



Peter Hare on the Proposition

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Abstract

History witnesses alternative approaches to "the proposition." The proposition has been referred to as the object of belief, disbelief, and doubt: generally as the *object* of *propo*sitional attitudes. It has also been taken to be the object of grasping, judging, assuming, affirming, denying, and inquiring: generally as the *object* of *propositional actions*. The proposition has also been taken to be the subject of truth and falsity: generally as the *subject* of *propositional properties*. It has also been taken as the *subject* and *object* of *logical propositional relations*, e.g. that which can be said to imply, be implied, contradict, be contradicted, etc. It has also been taken to be the resultants or products of propositional operations, usually mental or linguistic; e. g. judging, affirming, and denying have been held to produce propositions called judgments, affirmations, and negations, respectively. Propositions have also been taken to be certain *declarative sentences*. Finally, the proposition has been taken to be "meanings" of certain declarative sentences. This essay focuses on alternative approaches to "the proposition" considered by the late American philosopher Peter Hare (1935-2008) and of those who influenced him.

Keywords: Proposition, Propositional attitude, Propositional action, Propositional property, Propositional relation, Attitude negation, Constituent negation, Peirce, Frege, Ducasse, Madden.

Peter H. Hare (1935–2008) developed informed, original views about the proposition: some published (Hare 1969 and Hare-Madden 1975); some expressed in conversations at scores of meetings of the Buffalo Logic Colloquium and at dinners

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following. The published views were expository and critical responses to publications by Curt J. Ducasse (1881–1969), a well-known presence in American logic, a founder of the Association for Symbolic Logic and its President for one term.¹

Hare was already prominent in the University of Buffalo's Philosophy Department in 1969 when I was appointed. Soon after, he became Chair. As his Associate Chair from 1971to 1975, I spent many hours with him in Buffalo and on professional trips (Corcoran et al. 2008, 50).

Without realizing it at the time, I assimilated many of his philosophical attitudes, interests, distinctions, and notational stipulations—and much of his naturalistic philosophical framework—despite his unfailingly respectful leeriness of my frank and unstinting Platonism. Even though my critical Platonism was as tough-minded and non-religious as Hare's philosophy, it never became a "live option" for him. He *knew* of some of the arguments for the Platonist hypostatization of propositions (Hare-Madden 1975, 90), but—at least once—he dismissed them unceremoniously and without demonstrating awareness of their force (loc. cit.). His Platonistic tendencies were muted and restrained, always diluted or reinterpreted naturalistically. What he later insightfully called his "irenic impulse" fit well with his inclination to integrate and conciliate conflicting philosophies (Hare 2008, 357–8) and made it easy for me to selectively incorporate his ideas.

I thank Hare for my understanding of the philosophical centrality of the proposition as the object of belief, disbelief, and doubt. My previous education and research along paths set out by Aristotle, Boole, Tarski, and Quine had not prepared me for what Hare brought me to see: that the problem of the ontic and epistemic nature of propositions must be confronted by any comprehensive philosophy. Since learning from Hare, I have come to see the history of logic in a new perspective. Among the first things I now look for in historical logicians is awareness of the proposition as the object of the "propositional attitudes," the most important being belief, disbelief, and doubt-not in the ordinary sense of incipient disbelief, but in the philosophical sense of suspended judgment or, as Hare put it, "unconsummated judgment."2 Hare wrote that a theory of propositions should respond to "the many epistemological and metaphysical . . . questions about the nature and status of the entities which serve as the objects of believing, [sc. disbelieving], doubting, etc." (1969, 268).³

Framework

Not only is this article about Hare's views, but it also uses a framework of terminology and notation adapted from them. He used single quotes for words and other strings and double quotes for meanings⁴ (1969, 267) to notate a variant of the sense-referent distinction he called 'connotation-denotation' (1969, 270). For example, in some contexts

the five-letter word 'truth' *connotes* the meaning "truth" and *denotes* the object truth. More saliently, for Hare (loc. cit.), the three-word *sentence* 'Hare admired Whitehead' *connotes* the proposition "Hare admired Whitehead" and *denotes* the fact that Hare admired Whitehead.⁵ The true proposition *corresponds* to the fact. The string, connotation, and denotation can be thought of as the vertexes of a triangle; the relations of connoting, denoting, and corresponding as the sides, in *this* case. Other cases of "the semiotic triangle" will be considered below.

To further set the scene, I quote from page 12 of Ralph Eaton's well-known 1931 textbook *General Logic*, owned by Hare and known to Ducasse, being listed in the "Bibliography of Symbolic Logic" published by Ducasse's ASL the first year of his presidency.

The *proposition* must be distinguished from the *sentence*, the combination of words or signs through which it is expressed; from the *fact*, the actual complex situation whose existence renders it true or false; and from the *judgment*, which affirms or denies the proposition.

Hare could have accepted this, but only as an approximation needing supplementation and clarification.

Concerning its supplementation, the four concepts-proposition, sentence, fact, and judgment-are not enough for Hare: he also distinguished the proposition from the private *belief* that it is true and from the *statement* making the belief public. During the 1960s and 1970s, Hare favored a six-sided framework recognizing propositions, sentences, facts, judgments, propositional attitudes, and speech acts-although he did not use the expression 'speech act'. Years later, I adopted much of his approach without however sharing its naturalistic metaphysics and epistemology (Corcoran 2009). It might be misleadingly general to say 'naturalistic' if the word 'psychologistic' could be used without showing disrespect: he preferred to think of propositions as accusatives of certain "mental activities" (1969, 269), an expression from the 1600s (Arnauld and Nicole 1662/1964, 111) that he later updated to "psychological activities" (1975, 88). To reconcile this view with traditional principles he accepted, he resorted to the lame and hackneyed dodge of taking each proposition to be an equivalence class of such mental accusatives $(1969, 270).^{6}$

Concerning its clarification, Hare would have objected to Eaton's improper use of the overworked verbs 'affirm' and 'deny'. In one proper sense, *people*, not *judgments*, affirm or deny [sc. negate] propositions, and they do so by making affirmative or negative statements. In a derived sense, a *statement* can be said to affirm or deny [sc. negate] the proposition. But there are other contexts into which philosophers force the words: for Aristotle, an affirmative *proposition* affirms the predicate of the subject (*On Interpretation*, Ch. VI). Eaton's quoted usage is not even grammatically the same as Aristotle's. Eaton used a two-place or

transitive verb taking a subject and a direct object; Aristotle used a three-place or hypertransitive verb taking a subject, a direct object, *and* an indirect object.

Hare would have noticed that Eaton's misuse suggests failure to distinguish the judgment from the assertion or statement (Frege 1997, 52, 198). The judgment is always private and silent, and never done in writing; the assertion is normally public and done in writing or speaking. Hare and I discussed that contrast, which Frege never explicitly treats.

However, Hare never notes that propositional *attitudes* such as doubting and believing are grounded in propositional *actions* such as grasping and judging, which seem to presuppose prior existence of propositions. He seemed to sense the "chicken-egg" problem (1969, 269): do propositions exist through belief or does belief presuppose prior existence of propositions? In fact, Hare's use of 'mental activity'—instead of, say, 'mental attitude'—for that which has the proposition as its accusative suggests inattention to the attitude/action distinction.

Hare's writings about propositions are sensitive to ordinary "manin-the-street" usage, to then-current views in the logic community, and to the history of logic, but he rarely gives specific bibliographic references for his normally accurate observations. For instance, he wrote the following (1969, 268):

Indeed, the venerable doctrine that a proposition is "the verbal expression of a judgment," unpopular as this view is among modern logicians, probably is more in accord with both man-in-the-street usage and the history of logic than Ducasse's account.

This doctrine is found almost in this wording on page 75 in Richard Whately's influential 1826 *Elements of Logic*, credited with reviving logic in England. It was read by most logicians writing in the 1800s: Mill, Boole, De Morgan, and Jevons to name four. The view goes back at least to the famous *Port Royal Logic* (1662/1964, 99, 111, 114).

There can be no discussion without a shared vocabulary. If one person says 'Every proposition is either true or false'—as Hare and I do—and certain others say 'Not every proposition is either true or false' (Mill 1843/1878, V.I, Bk. II, Ch. VII, §5), there need not be disagreement. The second sentence can but need not be used to deny what the first was used to affirm. In order for a second speaker to contradict a first by uttering the negation of a given *sentence* uttered by the first, it is sufficient for the second to have used the negation to deny the very same *proposition* the first used the given sentence to affirm. If "certain others" use the word 'proposition' for something that might change or even lose its truth-value or that has no truth-value until conclusively tested, there is no contradiction. Likewise, there is no contradiction if "certain others" use 'true' in a coherence sense, in a pragmatist sense,

or in an epistemic sense. Of course, one person might share another's vocabulary for purposes of discussion without adopting it.

Hare's writings on propositions used a vocabulary he shared with his intended "audience," which included C. J. Ducasse, E. H. Madden, and R. E. Santoni—to mention three. Moreover, being a historian, he was aware of his writing for a specific, limited audience that shared certain presuppositions and for which certain theses were uncontested. The richer the class of shared presuppositions and uncontested theses the more fruitful a dialogue can be. These uncontested theses can serve to characterize meanings of words such as 'proposition' occurring in them—in much the same way that the axioms of geometry have sometimes been regarded as characterizing meanings of geometrical words.⁷ Perhaps more aptly, holding that the word 'true' is indefinable, Frege thought its meaning was explained by the laws of logic (1918, 290).⁸

Uncontested Theses

Among Hare's uncontested theses was the traditional law of *excluded middle*—"every proposition is either true or false"—and also the law of *non-contradiction*—"no proposition is both true and false." He was generally careful to point out a "venerable doctrine" he took to be contested (1969, 268).

He also subscribed to the *propositional attitude thesis*: every object of belief, disbelief, or doubt is a proposition (1969, 268; 1975, 80). Instead of the ambiguous word 'object'—which he used roughly in the sense of "patient"—he preferred 'accusative', which, though less familiar, lacks the ambiguities of 'object'. His ontological use of this normally grammatical expression is carefully chosen. He seemed to characterize or locate propositions as accusatives of the three traditional propositional attitudes.

The propositional attitude thesis, so prominent in the work of Hare and Ducasse, is not even mentioned by Eaton (1931), whose index omits the crucial words 'attitude', 'belief', 'disbelief', and 'doubt'. It would be interesting to know who first proposed this thesis, and to know what its historical origin is. Mill (1843/1878, V.I, Bk. I, Ch. I, §2) wrote: "Whatever can be the object of belief, or even disbelief, must, when put into words, assume the form of a proposition." For the record, Frege (1997, 52–54) was moving in the right direction when he discussed "the content of the judgment" in 1879, separating the judgment *per se* from its object. Even though Frege continued to give insufficient attention to the traditional propositional attitudes, by about 1918 he had distinguished the act of grasping a proposition from the act of judging it, and he distinguished the two both from the proposition—which is not an act but the object thereof—and from the act of asserting the proposition (1997, 329). Believing a proposition is holding it to be true; disbelieving is holding it to be false. However, as mentioned, there are two senses of the transitive verb 'to doubt' relevant here. Doubting a proposition, in the first sense intended, is not simply neither believing nor disbelieving: it is impossible to doubt a proposition that one does not understand. Doubting is an attitude that requires an object, an accusative, toward which it is directed. Once a proposition has been grasped, the propositional attitude of understanding it has been established, and only then can we begin the process of judging. When the process is completed, or consummated—to use Hare's term—the judger has a belief or disbelief. Judging the proposition to be true produces belief of it; judging the proposition to be false produces disbelief of it. But, if the process has not started or has not come to a conclusion, the judging person has doubt—in this mainly philosophical sense.

The converse of the propositional attitude thesis is that every proposition is the object of a definite "opinion"—held at a certain time by a certain person.9 Hare certainly accepted this, but he seems reluctant to assert it (1969, 271). I put the word 'opinion' in double quotes when I use it in the broad sense of a proposition toward which one has one of the three classical propositional attitudes, following Ducasse and Hare (1975, 88). In this technical sense, every proposition known to be true or known to be false is an "opinion" of the knower. Moreover, among a person's "opinions" are the propositions the person grasped but did not judge. In this sense, an "opinion" is a belief, disbelief, or doubt, and conversely.¹⁰ The question is not limited to traditional propositional attitudes. It concerns understanding: are there propositions that have never been understood by anyone? The "venerable doctrine" construed literally would yield a resounding "Of course not, judgments are human creations!" Arnauld and Nicole (1662/1964, 111) wrote, "all mental activity can be reduced to conceiving, judging, reasoning, and ordering"

Hare also accepted the *truth-value coherence thesis*: propositions are the things that can literally and coherently be said to be true or be said to be false. He cheered Ducasse's insistence that an "opinion"—someone's belief, disbelief, or doubt—should never be said to be true or false. A person's belief or disbelief is "correct" if the proposition believed is true or the proposition disbelieved is false but "erroneous" if the proposition believed is false or the proposition disbelieved is true. I applaud Hare, who would have been amused to know that this terminological nicety had been anticipated over three centuries earlier in the 1662 *Port Royal Logic*, which called a judgment "correct" or "incorrect" according as the proposition involved was true or false—evidently ignoring negative judgments (Arnauld and Nicole 1662/1964, 111). Although Mill praised the *Port Royal Logic*, he did not always learn its lessons: his stated view was that "errors are false propositions" (1843/1878, V.I, Bk. I, Ch. I, §2). Respecting the truth-value coherence thesis, Ducasse does not apply "true" or "false" to sentences or to facts. Hare suggests that Ducasse's theory could accept interrelating or tying together the sentence, the proposition, and the fact in a form of "the semiotic triangle."¹¹ The sentence is at the vertex; the connation and the denotation are at opposite ends of the base. The sentence—composed of words—connotes the proposition—composed of meanings. If the proposition connoted is true, the sentence or propositional expression denotes the fact—composed of the things the proposition is about. Hare wrote that "the expression can connote a proposition while having zero denotation (i. e., the proposition expressed [*sc.* connoted] is false)" (1969, 269–70).¹²

SENTENCE

2

1 3

CONNOTATION true proposition false proposition DENOTATION state-of-affairs, fact zero, null, nothing

Hare and Madden criticized Ducasse for identifying the true proposition with the fact it corresponds to (Hare-Madden 1975, 89). However, Hare and Madden never show the slightest understanding of why an intelligent person would be inclined to make this mistake, nor do they ever admit that other important figures such as Frege (1918/1956) made it.¹³

Hare and Madden never mention the apparent interchangeability of expressions such as 'it is true that' and 'it is a fact that', or 'is true' and 'is a fact'. Moreover, they never mention contexts like the following that make it appear that certain expressions, e.g., 'that zero is even', apparently denoting facts, also appear to denote true propositions and conversely.

Zero is even. It is a fact that zero is even. It is true that zero is even. The fact that zero is even is true. The proposition that zero is even is true. It is a true fact that zero is even. The fact that zero is even is a known truth. The proposition that zero is even is true if and only if it is a fact that zero is even.

Do Frege and Ducasse agree? Ducasse might have been hypostasizing propositions while Frege was doing the reverse to facts. Either way, Hare and Madden's criticisms seem decisive. The thought that the universe is exhaustively composed of timeless abstractions such as true propositions seems wildly implausible. But neither Frege nor Ducasse, as far as can be determined from the Hare-Madden discussion, seemed to accept this interpretation. Moreover, as far as I can tell, there is no discussion by Frege¹⁴ or by Ducasse of the ambiguity of the word 'fact'. Ducasse implied that Mont Blanc is a constituent of "Mont Blanc is cold" (Hare 1969, 271), whereas in his posthumous writings Frege implied the contrary (1997, 293). It would seem to follow that for Frege Mont Blanc is *not* a constituent of the fact that Mont Blanc is cold.

Ambiguity of 'Not'

Hare, attuned to the importance of ambiguity in philosophical dialogue, recognized two senses of the word 'not'. In one sense it is used for the familiar "truth-functional" negation sometimes synonymous with 'it is not the case that'; in another sense it indicates that the speaker intends to deny something (1969, 267) and thus has the attitude of disbelief toward that something. The sentence 'not every number is even' might be used to affirm a negation or to deny a universal. In the first sense, which I call the *truth-functional* sense, it indicates a feature of the logical form of the proposition expressed. In *some* simple cases, inserting or deleting an occurrence of such a 'not' reverses truth-value. Thinking that this is *always* the case leads to the *fallacy of single negation*: "some number is even" and "some number is not even" are both true.

The word 'not' is never used in the second sense when it occurs in a clause of a larger sentence as in the following.¹⁵

If not every number is even, then some number is not even. Zero is not odd and one is not even. Every number that is not even is odd.

In all such occurrences, it contributes to expression of a part of the proposition that the sentence is used to affirm. This is so even if it is repeated as in 'if two is even, it is not the case that it is not the case that two is even'. Of course, the proposition expressed has the same truth-value as the one expressed by deleting the repeated 'it is not the case that'.

An occurrence of 'not' being used by a speaker to indicate denial of a proposition is used in what I call the *attitudinal* sense. However, in this case its meaning is not part of the proposition denied—any more than the meaning of 'is it the case that' is part of the proposition questioned using a sentence beginning with it or that the meaning of the question mark is part of the proposition questioned. Hare thought that Ducasse meant to say that the attitudinal sense never occurs as part of a proposition (1969, 267).¹⁶

Hare is the first person I know of to recognize the distinction between the truth-functional and attitudinal senses of negative expressions such as 'not' and 'it is not the case that'. Along with this goes recognition that denying a proposition is not the same act as affirming the negation of a proposition. The truth-functional negation is not used to deny a proposition. As Aristotle first noted in Chapter VI of *On Interpretation*, whatever is the object of an act of affirming can be the object of an act of denying, and whatever is the object of an act of denying can be the object of an act of affirming: affirming and denying apply to the same things—propositions.

In order to clarify the fact that I am not giving Hare too much credit, I should note that in 1879 Frege has a very closely related distinction: roughly, between negatively judging a proposition devoid of negations and affirmatively judging the negation of such a proposition (1997, 54–5). However, later he abrogates virtually all ground for credit by repeatedly and improperly using 'is denied' where no denying or judging is relevant (1997, 56, 60), as I note below.

The declarative (sentence) type covers two subtypes: the *assentive* and the *dissentive*. It is useful to consider the interrogative type at the same time. Compare Lyons (1977, vol. 2, 802–3):

Interrogative: Is it the case that 1000!+1 is prime? Assentive: It is the case that 1000!+1 is prime. Dissentive: It is not the case that 1000!+1 is prime.

The three speech acts that use these three sentences are performed on one and the same proposition.¹⁷

The interrogative sentence can be used to express curiosity—or "philosophical doubt"—in the same proposition that the assentive is used to express belief in and the dissentive is used to express disbelief in. Being an *inquiry* is clearly a property of a speech-act and not of the proposition that is the object of the act. Likewise, being an *acceptance* is primarily a property of a speech-act and not of the proposition that is the object of the act. A person may accept any proposition whether "affirmative" such as "Every prime exceeds one" or "negative" such as "No prime precedes two." As Hare points out, being a *rejection* is primarily a property of a speech-act and not of the proposition that is rejected. A person may reject any proposition whether "affirmative" or "negative."

There are cases of course where the interrogative preamble 'is it the case that' is omitted and the inquiry is indicated simply by the question mark or, in speech, by intonation. At least as common are cases where the affirmative preamble 'it is the case that' is omitted and the acceptance is signaled in speech by intonation or in writing by punctuation. There are even cases of course where the negative preamble 'it is not the case that' is omitted and the rejection is indicated simply by the context

or, in speech, by ironic intonation. Recently, I overheard a colleague say 'That's a wonderful idea' in such a tone that it was clear the opposite was meant. Are there cases where an acceptance is made using an interrogative type sentence? Of course. Some of these use what are known as "rhetorical questions."¹⁸

It goes without saying that the assentive preamble is subject to an ambiguity similar to that of the dissentive: instead of signaling assent it can be intended as empty rhetoric. This is especially common when it occurs inside the sentence as in 'if 1000! +1 is not prime, then it is the case that a smaller number is a prime factor of 1000! +1'.

Another important difference between the truth-functional and the attitudinal interpretations of the ambiguous negative preamble 'it is not the case that' concerns the "double negation," for example, the following:

It is not the case that it is not the case that 1000! +1 is prime.

In the truth-functional sense, this could be used to assert a proposition having the same truth-value as the proposition that 1000! +1 is prime, as said above. But in the attitudinal sense, things are different. In the first place, it is not the case that denying that I am denying that 1000! +1 is prime is asserting that 1000! +1 is prime. Rather, denying that I am denying that 1000! +1 is prime is much weaker; it reveals very little about my attitude toward the proposition that 1000! +1 is prime. In fact, if someone were to ask me whether I deny that 1000! +1 is prime, I might well reply as follows.

I deny that I deny that 1000! +1 is prime.

However, it is not clear to me whether the last sentence could be used as a "conversational equivalent" to the above "double negation" taken attitudinally. Anyway, asserting the double negation of a proposition is not achieved by "double denying" it or denying its "denial."

In the usual symbolic languages, there are no *attitudinal preambles* such as 'is it the case that', 'it is the case that', 'it is not the case that'. In such languages, absolutely every sentence is a component of larger sentences and therefore every occurrence of a negation sign is truth-functional: no occurrence of a negation sign is attitudinal. However, in 1879 Frege did not always seem to recognize the difference. He apparently thought that propositions involving truth-functional negation really involve nested denials. He writes as if his asserting "not every number is even" was his asserting that he was denying that for every number he was denying that it was even. He seemed deliberately and repeatedly to write 'is denied' where 'it is not the case' would have been

more to the point and to write 'is affirmed' where 'it is the case' (or nothing) would have been more to the point (1997, 52–75).

In the 1918 Frege papers, which Hare probably did not read, there are many points that touch on themes about which Hare wrote. Frege (1918/1956, 293) noticed that the same proposition is asserted whether an assentive sentence is used with or without an assentive preamble: "it is the case that 1000! + 1 is prime" is the same proposition as "1000! + 1 is prime." Unfortunately, the only assentive preamble Frege considered was the ambiguous 'it is true that', which can also be used not as a preamble but to ascribe truth to the proposition. And worse, he failed to notice the ambiguity and, perhaps as a result, he mistakenly thought that ascribing truth did not change the proposition either. After all, whereas 'it is the case that 1000! + 1 is prime' can be used to assert a proposition about a certain number and not about a proposition, the sentence 'the proposition that 1000! + 1 is prime is true' can also be used to make an assertion about a proposition and not about a number. The proposition about the number 1000! + 1 is expressed in the object language. The proposition about the proposition is expressed in the meta-language. Moreover, as I only recently noticed, Frege (1997, 355) comes close to Hare's distinction between the truth-functional and the attitudinal "not"-even though he never explicitly discussed propositional attitudes, and he rarely used the words 'belief' and 'disbelief' in the relevant senses.

Hare (1969, 267) considers a statement made using the ambiguous sentence 'God does not exist'. On Hare's view this might be construed in at least three ways: as (1) a rejection, denying the affirmative proposition that God exists or as acceptance of either of two propositions; (2) acceptance that it is not the case that God exists—affirming the negation of an affirmative; or (3) acceptance that God is non-existent—affirming an affirmative having a negative predicate adjective. The difference between 2 and 3 is analogous to one of the differences described using the expressions *de dicto* and *de re*. On one analysis, statement 1 uses the attitudinal negation; 2 and 3 use the truth-functional. Hare has taken a step past the position suggested by Santoni (1969, 258).

Acknowledgements

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NOTES

1. Ducasse served as president of the ASL (1936–38), the APA (1939), the American Society for Aesthetics (1945–46), and the Philosophy of Science Association (1958–61).

2. Mill was one of the first logicians to emphasize this aspect of the proposition (1843/1878, V.I, Bk. I, Ch. I, §2). Mill uses the expressions 'object of belief' and 'object of disbelief' prominent in Hare's writings. This section of Mill's book deserves study by anyone interested in this topic. In his brief §2, Mill combines wisdom and insightful originality with sloppiness and slavery to confused tradition.

3. Unfortunately, Hare's ideas about the ontics and epistemics of propositional relations such as consequence, contradiction, and consistency cannot be treated in the space available.

4. I did not adopt this until the 1980s. The following passage was written during that period (1989, 38). Hare attended the colloquium meetings where the paper was discussed.

Some sentences express propositions and some do not. The sentence 'Two exceeds one' expresses the true proposition "Two exceeds one." The sentence 'One exceeds two' expresses the false proposition "one exceeds two." The properties "true" and "false" have as their range of applicability the class of propositions. Any attempt to affirm or to deny "true" or "false" of a non-proposition results in gibberish, incoherence, category error, nonsense. The sentences 'One is true' and 'One is false' do not express propositions at all.

5. Hare's undergraduate thesis was on Whitehead (2008, 357).

6. I think he would regret this ill-advised expression of his naturalistic temperament. His heart was not in it; he did not pursue the project.

7. The word 'proposition' has been assigned many meanings, sometimes two or more by the same writer in the same work. Hare and Ducasse wrote as if 'proposition' had one meaning, something they did not believe (1969, 267–269).

8. Frege's misnamed 1918 paper "The Thought" is becoming the historical *locus classicus* of the subject.

9. Were more space available, I would discuss the *propositional action thesis*—every object of a propositional action is a proposition—and its converse, of course.

10. Hare and Madden say that an opinion is "a proposition plus some attitude toward it" (1975, 88). This seems to allow the possibility of opinions being accusatives of other attitudes.

11. This is my expression, not Hare's or Ducasse's. If I remember correctly, it is suggested somewhere by Peirce.

12. Hare slipped into using the misleading 'express' where he preferred 'connote': strictly, propositions are expressed by people, not sentences; propositions are connoted by sentences, not people. But, we can cut ourselves and others some slack on such niceties.

13. In conversations and colloquium meetings, Hare often emphasized two of his own hermeneutical principles, both violated in the chapter under discussion. Both concern obligations incurred by charging a respected and accomplished scholar of error. The first is to make it clear how such an error could have made by such a scholar *and* how the scholar could have overlooked it. The second is to explain how the mistake may have seemed to advance the scholar's agenda or otherwise provided the scholar gratification.

14. Frege mentions this point only twice in his voluminous writings (1997, 93, 342).

15. To simplify the exposition, I am ignoring at least two other structural, non-attitudinal senses of negative particles such as 'no', 'not', and 'non': one adverbial as in 'no worse' and 'not equal'; one adjectival as in 'not men' or 'non-man'. Anyway, the truth-functional negation is non-adverbial and non-adjectival. This might be the place to express my doubt whether 'truth-functional' is the best term to use here. It would be better to have a word whose "sense" is to "sentence" as "adjective" is to "noun" and as "adverb" is to "verb."

16. On the face of it, this might seem to be a sensible view for Ducasse to take; the counterexamples—if any—would probably be "exceptions that prove the rule." However, the passages Hare quoted to support his interpretation seem to suggest a different view often attributed to De Morgan and Jevons, that in a logically perfect language there are no negations of any kind: all terms come in complementary pairs neither of which contains any negative feature; "odd" and "even" in number theory would be an example.

17. In 1963, the proposition that 1000! + 1 is prime was a famous unsolved problem of number theory (Stein 1963, 27).

18. This important topic, which deserves a separate work, has been treated by many logicians down through the ages. There have been three main sub-issues, one for each of the three traditional propositional attitudes. In a given assertion, what indicates the acceptive attitude? What makes a speech-act an affirmation and not a denial or an inquiry? Aristotle started the discussion with the claim that the verb "always indicates that something is said or asserted of something" (On Int., III). The Port Royal Logic expands on Aristotle (Arnauld-Nicole 1662/1964, Part II, Ch.2, 104-107). On 107, it says: "The essence of a verb is to indicate the activity of assertion." Mill said similar things (1843, Vol. I, Bk.I, Ch.IV, p. 85). And, perhaps surprisingly, Frege seemed to join the parade when he said that assertoric force is bound up with the predicate (1997, 54, 324). Although he broke ranks by announcing his obscure but oft repeated view that the assertoric force is supplied by "the form of the assertoric sentence" (1997, 158, 330, 356)writing as if all assertoric sentences have the same "form," he never gave up trying to find assertoric force in the sentence as opposed to the speech act-unless he was taking the sentence to be the act and not the string of characters or sounds. Hare seemed to think that some verb-forms indicate assertoric force and some do not (1969, 267).