

Sean-Michael Lewis
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Rethinking the existence of the thetic judgment

The proper logical representation of sentences and their negative forms has been a hotly debated topic for centuries. Aristotle posited that the form of natural language sentence had a basic subject-predicate form; the predicate would either be affirmed of the subject, or denied (shown in (2), (5)). The debate began when the Stoics stated that all sentences were propositions, and that a proposition was negated in total, via a preceding negative operator (shown in (3), (6)). In Stoic or propositional logic, negation has scope over the entire sentence, while in Aristotelian or term logic, the scope of negation is limited to the predicate. All accounts since then have for the most part taken one of these sides. In his book, Larry Horn (1989) outlines the history of this debate, and provides his own opinion on the matter.

- (1) Socrates is intelligent.
- (2) [Socrates]:**aff**: [intelligent]ⁱ
- (3) **p**
- (4) Socrates is not intelligent.
- (5) [Socrates]:**den**: [intelligent]
- (6) **~p**

Essentially, Horn makes his case for Aristotle's logic over that of the Stoics, but does allow for the possibility that some natural language sentences are in fact propositions, rather than subject-predicate forms. This allowance is made in light Kuroda's (1972) evidence in Japanese syntax of two types of statements or judgments: categorical judgments (sentences with logical subjects or topics) and thetic judgments (sentences with no logical subjects). Given the presence of a clear subject in categorical judgments, Horn states that negation is applied to these sentences a la Aristotle;

predicates are denied as properties of the logical subjects. Even though thetic judgments appear to have no subject, Horn explains that term negation will still apply, if only at a pragmatic level. In his own words, "... a subject potentially within the semantic scope of a sentential negation is typically interpreted as thematic and hence outside its pragmatic scope." (Horn 1989; p. 514)

The simultaneous existence of categorical and thetic judgments presents a problem for both the Aristotelian and Stoic concepts of sentence structure, and thus concepts of sentential negation. It would certainly be undesirable to allow for two distinct types of assertion and negation. Horn avoids this problem by using pragmatics to essentially make all statements Aristotelian. The effect of his proposal is that regardless of the syntax or semantics of a sentence, there is always a logical subject that a predicate is either affirmed or denied of. This account seems unsatisfactory to me. While I agree with Horn's arguments in favor of predicate denial, I don't see how a thetic judgment, which does not appear to favor any constituent as a subject, interprets pragmatically as a subject-predicate formation.

Because of these and other uncertainties, I wish to take the position that thetic judgments are actually categorical judgments that have abstract subjects. In developing my argument, I'd like to show that this single judgment model is favorable from logical, semantic and syntactic perspectives. The ultimate result of this analysis will be that Aristotle's assessment of the structure of statements (both affirmative and negative) was correct, and that the pragmatic account of apparent propositions by Horn is unnecessary. But, before I essay my arguments, I will provide more solid definitions of thetic and categorical, as part of summary of past work on judgment structure.

I. An in-depth look at categorical andthetic judgments.

The idea that all sentences were either categorical orthetic originated with the work of Franz Brentano and was elaborated on by his pupil Anton Marty. Their theory of judgment structure defined a categorical judgment to require two separate acts in its resolution: recognition of the subject, and affirmation or denial of the predicate's relation to the subject. The theory describesthetic judgments to be the simple recognition or rejection of some judgment material (i.e. proposition).

Kuroda uses this theory to explain a syntactic phenomenon in Japanese, at the same time applying restrictions to the constituents of the two judgments. The phenomenon in question is the selection of syntactic markers by the NP in subject position. The syntactic subject selects either *-ga* or *-wa* as a marker. Sentences that select *-ga* have the same translation as those that select *-wa*; the difference between the particles is the context in which they are used. Notice the following pairs of data:

- (7) Inu ga neko o oikakete iru.
- (8) Inu wa neko o oikakete iru.
"A/the dog is chasing the cat."
- (9) Inu ga hasiru.
- (10) Inu wa hasiru.
"Dogs run."

Kuroda's claim is that sentences with a *-wa* marked subject are categorical, while those with a *-ga* marked subject arethetic. He comes to this conclusion by examining the contexts in which *-wa* and *-ga* are appropriate in both 'specific' and 'generic' sentences. The distinction between 'specific' and 'generic' is given in (11), a direct quote of Kuroda.

- (11) I call a sentence generic if a statement made by it is a statement about a general, habitual, or constant state of affairs of some sort, and specific if the statement made by it refers to a particular occurrence of an event or state of affairs (Kuroda 1972; p. 160) .

Given this definition, it is clear that (7) and (8) are examples of specific sentences.

The context in which (7) would be used is one in which an observer sees a dog chasing a cat and notes, ‘A dog is chasing a cat.’ Kuroda provides the following analysis of the steps involved in making this judgment:

- (12) X’s chasing of Y.
- (13) X is a dog.
- (14) Y is a cat.

It is important to note that the first part of this judgment involves the recognition of the event, and not the syntactic subject. Then, the actors in the event are placed. Since the important material of this judgment is the event, X may be an indefinite dog (i.e. a dog) or a definite dog (i.e. the dog).ⁱⁱ The same freedom of definition is available to Y. In fact, it is also possible for X and Y to be represented by proper names. The variables are restricted, but they can be described in any way that is appropriate to their roles in the event.

The sentence in (8), however, would be used when the dog was of primary importance to the utterance. For example, if someone were talking about her dog rather than the event of the chase, she would use (8). The event of the chase is still referred to, but only in trying to affirm the dog’s participation in said event.

There are other possibilities for *-wa* marking as well, however. If the speaker wanted to make a subject out of the cat, akin to saying, “The cat is being chased by a dog,” she would use (15). She could also make reference to the same event, but make a subject out of the location of the event as in (16). Here, an optional locative, *in the garden*, is made

to be a subject. Thus, it appears that any phrase that is assigned a role may be made into a subject in specific sentences.

(15) Neko wa inu ga oikakete iru.

(16) Niwa de wa inu ga neko o oikakete iru.

Kuroda's mapping of *-ga* to thematic and *-wa* to categorical appears very strong in light of the contexts in which each particle is used in specific sentences. The primacy of the event in sentences with *-ga* marked subjects matches the Brentano-Marty definition of thematic. Sentences containing *-wa* marked subjects act to affirm or deny qualities of said subjects, making it easy to define them as categorical.

The mapping also works well in regard to generic sentences, in that generic sentences are always categorical. The timeless qualities described by generic sentences must be attributed to a subject. Kuroda notes this when pointing out that (9) is a rather awkward construction, and could only be used in a very specific situation. In general, to say "Dogs run" is to say that to run is a quality or property of dogs. The affirmation of that property makes the statement categorical, thus sentences with *-wa* marked subjects like (10) are used to make generic statements.

Kuroda's conclusion is that specific sentences, those that refer to an event or state of affairs, may be either categorical or thematic, while generic sentences are always categorical. This distribution of judgment types is interesting in that it seems that all sentences can possibly have a subject. In the case of generic sentences, this is fairly straightforward; the NP being described by the predicate is the subject. Specific sentences however, can select a number of different XPs as subject, or in the case of thematic readings, no logical subject at all. As is evident from my summation, the distinction between specific and generic sentences, and probably thematic and categorical, is

dependent upon the predicate of the sentence. Since predicates that allow for thetic readings also allow for categorical readings, I don't think it is plausible to say that a subject is extracted from thetic judgments pragmatically. If the speaker wished for a certain XP to be interpreted as subject, she would have the option to do so.

Given that the distribution of thetic and categorical judgments seems to be based on their predicates, I would like to leave behind Kuroda's model of looking at specific and generic sentences. In investigating the reasons that some predicates allow for thetic readings, I will look to previous work that makes a distinction between stage-level and individual-level predicates. The definitions of these predicate types work well as analogs to Kuroda's specific and generic.

- (17) Stage-level predicate (SLP): describes a stage or eventuality, and is able to change over time.
- (18) Individual-level predicate (ILP): describes a property of an individual, and does not change over time.

The study of SLPs and ILPs is rather extensive, and the terminology doesn't exactly match up, but I believe that this model is compatible with Kuroda's model. SLPs, for example, describe events just as specific sentences do. Likewise, ILPs are analogous to generic sentences in that neither is rooted in time. There is not much, however, in SLP and ILP literature concerning categorical and thetic judgments, though Ladusaw (1994), and McNally (1995) both indicate similarities. Most notably, Eduardo Raposo and Juan Uriagereka (1995) propose that the SLP/ILP distinction is really a categorical/thetic distinction. While some of their observations are similar to my own, they have different motivations and arrive at different conclusions. Thus, I will spend time in making a correlation between Kuroda's ideas of categorical and thetic and the SLP/ILP distinction.

The reasoning behind my desire to speak of predicates rather than sentences is because the distribution of logical readings among SLPs and ILPs is similar to that ofthetic and categorical judgments among specific and generic sentences. What's more is that there have also been analyses and explanations of this distribution. While it would be very convenient to be able to say that SLPs are predicates of specific sentences and that ILPs are predicates of generic sentences, there is a conflict of terminology. The term *generic* has a slightly different meaning in SLP/ILP literature than the one that Kuroda uses. So, before I exploit the accounts of the SLP/ILP distinction to my own ends, I will spend time clearing up the terminology. Much of the data used in work on SLPs and ILPs is in English, and I will use English data in my own argumentation. Although Kuroda's observations were in Japanese, it will be made clear that they apply in English as well.

II. The stage-level and individual-level distinction.

Below are examples of SLPs and ILPs.

(19)	SLP	ILP
	available	altruistic
	sick	pretty
	hungry	blond
	chase	own
	eat	know
	run	intelligent

As noted in (17), SLPs deal with eventualities. When predicated upon a subject, they describe a quality that is true at a given time. ILPs, as stated in (18), describe inherent properties of subjects they are predicated upon. These properties are independent of time or eventualities. This distinction has led linguists such as Angelika Kratzer (1988), Molly Diesing (1992), and Ted Fernald (2000) to propose that SLPs require a

spatiotemporal argument that ILPs do not. Kratzer goes on to claim that this variable accounts for the differences in which sentences with indefinite arguments can be bound by quantification and existential closure.

Sentences (20) and (21)ⁱⁱⁱ are respective examples of an ILP and an SLP with indefinite syntactic subjects.

(20) Firemen are altruistic.

(21) Firemen are available.

Indefinite NPs, such as *firemen* in (20)-(21), are variables in that they do not refer to specific entities. For this reason, these sentences are allowed generic readings in which they are bound by the implicit generic quantifier, G^{iv} . Sentences such as (20), which contains an ILP with an indefinite argument, have only a singular generic reading.

Thus, (20) is read as, “Generally, firemen are altruistic.” To formalize generic sentences such as (20), I will use the logical notation for generic quantification provided in (22).

(22) G_x [*Restrictive Clause*] [*Nuclear Scope*]

This formula basically translates to, “Generally, for any value that that can be assigned to the variable x in the restrictive clause, the nuclear scope is predicated upon the value.”

This formula also requires that the variable on which G operates be present in both the Restrictive Clause and the Nuclear Scope. This requirement is restated in the Prohibition against Vacuous Quantification in (23).

(23) **Prohibition against Vacuous Quantification**

For each quantifier Q , there must be a variable x such that Q binds an occurrence of x in both its restrictive clause and its nuclear scope.

Given this logical notation for generic sentences, the appropriate formalization of (20) is provided in (24) with its generic reading restated in (25).

(24) G_x [*fireman(x)*][*altruistic(x)*]

(25) Generally, firemen are altruistic.

We would assume that since (21) has the same indefinite subject as (20), it also has a generic reading. While this observation is in fact true, Kratzer (1988) and Diesing (1992) note that sentences containing indefinite SLPs actually have three readings rather than one. Their explanation for this ambiguity is based upon a syntactic account of the appearance of the spatiotemporal event argument assigned by SLPs. The pairs in (26)-(31) provide my approximation of Kratzer's (1988) and Diesing's (1992) formalizations for the three readings of (21). I say that the formalizations are approximate because the two linguists did not use exactly the same formalization. Their formalizations were logically equivalent however, as are my mine. In my notation, the spatiotemporal argument is represented by *l*.

(26) $\exists_{x,l}$ [fireman(x) & available(x, l)]

(27) There are firemen available.

(28) $\mathbf{G}_{x,l}$ [fireman(x) & space-time(l)] [available(x, l)]

(29) All firemen are necessarily available at all times.

(30) \mathbf{G}_l [space-time(l)] \exists_x [fireman(x) & available(x, l)]

(31) Generally, at any time, there are firemen available.

In looking at the formalizations and readings of (20) and (21), we find a familiar distribution; the syntactic subjects of ILPs necessarily appear in the restrictive clause, while those in SLPs may or may not appear there. It should be noted that the reading in (26)-(27) is definitivelythetic. The logical formalism is a standard proposition, and the gloss clearly indicates a simple judgment: there is no apparent subject, just a statement of affairs. Thus, if generic readings could be considered categorical constructions, the distribution of categorical andthetic among SLPs and ILPs would be identical to their distribution among Kuroda's (1972) specific and generic sentences.

Both Kratzer and Diesing, in an attempt to account for this distribution of readings, provide a syntactic analysis that seems to indicate just that relationship. They assume a mapping hypothesis, which maps a syntax tree to a logical formalization. The hypothesis assumes a Government and Binding theory of syntax and is provided in (32).

- (32) **Mapping Hypothesis**
Material from VP is mapped into the nuclear scope.
Material from IP is mapped into a restrictive clause.

The effect of this hypothesis is that syntax trees are split into two parts, as illustrated in (33).

(33)

This hypothesis predicts that when an indefinite NP appears as a syntactic subject (i.e. in Spec-IP), it will be bound by **G**. If an indefinite NP appears within the VP, it will be bound by existential closure. The result of this hypothesis is that the logical distinction between SLPs and ILPs is evident in the syntax of representative sentences. Kratzer and Diesing both agree that the syntactic distinction between the predicates lies in the position of subject generation, though they differ on the account.

Kratzer proposes that the difference is a matter of argument structure. Her claim is that ILPs assign an external argument, which is base-generated in Spec-IP. The tree in (34) exhibits the d-structure, s-structure and LF of (20) under this analysis. Applying the mapping hypothesis in (32), we find that *firemen* is mapped to the restrictive clause while

altruistic goes to the nuclear scope. The resultant logical representation of this mapping is found in (24), as desired.

(34)

SLPs differ from this ILPs in that they have an event argument, which Kratzer claims is assigned externally. As a result, all NP arguments are base-generated internal to the predicate. Since the event argument is implicit in her analysis, it is not present at d-structure or s-structure; it appears in Spec-IP only at LF. This allows internal NP arguments to move to the subject position of Spec-IP at s-structure. The d-structure and s-structure of (21), using this analysis, are shown in (35) and (36) respectively.

(35)

(36)

The moving NP can be interpreted in one of two positions at LF: either Spec-IP for a generic reading (if it is indefinite), or internal to the VP for an existential reading. The

mapping, which could have occurred at any level of syntax for a sentence like (20), must occur at LF in order for the three readings of (21) to be generated. Thus the mapping for all sentences is assumed to happen at LF. In (37) and (38) below, two of the possible three LFs of (21) are presented. They map to the logical formalizations in (28) and (30) respectively. The LF that maps to (26) is actually the same as that of (30). I will discuss this observation in detail at a later time.

(37)^v

(38)

Diesing (1992) notes that Kratzer's argument based account does not allow for sentences that contain floating quantifiers. She instead proposes a control-based analysis of SLPs and ILPs that provides the same LFs that Kratzer does. Since she also employs the mapping hypothesis (she actually proposed the hypothesis), her analysis arrives at the same logical formalizations as Kratzer's. Though her analysis does admit to the existence of an event argument, the argument plays no role in accounting for her proposed distinction in SLP/ILP syntax. Fernald (2000) claims that the mapping hypothesis does not account for more complex predicates, proving both Kratzer's and Diesing's analyses to be faulty. But, while both Diesing and Fernald note serious

problems with Kratzer's account, her emphasis on the role of the event argument in SLP/ILP distinction deserves further consideration.

Let us look again at my interpretation of the generic quantification formula, which I have restated in (39).

- (39) Generally, for any value that that can be assigned to the variable x in the restrictive clause, the nuclear scope is predicated upon the value.

This gloss seems to indicate a subject-predicate relationship between restrictive clause and nuclear scope. Kratzer captures this relationship in her argument structure based analysis. While the mapping hypothesis that she uses would allow any variable present in Spec-IP to be mapped to the restrictive clause, Kratzer indicates an inherent subject-predicate relationship at an earlier level of interpretation. For example, ILPs always assign an NP to the external argument position of Spec-IP. Since Kratzer assumes a mapping hypothesis, the external argument of ILPs will always be mapped to the restrictive clause. ILPs inherently lend themselves to logical subject-predicate forms, in that they are always generic. Given that ILPs describe timeless qualities and properties, and that they seem to always be involved in subject-predicate relationships, it would appear that sentences containing ILPs are categorical. They are sentences that describe their subject.

Kratzer's proposal for the argument structure of SLPs also has interesting consequences. Although the event argument is implicit, its assignment to the external argument position blocks other NP arguments from being base-generated as a subject. Sentences with SLPs are about the space-time represented by the event argument. Although another NP may move to be interpreted in the restrictive clause, it shares the status of logical subject with the event argument.

What I hope to show from analyzing Kratzer's motives is that generic sentences are in fact categorical judgments. The restrictive clause of generic statements is populated by a logical subject, while the nuclear scope is populated by a predicate. Although the external argument analysis does not accurately describe the syntax, it is descriptive logically. So, while Kratzer's syntactic account is wrought with holes, it does capture the fact that ILPs describe NPs, while SLPs describe events.

This observation about the subject-predicate nature of SLPs and ILPs does pose a question concerning the possible readings of SLPs containing indefinite NPs. If SLPs inherently have events as subjects, how does the thetic representation in (26) occur? This question can be answered if we look at SLPs and ILPs that contain definite arguments. While indefinite arguments may be bound by quantification and existential closure, definite arguments can have no such readings. Note the reading of (21) described in (27). The existential reading means that there are firemen available, *here and now*. While the formalism in (26) shows the event argument to be bound by existential quantification, I think that this is a mistake on Kratzer's part. If this reading contained a variable event argument, one that did not refer to a specific time and place, then said argument would be bound by generic quantification since it would be base generated in Spec-IP. The reason that **G** does not bind the event argument in Spec-IP is because the argument is not a variable. That being the case, the event argument for the reading in (27) cannot be bound by either. But, does that mean that this non-variable event argument should be left out of the formalization? It probably shouldn't be, though Horn (1989) notes that logical formality does not account for subject-predicate formations. In fact, the logical representation of generic sentences is not meant to indicate a relationship between subject

and predicate per se. So, instead of using standard formalism, I will use my own notation to formalize the reading described in (27). I will use L to indicate a definite event argument, rather than l , which indicates a variable event.

(40) [L]:**aff**:[firemen are available]

In (40), the proposition *firemen are available* is affirmed as a quality of the space-time represented by L .

In analyzing the SLP/ILP distinction, it is clear that SLPs assign an event argument that ILPs do not. According to Kratzer, this event argument is always a subject, which allows for sentences that have only an implicit subject. But, given that Kratzer's syntactic analysis has proven untenable by both Diesing and Fernald, how does the event argument make itself evident in the syntax. While I do not have a syntactic analysis in mind that would be able to account for the grammatical effects of the event argument, I would like to propose some logical and semantic arguments that further support the role of the event argument as subject of otherwise subject-less sentences. Afterwards, I will discuss what a syntactic analysis that did incorporate the event argument would need to include. I would also like to note that many of my examples henceforth will not contain NPs that introduce variables, nor will the event arguments be variables themselves. Thus, the concepts of restrictive clause and nuclear scope will have no meaning in these examples. But, the examples above show that ILPs with variable themes and SLPs with variable event arguments do assign logical subjects (i.e. what goes into the restrictive clause. If we make these arguments definite rather than variable, while they won't be in restrictive clauses or nuclear scopes, they will still act as logical subjects.

III.Perception and resolution.

Let us return to Kuroda's example of a person who observes a dog chasing a cat. In describing the event, the observer utters the sentence in (41).

(41) A dog is chasing a cat.

The predicate chasing a cat is an SLP, and so I claim that there is an event argument that plays a role in the logical representation of the utterance in (41). As Kuroda explains, in this situation, the observer is talking about the chase. He describes the process of the observer making the judgment in (12)-(14), restated here in (42)-(44).

(42) X's chasing of Y.

(43) X is a dog.

(44) Y is a cat.

But, given that the observer is observing, what is she actually talking about? I think that before the observer utters the statement in (41), or even makes the description made in (42), she recognizes the space and time in which the chase is occurring. She recognizes the event, then affirms a description of the event. The process of making the statement in (41) is identical to the process involved in making a categorical judgment. Thus, we can formalize (41) in (45), which is the English translation of (7).

(45) [L]:**aff**:[A dog is chasing a cat]

Now let us consider the case when an observer wishes to speak of the dog involved in the chase. In this case, the observer, making a logical subject of the dog, would again say (41) in English, or (8) in Japanese. Kratzer and Diesing observe that NPs may be read as logical subjects in SLPs, but only in addition to the event argument. So, is the logical subject *a dog*, or is it a combination of *a dog* and the event argument. Let us again look at the steps the speaker takes in making this judgment. Since she is speaking about the dog, she must have recognized the dog first. She then affirms that the dog is chasing a

cat. But, is the fact that the dog is chasing a cat a property of the dog, or is it only a description of the dog at the time and place of the chase? I think that the speaker in fact observes the dog at a time and place *L*, and describes the dog at *L* as chasing a cat. This reading of (41) and (8) would be formalized in (46).

(46) [a dog at time and place *L*]:**aff**:[chasing a cat]

I have revisited Kuroda's explanation of the process involved in making a thetic judgment and presented another one in its place. My analysis acknowledges the presence of a spatiotemporal event that I believe a speaker is referring to when describing an event. I have also shown the importance of the event argument's inclusion in the subject when an NP is made a logical subject. I would now like to discuss the importance of the event argument in resolving the truth-values of sentences.

The sentences in (47) and (48) are identical to (20) and (21) with the exception that they contain definite NPs.

(47) Harry is altruistic.

(48) Harry is available.

In determining whether the categorical (47) is true, one makes a comparison between predicate and subject. Is altruistic a property of Harry? If it is, then the statement is true, otherwise, the statement is false. In order to determine the truth-value of (48), we would need to know from context which reading is being used. Let us assume that we can tell from context that (48) is a statement describing Harry. Again, we ask if available is a property of Harry. A yes or no answer to the question would seem to indicate truth or falsehood, but unlike altruistic, available is dependent upon time. If Harry is altruistic, we can say he is so at all times and at all places. His availability, however, is contingent upon the time and place in which the statement is being analyzed. If I am 3000 miles

away from Harry and need his medical skills immediately, then Harry is not available. If I am in the same town as he is, he may in fact be available. In either situation he would still be altruistic though. Thus, in order to determine the truth of (48) in the context that Harry is the logical subject, we must determine if available is a property of Harry at a given time and place.

What about the reading of (48) where Harry is not the logical subject. If this reading is analyzed thetically, then there is no subject with which to compare the predicate. How do we determine its truth-value then? The fact is that in order to determine the truth-value of any simple judgment, you must compare the sentence to the time and place in which it is rooted. If the sentence is a proper description of the space-time it is describing, then the statement is true.

In both describing events and resolving truth values of statements containing SLPs, I have argued that recognition of the space and time in which the sentence is rooted absolutely necessary. These observations provide logical evidence that thetic judgments are in fact categorical judgments with abstract subjects. I would now like to strengthen my argument by examining some semantic phenomena associated with SLPs and ILPs.

IV. Presupposition and the abstract subject.

In my analysis of the concepts involving thetic categorical, I have made a distinction between logical and syntactic subjects. The two types of subjects can be clearly distinguished by examining (21). While it is clear that *firemen* is occupying a syntactic position associated with subjects (generally considered to be Spec-IP), it may not be interpreted as the logical subject. A logical subject is essentially the topic of the sentence; it is what the sentence is about. Horn (1989) notes that some linguists consider

the idea of a topic or logical subject to be inherently linked with presupposition.

Essentially, if the sentence is about a subject, then the sentence presupposes the existence of said subject. If we look at Kuroda's examples of categorical sentences, it seems fair to say that the *-wa* marked subjects are presupposed. Thus, if the event argument assigned by SLPs is a valid logical subject, we would expect it to be presupposed.

Let us return to the case of the person observing a dog chasing a cat. Except, this time let the dog be a specific dog that is owned by the observer. What if the observer's friend were to ask the question in (49)?

- (49) What is the dog doing?
- (50) The dog is chasing a cat.

The question in (49) presupposes the existence of the dog. The sentence in (50) is the reply the observer would give to (49). Since (49) is about the dog, valid answers to the question will also be about the dog. So, we must assume that the reading of (50) is the one where the dog is part of the logical subject, and thus presupposed.

Let us now consider a case when the friend asks the observer the question in (51).

- (51) What's happening?

If this question is about nothing and presupposes nothing, then just about any statement could be considered a valid answer. In (52)-(54) I provide some representative statements as potential answers to (51).

- (52) The dog is stupid.
- (53) There are people swimming in Paris.
- (54) The dog is chasing a cat.

Note that (52) is not a valid answer to the question posed in (51). And, while both (53) and (54) are valid answers, (53) is a bit awkward given the context.

To account for these observations, I'd like to propose that (51) does have a presupposition, even if it is nothing more than that something happened. The question is about any events relevant to the observer. Since (52), in that it contains an ILP, only presupposes the existence of the dog, it is not a valid answer to (51). It does not provide information that the question is asking for. The statements in (53) and (54), however, are SLPs that have event argument subjects. While (53) is certainly a better answer than (52), the space-time to which it refers is not very relevant to the observer. The sentence in (54) is a description of an event that is immediately relevant to the observer^{vi}. This point about relevance to the observer is important in relation to the intent of the friend asking the question. By asking the question in (51), the friend is asking about any number of events that the observer may or may not have observed. In fact, since it is not a yes-no question, we might consider it to presuppose the existence of at least one event. The sentence in (54) is a description of one such event, whereas the event described in (53) is not.

In light of these observations, I believe that the event subjects of SLPs are in fact presupposed. By describing an action or state of affairs, one presupposes the space-time on which the description is being predicated. Thus, questions that presuppose a certain space-time can only be answered by statements that also presuppose said space-time. In this way, the event argument proves once again to act as subject.

One problem with my presupposition-based analysis is the question of the validity of (55) as an answer to (51).

(55) Firemen are available.

It is clear that even if the event argument is referring to a relevant space and time, (55) is an odd answer to (51). This would seem to indicate that what is really important in answering the question in (51) is providing a non-stative answer. This problem arises from the fact (51) is at its root, non-stative itself. What is required to show the importance of the event arguments presupposition, in addition to my reasons for selecting (54) over (53), is a question that is both non-stative and that presupposes a particular space-time. One that comes to mind, but may not be particularly strong, is the question in (56).

(56) What's up?

This question is very nebulous, but does not seem to have any requirements on stativity. It seems to only want to information about notable space-time descriptions. It doesn't ask about non-stative happening, nor does it ask about a specific entity. The answers in (52) and (53) are still infelicitous, for the aforementioned reasons concerning presupposition. But, I think that both (54) and (55) are valid answers to (56), assuming they have event argument subject that matches the space-time that the inquisitor is assuming in her utterance.

V. Consequences and questions.

In this essay, I have provided logical and semantic evidence that SLPs have abstract subjects. The result of this observation is that the thetic judgments Kuroda are really just a variant of categorical judgments. This fact frees Horn from having to allow for the possibility of Stoic negation in thetic sentences. But, while I have shown that abstract subjects function just as lexical subjects, I cannot account for their existence

syntactically. In closing, however, I will provide a few thoughts on what phenomena a syntactic analysis would need to account for.

I have already noted that my analysis relieves Horn of having to acceptthetic judgments as Stoic propositions. But, there is still the question of negative scope in these sentences. For example, the negation of (50) would be:

(57) The dog is not chasing a cat.

This syntactic structure would seem to indicate that negation has scope over the predicate only. Yet, we know that in the reading where the event argument is the sole subject, negation would need to have scope over all of the overt elements of the statement, as per the formalization in (58).

(58) [L]:**den**:[the dog is chasing a cat]

While there are a number of syntactic proposals that try to account for the presence of *not* in sentences, it is clear that it appears somewhere between Spec-IP and VP. Thus, in order for *not* to have scope over the whole sentence, all lexical elements must be dominated by VP at some level of the syntax. Since this restriction is obviously not required at s-structure, I would assume that it holds true at d-structure. While movement of NPs from within VP to Spec-IP would allow for (57), indefinite NPs would have the option of staying within VP for existential constructions a la (59).

(59) There is a dog chasing a cat.

It is also important that the event argument appear in Spec-IP at some level of syntax. This requirement is important in terms of maintaining the fact that the event argument is involved in a categorical relationship with the rest of the sentence, just like an NP.

As it turns out, both of these requirements are features of Kratzer's analysis. But, as I have already stated, her explanation of how the grammar generates these constructions is not sound, nor is her dependence on the mapping hypothesis. While Diesing does provide an analysis that is effective in so far as it avoids Kratzer's pitfalls, it still relies on the mapping hypothesis, and it is not motivated by the existence of the event argument. This is problematic in my mind because the event argument is functions in most ways just as an NP subject, yet is completely left out of Diesing's syntax. I believe that any syntactic analysis of the SLP/ILP distinction should reflect the importance of the event argument's role in the semantic and logical facets of the distinction.

VI. Conclusion

When I read Larry Horn's treatise on negation, the problem introduced by thethetic judgment intrigued me. While thetic judgments appeared to be propositions in the Stoic sense, their syntax did not reflect it. I also found the idea of a proposition difficult to understand in terms of determining truth-value. At the same time, Horn's pragmatic address of this issue seemed unsatisfactory in that it seemed to undermine the intent of the speaker of a judgment. As a result of examining literature on the SLP/ILP distinction, I have found that thethetic judgment is in fact a categorical judgment with an abstract subject. I have shown that this subject is equivalent to an NP subject in terms of its semantic and logical function. Contrary to Raposo and Uriagereka (1995), who argue that the SLP/ILP distinction can be eliminated by adopting a categorical/thetic approach to sentences, I propose that the categorical/thetic distinction does not exist, though its proposed effects are apparent from and SLP/ILP approach. And, while I have not provided a syntactic analysis, I have described an approach to the syntax that allows an

entire sentence to be negated within the predicate structure, providing the appearance of wide-scope negation. All sentences are categorical, and the question that was once subject or no subject is now lexical subject or abstract subject.

ⁱ This is my own notation for term logic. It takes the form:

[*Subject*]: **aff** | **den** : [*Predicate*]

ⁱⁱ Japanese has no definite or indefinite articles.

ⁱⁱⁱ Kratzer's (1988) (2a) and (2b) respectively.

^{iv} **G** roughly translates as *generally*.

^v Kratzer does not exactly say how the NP and the event argument would occupy Spec-IP together at LF. It is clear, however, that they must both map to the restrictive clause, so I assume that the event becomes an adjunct of the NP just for presentation's sake.

^{vi} This reading has only the event argument as subject.