοι ἔριδος καὶ ἀρωγῆς
21.563 μὴ μ' ἀπαειρόμενον *πόλιος πεδίονδε* νοήσῃ
22.237 τείχεος ἐξελθεῖν, ἄλλοι δ'ἔντοσθε μένουσι
22.383 ἢ καταλείψουσιν πόλιν ἄκρην τοῦδε πεσόντε
22.417 ἐξελθόντα πόληος ἱκέσθ'ἐπὶ νῆας Ἀχαιῶν
24.329 οἱ δ'ἐπεὶ οὖν *πόλιος* κατέβαν, πέδιον δ'ἀφίκοντο

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[28] Readers will think at once of such phrases as Ἰλίου αἰπεινῆς and Ἰλίου ἱρῆς. But these are either pertinentive (9.419, 686; 21.128), ablative of separation (6.96, 277), or partitive (15.215). I do not know *why* Homer did not use these phrases in a motion-from sense. But it is not chance alone, since chance is ruled out statistically as the reason for the fact that there are no motion-from formulae.

We have established, then, that there are few or no pre-Homeric formulae for "in Troy-city" and none for "from Troy." The formulaic tradition did not say these things. But what about the whole epic tradition, formulaic and non-formulaic?—for it is evident from Homer that not every time an idea is expressed will it be expressed in a formula. Did no poet before Homer ever say "from Troy"? Such an extreme view is surely very unattractive. What we *can* argue is this: in the last few generations before the composition of the *Iliad,* the oral poets did not *frequently* say "in Troy" or "from Troy." If they had, formulae would have developed.

That is as far as the facts so far examined will carry us. Naturally we wish to take the next, highly tempting, step: pre-Homeric poetry did not say "in Troy" frequently because it did not frequently place the action in Troy. It did not say "from Troy" because, being rarely inside the city, it rarely had occasion to leave it. This would mean that the bulk of the *Iliad*'s Trojan scenes—there are 33 in all—could safely be attributed to Homer's own invention. Note that this does *not* mean that the Trojan scenes will be significantly less formulaic than the rest. Hector's helmet is just as bright, and the Achaean chitons just as brazen, whether referred to inside the city or out of it. It certainly does not make Homer a pen-poet who inherited the rest of the *Iliad.* It *does* mean that the parts of Troy which are not visible from outside will lack formulae—and this is in fact the case.

There is not enough space here to defend this hypothesis at length, but the argument can at least be adumbrated. It falls into two parts, textual and historical.

Most of the "in Troy" and "from Troy" phrases occur in the 33 Trojan scenes: the density is one every 46 lines for locatives in Trojan scenes, one in 1615 outside; one in every 96 lines for "from Troy" in Trojan scenes, one in 2423 outside. It is the existence of Trojan scenes which calls for the frequent occurrence of Troy-city locative and motion-from phrases. If there are few such phrases in a poem, it is because that poem has few Trojan scenes. But the poets of the pre-Iliadic tradition did not have many such phrases: if they had had them, formulae would have developed. It follows that there were few Trojan scenes in pre-Iliadic poetry. We owe the bulk of the Trojan scenes to Homer's invention.

The only "in Troy" or "from Troy" formula which was designed solely for this role is κατὰ, ἀνὰ πτόλιν. Of its 6 occurrences, 5 come inside Troy, in Trojan scenes. The chances are that this minimal formula developed precisely because the increased frequency of Trojan scenes had led to an increase in

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This is a good place to mention Calvert Watkins' recent suggestion that we may have a fragment of Trojan poetry: "and he came from steep Wilusa." See "The Language of the Trojans," in Troy and the Trojan War (Bryn Mawr 1986) 45–62. If this phrase was an ancestor of Homer's, it went through several changes as it descended; for Homer speaks of Ἰλίου αἰπεινῆς only in formulae for the city's destruction, never for motion from.

locative references. With Homer there came a multitude of Trojan scenes, and the ensuing density of "in Troy" phrases; under such pressure, locative formulae start to develop. The paucity of "in-Troy" phrases in the formulaic tradition shows that the pressure to create formulae did not yet exist; it did not exist because Trojan scenes were not yet common.

We saw above (p. 32) that the formulaic set for the Trojans in the nominative was deficient, with low formularity and a still more surprising lack of regularly recurring formulae. I am not, of course, suggesting that Homer invented the Trojans—I think that "to windy Troy" can probably be dated to as early as 1125, for instance, and the whole "to Troy" formulaic set took generations, probably centuries to develop. But it does appear that Homer refused to use the set of formulae for the Trojans that he must have inherited, presumably because they did not say what he wanted to say. They may, as do some of the infrequently occurring formulae we still possess, have described the Trojans as arrogant, ἀγαυοί; they may have made the Trojans warlovers, φιλοπτόλεμοι. The composer of the Trojan scenes did not depict his Trojans as haughty war-mongers, and he therefore had reason to eschew the traditional formulae whenever possible. This is speculative; but the hard fact that the Trojans are strikingly deficient in nominative formulae demands an explanation of some kind.

The historical argument is that Homer's Troy exhibits features which cannot have existed in real cities much before Homer's time in the eighth century.[29] A temple, with a statue, on an acropolis, belongs to the eighth century or later.[30] Troy has not one, but two such temples, one for Apollo (*Iliad* 5.446, 7.83) and one for Athena (6.297 etc.). It is very likely that these features of Troy's acropolis were modeled on contemporary life. Homer's Troy has fortification walls which surround the whole city and not merely the acropolis. Though Mycenaean Thebes may have had such long walls, they are very rare before 800 B.C.[31] Homer's more likely model is Old Smyrna, whose wall dates from the late ninth century.[32] Troy is a *polis,* governed not by Priam alone but by elders, *demogerontes,* the bribery of one of whom, Antimachus, made it possible for Paris to keep Helen and necessary for Troy to go to war (*Iliad* 11.125). Such a city belongs to the eighth century or later. If so many features of Homer's Troy are contemporary, it is likely that most of the material of the Trojan scenes will also be contemporary.

The conclusion that Homer is responsible for most of our Trojan scenes is not, however the major result of our researches. More important is the

[29] For Homer's date, see R. Janko, *Homer, Hesiod and the Hymns* (Cambridge 1982) 231.

[30] See N. Coldstream, *Geometric Greece* (London: E. Benn 1977).

[31] S. Symeonoglou, *The Topography of Thebes* (Princeton 1985) 19-23.

[32] See A. Snodgrass, *The Dark Age of Greece* (Edinburgh 1971) 298; on 435 Snodgrass advances the view that Homer's Troy is contemporary with Homer. See also his *Archaic Greece* (California 1980) 15-84.

establishment of the concept of a formulaic set with statistically definable features. With these we can make powerful inferences as to what phrases Homer must have inherited and what he may have invented. Thus, the regularly recurring formulae for Achilles,—πόδας ὠκύς (30X), ποδάρκης δῖος (21X), δῖος (34X), ὠκύς (6X)—were not invented for the *Iliad,* which displays Achilles running only once, and requiring on that occasion divine intervention to overtake his competitor. But the sentence ταφὼν δ'ἀνόρουσεν Ἀχιλλεύς, recurring in final position 3 times, might very well be Homer's creation. With such a tool we can shed a great deal of light upon Homer's individual style; and we can uncover some of the artistic and even intellectual history of the Greeks from 1250 to 750 B.C.[33]

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[33] "Intellectual history," because in *AJP* 105 (above, note 6), I show how formulaic analysis supports the view that the epic tradition placed the divine home on the terrestrial mountain Olympus *before* locating it, first, in the remote sky and then, apparently, out of nature altogether.

APPENDIX 1: Statistical Analysis

I believe that the best way for readers to become convinced of the paucity of "in Troy" and "from Troy" formulae is to work through the groups and sets set forth in this paper. But the use of statistics as a check on the first-hand impressions is welcome, and to this end I have consulted Professors Alfred Holtzer (Chemistry) and Edward Spitznagel (Mathematics) at Washington University, and taken the excellent advice of Professor Dee L. Clayman, of Brooklyn College, CUNY. Their patience, generosity and lucidity are responsible for my being able to offer the following statistical results in confirmation of the statements in the body of the paper.

The paper aims at establishing a fact—that certain ideas were expressed formulaically, and others not—and at offering a hypothesis, that at the time he composed the *Iliad,* Homer had available plenty of formulae for the one group of ideas, and very few for the other. Statistics tests the hypothesis that all the ideas are uniformly formulaic; it discovers no reason to reject uniform formularity except for those ideas which in the paper appeared significantly non-formulaic—"in Troy," "from Troy," and—less clearly—"from the Greek camp."

We begin with the "Motion-to" groups. By my hypothesis, these should be uniformly formulaic: whether you are saying "to Troy" or "to the Greek camp," the percentage of formulae should be about the same. A chi-square test bears this out. We form a table by simplifying lines 1, 2, 4, 6 and 7 on our chart on page 31. (We omit "Troad [both]" and "Olympus [both]" from the calculation, since we are concerned with the *Iliad*). We group together full and minimal formulae. Since "formularity," as I have defined the term, counts semi-formulae with non-formulae, we also naturally group these together. In running statistical tests, however, we must recognize the possibility that semi-formulae would turn out to be formulae if we had more evidence. Hence we group semi-formulae both with non-formulaic instances, and with formulae. Thus "to the Greek camp" has 115 formulae and 32 non-formulae by one reckoning, 127 and 20 by the other. All five lines taken together show 261 total formulae, 78 non-formulae, 339 total occurrences altogether by one reckoning, 283, 56, and again 339 by the other. The formularity for the total of the five lines is thus 77% (261 divided by 339) or 84% (283 divided by 339). If the groups were *absolutely* uniform, we would expect the same formularity for each idea. 77% of 147 total occurrences for the Greek camp is 113.2. This is called the expected frequency; it deviates from the actual frequency, 115, by 1.8.

The "chi-square" figure in the following charts measures the total deviation of each of the lines from the expected frequency: the higher the chi-square, the more endangered is the hypothesis of uniformity. The phrase "degrees of freedom" as applied to our test states the number of entries in our table which might vary without affecting either the total number of occurrences for each idea we are considering or the total percentage of formulae; it is one fewer than the number of lines. The more degrees of freedom we have, the higher the chi-square can be without endangering the hypothesis. The "P-value" states the probability of getting at least as high a value for chi-square as we have obtained, given that the hypothesis of uniformity is true. Statisticians are in general agreement that if the P-value falls below a certain small number—say .05 or .01—the hypothesis of uniformity should be rejected. If the P-value is greater than .05, we have no reason to reject the hypothesis.

	Chi-square	d.f.	P-value
Motion-to, semi-formulae with formulae:	4.982	4	.28912
Motion-to, semi-formulaic with non-formulae:	4.935	4	.29400

The probability that these groups are drawn from a population showing uniform formularity is very good.[34]

A similar uniformity obtains in the Locative sets. Disregarding for the moment the "In Troy-city" set, the *Iliad* shows 85% formularity among the Locative sets when semi-formulae are grouped with non-formulaic instances, 93% when semi-formulae are grouped with formulae. This is shown clearly by the chi-square tests. Again, we omit "Troad (both)" and "Olympus (both)" since we are making comparisons within the *Iliad*. We group semi-formulae both ways, as before.

First we omit "in Troy" and test the remaining groups for uniformity:

	Chi-square	d.f.	P-value
Locative, omitting "in Troy", semi-formulae with formulae	4.432	3	.21844
Locative, omitting "in Troy", semi-formulae with non-formulae	2.063	3	.55935

This means that for the camp, the battlefield, the Troad and Olympus, the place you are in does not affect the formularity of the locatives: it is uniformly high. Again, however, the expected frequencies for three of our groups is lower than 5. If we collapse all three, leaving a 2 x 2 table, we get particularly high P-values for uniformity: .60368, semi-formulae with formulaic; 69.34, semi-formulae with non-formulaic. Now let us include the group "in Troy":

	Chi-square	d.f.	P-value
Locative, including "in Troy", semi-formulae with formulae	65.168	4	.00000
Locative, including "in Troy", semi-formulae with non-formulae	48.016	4	.00000

Collapsing does not alter the picture.

Uniformity is now overwhelmingly improbable—that is, the difference made by including "in Troy" is highly significant. When Homer expresses the idea of being in Troy, the formularity drops dramatically.

The Motion-from groups are harder to handle statistically, because the "from the Greek camp" group also diverges, perhaps significantly:

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[34] Since one of the expected frequencies is less than 5, and since this may make the test unreliable, we can check the results by collapsing "Troad" and "Olympus." We still have high P-values: semi-formulae with formulae, chi-square 4.965, 3 d.f., P-value .17439; semi-formulae with non-formulae, chi-square 4.992, 3 d.f., P-value .17760.

	Chi-square	d.f.	P-value
Motion-from, omitting "from-Troy", semi-formulae with formulae	9.099	3	.02800
Motion-from, omitting "from-Troy", semi-formulae with non-formulae:	10.804	3	.01283

The relatively low figure for the P-value of uniform formularity here is obviously the result of the rather low formularity of the motion-from-the-Greek camp group.

	Chi-square	d.f.	P-value
Motion-from, including "from-Troy", semi-formulae with formulae	21.076	4	.00031
Motion-from, including "from-Troy", semi-formulae with non-formulae:	35.129	4	.00000

Now that we have included the "from-Troy" group, the P-value of uniformity decreases nearly 100 times, which is surely statistically significant. But for most of us who are unfamiliar with statistical analysis, the qualitative fact is far more arresting. When you wish to say "from the camp," or the Troad, or the battlefield, or Olympus, formulae exist. Even the idea "from the camp," the least formulaic, has four separate formulae. The idea "from Troy" has no clear-cut formulae at all.[35]

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[35] My discussion of the chi-square test is based on accounts in Sidney Siegel, *Non-parametric Statistics for the Behavioral Sciences* (New York: McGraw-Hill 1956) 104–11 and 175–79, and in M. E. Bulmer, *Principles of Statistics* (New York: Dover 1979).

APPENDIX 2: Formulaic Sets

Motion-to the Greek camp: (line 1 on p. 31)

(1) νῆας total 168x; non-motion-to-camp 50x; motion-to-camp	118x
A. Motion-to-camp non-formulaic[36]	15x
B. Motion-to-camp formulae	103x
a. Full formulae	83x
1. Bucolic diaeresis: νῆας ’Αχαιῶν	1x (cf. 2)
2. Hephthemimeral caesura: "to beside":	
παρὰ νῆας ’Αχαιῶν	1x (cf. 1)
3. Hephthem. "to among": κατὰ νῆας ἐΐσας	1x (cf. 10)
4. Hephthem. "to", cons.: κοίλας ἐπὶ νῆας	10x
5. Hephthem. "to", vowel: ἐπὶ νῆας ’Αχαιῶν	6x
6. Trochaic caesura with ppl.: κεδασθέντες κατὰ νῆας	2x
7. Trochaic no ppl.: θοὰς ἐπὶ νῆας ’Αχαιῶν	14x
8. Penthem. prep.: κοίλας ἐπὶ νῆας ’Αχαιῶν	3x
9. Penthem. no prep.: κλισίας καὶ νῆας ’Αχαιῶν	1x (cf. 1)
10. Second trochee: ἐπὶ κλισίας καὶ νῆας ἐΐσας	1x (cf. 3)
11. Trithem. to diaeresis:	
ἐπὶ νῆας ’Αχαιῶν – ⌣ ⌣ – ⌣	4x
12. Trithem. to C₂: ἐπὶ νῆας ἐϋσσέλμους ⌣ ⌣ – ⌣	4x
13. Trithem. to end, "to beside":	
παρά τε κλισίας καὶ νῆας ’Αχαιῶν	4x
14. Trithem. to end, "to", vowel:	
ἐπὶ τε κλισίας καὶ νῆας ’Αχαιῶν	3x
15. Trithem. to end, cons.: κατὰ νῆας ’Αχαιῶν χαλκοχιτώνων	3x
16. First trochee: θοὰς ἐπὶ νῆας ’Αχαιῶν χαλκοχιτώνων	1x (cf. 15)
17. Initial to penthem., no verb: νῆας ἐπὶ γλαφυράς	19x
18. Initial to penthem. with verb: ἂψ ἐπὶ νῆας ἴμεν	2x
19. Whole line: φεύγοντες νῆάς τε καὶ ‘Ελλήσποντον ἵκοντο	3x
b. Semi-formula (16.395)	1x
c. Minimal formulae (ἐπὶ etc. at the trithemimeral caesura)	19x
(2) νέας total 6x; non-motion-to-camp 3x; motion-to-camp	3x
A. Motion-to-camp, non-formulaic (13.101)	1x
B. Motion-to-camp full formulae	2x
1. Trochaic (with κλισίας): κατὰ (ποτὶ) κλισίας τε νεάς τε	
(overlaps 1 Ba 7)	2x
(3) νηυσί total 154x; non-motion-to-camp 139x; motion-to-camp	15x
A. Motion-to-camp, non-formulaic (18.7, 24.392)	2x
B. Motion-to-camp formulae	13x
a. Full formulae	7x
1. Initial to trochaic (complements!)	5x
νηυσὶν ἐπὶ γλαφυρῇσιν	

[36] The instances are 2.150, 2.438, 5.165, 6.69, 8.149, 10.14, 10.336, 11.513, 12.7, 12.123, 13.31, 16.63, 19.3, 22.217, 24.298.

2. Initial to trochaic, with verb (complements!)	2x
νηυσὶν ἐπισσεύοντο	
b. Semi-formulae (10.442, 12.411, 418, 13.1, 17.341, 708)	6x
(4) The semi-formulae μελαινάων ἐπὶ νηῶν (5.700) and	
μετ' ἀγῶνα νέων (20.33) as motion-to-camp	2x
Total νῆας etc., motion-to	138x
Full formulae (67%)	92x
Minimal formulae	19x
Semi-formulaic (6%)	9x
Non-formulaic (13%)	18x

στρατόν motion-to (line 1 on p. 31).	
(1) Total instances of στρατόν	46x
a. Not the Greek camp or army	12x
b. Direct object or motion-through	8x
c. Locative (cf. p. 31 above)	16x
d. Total motion-to-Greek-camp	
(line 1 above minus lines a, b and c)	10x
A. Motion-to-non-formulaic (4.179, 24.566)	2x
B. Motion-to formulae	8x
a. Full formulae	4x
1. Trochaic, cons.: μετὰ (κατὰ) στρατὸν εὐρὺν Ἀχαιῶν	
(overlaps 1Ba7)	2x
2. Trochaic, vowel: ἔσω στρατὸν εὐρὺν Ἀχαιῶν	
(complements 1Ba7)	1x (cf. 1)
3. Trochaic, verb: ὁ δ' ἐς στρατὸν ὤχετ' Ἀχαιῶν	
(complements 1Ba7)	1x (cf. 1)
b. Semi-formulae (5.589, 10.325, 13.329, 24.112)	4x

Grand total νῆες and στρατόν	148x
Full formulae (65%)	96x
Minimal formulae (13%)	19x
Semi-formulae (8%)	13x
Non-formulaic (14%)	20x

Battlefield motion-to (line 2 on p. 31)	
1) πόλεμον total 51x; irrelevant 33x; motion-to-battlefield	18x
A. Non-formulaic (14.62, 15.533, 17.433, 17.487, 18.238)	5x
B. Motion-to formulae	13x
a. Full formulae:	5x
1. Penthemimeral: πόλεμον φθισήνορα ‒ ‒ [37]	1x
2. After the first foot: ἐς πόλεμον πωλήσεαι	2x
3. Initial: οὔτε ποτ' ἐς πόλεμον	2x
b. Minimal: ἐς πόλεμον after first foot	8x

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[37] I count the phrase because it occurs four other times: twice in a somewhat different meaning (once motion-from, see below Ap. 14); twice in 2.833 and its echo 11.331, which count as minimals.

2) πόλεμόνδε total occurrences   18x
  A. Non-formulaic (2.872, 11.683, 11.797, 13.298)   4x
  B. Formulae: 14x
    a. Full formulae: 10x
      1. Initial: ἀλλ' 'ὄρσευ πόλεμόνδε   2x
      2. Initial: ὀτρύνων πόλεμόνδε   3x
      3. Initial: νισσόμενον πόλεμόνδε   2x
      4. After the first syllable: – ἴμεναι πόλεμόνδε   3x
    b. Minimal: πόλεμόνδε after the trithemimeral   4x
      (cf. ἐς πόλεμον after the first foot)
3) μάχην total 28x; irrelevant 24x; motion-to-battlefield   4x
  A. Non-formulaic (3.241, 15.59)   2x
  B. Formulaic: trochaic caes.: μάχην ἐς κυδιάνειραν   2x
Total battlefield motion-to   40x
    Full formulae (43%)   17x
    Minimals (30%)   12x
    Non-formulaic (27%)   11x

Troad motion-to (lines 3-4 on p. 31)	*Iliad*	*Odyssey*	*Both poems*
1. Ἴλιον total	69x	16x	85x
A. Ἴλιον = Troy-city	61x	2x	63x
B. Ἴλιον = Troad, total	9x	13x	22x
C. Troad non-formulaic	0x	0x	0x
D. Troad formulae	9x	13x	22x
a. Full formulae	6x	9x	15x
1. Hephthem.: εἰς Ἴλιον ἵρην	2x	2x	4x
2. Penthem.: ὅτε Ἴλιον εἰσανέβαινον	0x	3x	3x
3. Init. to trochaic: Ἴλιον εἰς εὔπωλον	3x	2x	5x
4. Init. to trochaic: Ἴλιον εἰς ἅμ' ἕπεσθαι	1x	2x	3x
b. Minimal formulae:			
ἐς Ἴλιον after trochaic;	3x	4x	7x
Ἴλιον εἴσω after Bucolic diaeresis			
2. Τροίην total	26x	9x	35x
A. Τροίην = Troy-city	12x	1x	13x
B. Τροίην = Troad, total	14x	8x	22x
C. Locative formula (cf. p. 48 below)	2x	0x	2x
D. Troad motion-to non-formulaic[38]	3x	3x	6x
E. Troad motion-to formulae	9x	5x	14x
a. Full formulae	6x	5x	11x
1. Trochaic: κατὰ Τροίην ἐρίβωλον	1x	0x	1x (cf. 2)
2. Penthem. Τροίην ἐρίβωλον ἵκοντο	2x	0x	2x
3. Trithem. to Hepth. Τροίηνδε κίων	0x	4x	4x
4. Init. to trochaic ἐς Τροίην οὐδ' αὖτις	2x	0x	2x
5. Whole line: ἤλθεθ' ὑπὸ Τροίην πόλεμον			
θρασὺν ὁρμαίνοντες	1x	1x	2x
b. Minimal formula ἐς Τροίην initially	3x	0x	3x

[38] The instances are *Iliad* 5.773, 5.207, 24.346, *Odyssey* 1.210, 11.510, 13.248.

Total for *Iliad* alone   21
    Full formulae (57%)   12
    Minimals (29%)   6
    Non-formulaic (14%)   3

Total for both poems   42
    Full formulae (62%)   26
    Minimals (24%)   10
    Non-formulaic (14%)   6

Troy-city motion-to (line 7 on p. 31)
1. Ἴλιον total   69x
    a. Ἴλιον = Troad (cf. above, p. 31 line B)   8x
    b. Ἴλιον = Troy-city: Non-motion-to   18x
    c. Ἴλιον = Troy-city total motion-to
    (line 1 above minus lines a and b)   43x
  A. Motion-to non-formulaic (5.210, 22.17, 24.620)   3x
  B. Motion-to formulae   40x
    a. Full formulae   32x
      1. Bucolic diaeresis Ἴλιον ἵρην   2x
      2. Hephthem., vowel: εἰς Ἴλιον ἵρην 1x (cf. 1)
      3. Hephthem., cons. προτὶ Ἴλιον ἵρην 5x
      4. Hephthem., verb: ὑπὸ Ἴλιον ἦλθε 4x
      5. Trochaic, ἐς Ἴλιον εἰληλούθει   3x
      6. Penthem., vowel ὑπὸ Ἴλιον ἠνεμόεσσαν 1x (cf. 1)
      7. Penthem., cons. προτὶ Ἴλιον ἠνεμόεσσαν 6x
      8. Penthem., vowel, verb εἰς Ἴλιον εἰληλούθει 1x (cf. 5)
      9. Penthem., cons., verb προτὶ Ἴλιον ἀπονέοντο 4x
      10. Init. to trochaic, verb ἂψ εἰς Ἴλιον ἦλθε 2x
      11. Init. to trochaic, verb Ἴλιον εἰσανέβησαν 3x
    b. Minimal formulae (προτὶ Ἴλιον after penthem.;
      Ἴλιον εἴσω after Bucolic diaeresis)   7x
    c. Semi-formula (7.20)   1x
2. ἄστυ total accusatives   79x
    a. Not Troy   9x
    b. Troy-city locatives (cf. above, p. 31: lines A, C1, D1, 8.517) 13x
    c. Troy-city other non-motion-to   27x
    d. Troy city total motion-to (line 2 minus lines a, b and c) 30x
  A. Motion-to non-formulaic (10.348, 17.191, 18.255, 21.128?, 24.778) 5x
  B. Motion-to formulae   25x
    a. Full formulae   10x
      1. Hephthem., verb, cons: προτὶ ἄστυ δίεσθαι 2x
      2. Trith., προτὶ ἄστυ μέγα   2x
      3. Initial to trochaic: ὥσαισθε προτὶ ἄστυ 4x
      (and modification) (complements 1Ba10)
      4. Initial to trochaic, no verb: ἄψορρον προτὶ ἄστυ 2x
      (complements)
    b. Minimal formulae (προτὶ ἄστυ at trithemimeral) 10x

c. Semi-formulae (17.287, 17.419, 22.112, 47, 24.696)	5x
3. πόλιν, πόλινδε = Troy motion-to	9x
A. Motion-to non-formulaic (5.224, 6.86, 8.522, 13.820, 21.611)	5x
B. Motion-to semi-formulae (6.41, 10.209, 410, 21.4)	4x
4. πύλας = Troy	5x
A. Motion-to non-formulaic	0x
B. Motion-to full formulae:	5x
1. Trochaic: πύλας καὶ τείχεα – –	2x
2. Trith: Σκαιάς τε πύλας καὶ φηγὸν ἵκανεν	3x
5. τεῖχος = Troy	5x
A. Motion-to non-formulaic (8.533, 22.56)	2x
B. Motion-to full formula	2x
1. Trith: ἐς τεῖχος ˘ – – ˘ ἀλῆναι (and 21.536, a pun)	3x
6. Τροίην, Τροίηνδε = Troy	4x
A. Motion-to non-formulaic (6.207)	1x
B. Motion-to full formula	
1. Initial: ἠγάγετο Τροίηνδε (and modification)	3x
7. πτόλιν = Troy total motion-to	2x
A. Motion-to minimal (ὑπὸ, ποτὶ after trochaic)	2x
8. Other non-formulaic (2.786, 16.395)	2x
Other semi-formulae (21.540)	1x
Total Troy-city motion-to	101
Full formulae (53%)	53
Minimals (19%)	19
Semi-formulae (10%)	11
Non-formulaic (18%)	18

Battlefield locatives (line 9 on p. 31)

1) πολέμῳ total 15x; non-locative 2x; locative	13x
A. Non-formulaic locative (9.53, 18.106, 20.131)	3x
B. Locative formulae	10x
a. Full formulae:	5x
1. Initial: οὔτε ποτ' ἐν πολέμῳ	2x
2. Initial: ἄνερες ἐν πολέμῳ	3x
b. Minimals: ἐν πολέμῳ after the first foot (cf. motion-to)	5x
2) μάχη: total 16x; non-locative 8x; locative	8x
A. Non-formulaic locative	0x
B. Locative formulae:	8x
a. Full formula, trochaic: μάχη ἐνὶ κυδιανείρῃ	4x
b. Minimal: μάχη ἔνι after trochaic	4x
3) μάχην total 28x; non-locative 23x; locative	5x
A. Non-formulaic (5.824)	1x
B. Formulaic	4x
a. Full formulae:	4x
1. Trochaic: μάχην ἀνὰ κυδίανειραν	2x

2. Whole line:

βῆ δ' ἴμεν ἄν τε μάχην καὶ ἀνὰ κλόνον ἐγχείαων[39]   2x

Total battlefield locatives	26x
Full formulae (50%)	13x
Minimals (35%)	9x
Non-formulaic (15%)	4x

Troad-locatives (lines 10-11 on p. 31)	*Iliad*	*Odyssey*	*Both poems*
(1) Τροίη = total	19	11	30
A. Τροίη = Troy-city	3	0	3
B. Τροίη = Troad locative	16	11	27
C. Troad non-formulaic (*Od.* 1.355, 4.6)	0	2	2
D. Troad formulae	16	9	25
a. Full formulae	10	7	17
1. Trochaic: ἐν(ὶ) Τροίη εὐρείη	1	2	3
2. Before Bucolic diaeresis: ἐν(ὶ) Τροίη ἐριβώλακι ‒ ◡ ◡ ‒ ◡	3	0	3
3. Before Bucolic diaeresis: ἐν(ὶ) Τροίη ἑκὰς Ἄργεος	1	1	2
4. Init. to penth: Τροίη ἐν εὐρείη	2	3	5
5. Init. to penth: αὐτοῦ ἐνὶ Τροίη	3	1	4
b. Minimal (ἐν(ὶ) Τροίη before penthemimeral):	4	2	6
c. Semi-formulae (*Il.* 2.162, 178)	2	0	2
(2) Full formula: Τροίην ἐριβώλακα	2	0	2

Totals for *Iliad* alone:	18
Full formulae (67%)	12
Minimals (22%)	4
Semi-formulae (11%)	2
Non-formulaic	0
Totals for both poems:	29
Full formulae (65%)	19
Minimals (21%)	6
Semi-formulae (7%)	2
Non-formulaic (7%)	2

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[39] Doubtful; the meaning "through the battle and din of spears" may be preferable to "upon the battlefield and through the din," despite the preceding formula of motion. But the problem is the same with many of the battlefield phrases; a translation "battle" is often defensible. In general I have included as meaning "battlefield" only those phrases containing a preposition (ἐν, ἐς, κατά, ἀνά, ἐκ), and phrases whose motion-from sense seems indisputable. Here I have been guided by the presence of ἀνά.

Motion-from the Greek camp (line 11 on p. 31)

(1) νηῶν total 68x; non-motion-from-camp 45x;	
motion-from-camp	23x
A. Non-formulaic motion-from camp[40]	12x
B. Motion-from formulae	11x
a. Full formulae	6x
1. Trochaic: μελαινάων ἀπὸ νηῶν	3x
2. Penthem.: νηῶν ἄπο καὶ κλισιάων	1x (cf. 2B1)
3. Initial to Penthem.: ἐλθὼν ἐκ νηῶν	2x
b. Semi-formulae (7.419, 15.601, 15.69, 16.87, 16.293)	5x
(2) νεῶν total 40x; non-motion-from-camp 31x;	
motion-from-camp	9x
A. Non-formulaic motion-from-camp (8.490, 16.305)	2x
B. Motion-from formula	7x
1. Trochaic: νεῶν ἄπο καὶ κλισιάων	7x
Total motion-from camp	32x
Full formulae (41%)	13x
Semi-formulae (16%)	5x
Non-formulaic (44%)	14x

Battlefield motion from (line 12 on p. 31)

1) πολέμοιο total 99x; not motion-from-battlefield 71x;	
motion-from-battlefield	28x
A. Non-formulaic (11.408, 12.249)	2x
B. Formulae	26x
a. Full formulae:	20x
1. Hephthemimeral: φέρον ἐκ πολέμοιο	1x (cf. 2)
2. Trochaic, cons: πόδες φέρον ἐκ πολέμοιο	2x
3. Trochaic, vowel: ἐρωῆσαι πολέμοιο	3x
4. Trithemimeral: φίλον υἱὸν ὑπεξέφερεν πολέμοιο	2x
5. First syllable to hephthem.: ἐκ πολέμοιο φέρον	1x (cf. 2)
6. Initial: ἐξέφερον πολέμοιο	3x
7. Initial: φεύξεσθ'ἐκ πολέμοιο	2x
8. Initial: δηΐου ἐκ πολέμοιο	3x
9. Whole line: δηΐου ἐκ πολέμοιο καὶ αἰνῆς δηϊοτῆτος	3x
b. Minimal: ἐκ πολέμοιο final	6x
2) πολέμου total 24x; not motion-from-battlefield 17x;	
motion-from-battlefield	7x
A. Non-formulaic (6.480, 11.810, 21.598)	3x
B. Formulae	3x
a. Full formula: Penthem. πολέμου καὶ δηϊοτῆτος[41]	1x

[40] The instances are 8.213, 8.533, 12.72, 13.57, 13.744, 14.46, 15.407, 16.267, 16.366, 19.360, 24.401, 24.681.

[41] A case where only one instance of an obviously formulaic phrase occurs in a set, but where it occurs in other sets (esp. accusative), and where the motion-from sense is in no sense awkward. The line is *Iliad* 5.348.

b. Semi-formulae (3.428, 11.751, 12.123)	3x
3) πόλεμον total 51x; not motion-from-battlefield 46x;	
motion-from-battlefield	5x
A. Non-formulaic (12.322, 13.225)	2x
B. Formulae	3x
a. Full formula: λιπὼν πόλεμον φθισήνορα (see note 37)	1x
b. Semi-formulae (6.254, 13.250)	2x
4) μαχῆς total 70x; not motion-from-battlefield 58x;	
motion-from-battlefield	12x
A. Non-formulaic (5.35, 5.456, 5.763, 15.426)	4x
B. Formulae	8x
a. Full formulae	6x
1. Trochaic, ppl.: μαχῆς ἐκ νοστήσαντε	4x
2. Trochaic inf.: μαχῆς ἐξ ἀπονέεσθαι	2x
b. Semi-formulae (2.391, 11.283)	2x
Total battlefield motion-from	52x
Full formulae (54%)	28x
Minimals (12%)	6x
Semi-formulae (13%)	7x
Non-formulaic (21%)	11x

Troad motion-from (line 13-14 on p. 31)	*Iliad*	*Odyssey*	*Both*
1. Τροίης motion-from total	4x	4x	8x
A. Non-formulaic (*Od.* 1.327, 10.40?)	0x	2x	2x
B. Full formula:			
1. Init. to final:			
ἐκ Τροίης . . . Ἀχαιῶν	3x	0x	3x
C. Minimal formula: ἐκ Τροίης			
initially (cf. 1B1)	1x	2x	3x
2. Τροίηθεν motion-from total	1x	6x	7x
A. Non-formulaic (*Od.* 9.259, 11.160)	0x	2x	2x
B. Full formulae:	1x	4x	5x
1. penthemim.: Τροίηθεν ἰόντες	1x	3x	4x
2. trith.: Τροίηθεν ἰών	0x	1x	1x (cf.1)
3. Ἰλιόθεν non-formulaic	1x	1x	2x
Total for *Iliad* alone			6
Full formulae (67%)			4
Minimals (17%)			1
Non-formulaic (16%)			1
Total for both poems			17
Full formulae (47%)			8
Minimals (18%)			3
Non-formulaic (35%)			6