

**A Semantic Analysis of Amount Relatives: In Comparison with Concealed
Exclamatives**
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Since Carlson (1977) pointed out the existence of amount relatives (e.g. *It would take days to drink the champagne that they spilled that evening.*), a number of studies have analyzed these relative clauses (Heim (1987), Grosu and Landman (1998), and McNally (2008)). They state that what semantically characterizes amount relatives is that they describe amounts as opposed to individuals.

- (1) a. It will take us the rest of our lives to drink the champagne that they spilled that evening.
 b. It will take us the rest of our lives to drink as much champagne as they spilled that evening. (Grosu and Landman (1998:132))

The relative clause in (1a) can be interpreted as an amount relative. We, thereby, get the identity of quantity reading from the sentence in (1a), as expressed by the sentence in (1b). In this respect, amount relatives are different from ordinary restrictive relatives.

In addition, the idiosyncrasy of amount relatives is found in the following examples, which are cited from Carlson (1977:525):

- (2) a. Every man there was on the life-raft died.
 b. The people there were at that time only lived a few decades.
 c. That's all there is.
 d. *{Five / Many} men there were here disagreed.
 e. *{Some / A} man there was disagreed.

These examples tell us that amount relatives can only occur with certain determiners: basically, only universal quantifiers (*every*, free-choice *any*, *all*) and definite articles (*the*, *those*) are felicitous. Therefore, amount relatives show a kind of definiteness restrictions in their antecedent positions.

Previous studies have attempted to explain the semantic characteristic of amount relatives in a principled way, but they fail. For example, Grosu and Landman (1998) explain this characteristic with some ad hoc operators. Firstly, they assume a maximalization operator MAX in these relatives. The operator MAX guarantees that the denotation of the antecedents of amount relatives will be interpreted as a singleton set. As a result, this singleton set requires a definite article or universal quantifier

modifying an antecedent of an amount relative. At first sight, they can explain the way in which the meaning of amount relatives is derived. However, the following example is problematic for their account:

- (3) I read all the books there were on the table. (McNally (2008:163))

In sentence (3), the amount relative identifies the books which the speaker actually read. Grosu and Landman, then, posit that an additional operator SUBSTANCE is needed to ensure the identity of individuals. The operator SUBSTANCE has an effect on the denotation of amount relatives and converts it from a set of degrees into a set of individuals. It is clear that this operator is redundant since the application is limited to amount relatives including *there*-constructions, as exemplified in (3).

The purpose of this thesis is to give a fundamental account for the semantic characteristic of amount relatives. In particular, we deal with a definiteness restriction in antecedents of these relatives. We propose that the speaker will put into the antecedents of amount relatives his/her subjective judgment about the amount of their referents.

It has been said that relative clauses whose antecedents are indefinite cannot be interpreted as amount relatives. This is exemplified by (4):

- (4) a. It would take us the rest of our lives to drink the champagne that they bought that evening.
 b. #It would take us the rest of our lives to drink a champagne that they bought that evening.

Sentence (4a), in which the restrictive relative with the definite head noun occurs, is acceptable, and the relative is interpreted as an amount relative. In (4b), however, the relative clause including an indefinite antecedent is not interpreted as an amount relative, but a restrictive relative. This observation suggests that amount relatives show a kind of definiteness restrictions.

Now, we explain this definiteness restriction in a principled way. When we are surprised at some event, it must be presupposed that this event has happened, because we cannot be surprised at anything that has not happened. Furthermore, the existence of participants in the events also must be presupposed. Then, antecedents of amount relatives must be definite noun phrases. The following examples confirm this point:

- (5) a. *{Five / Many} men there were here disagreed.
 b. *{Some / A} man there was disagreed.

- c. Every man there was on the life-raft died.
 d. That's all there is. (Carlson (1977:525))

In (5a) and (5b), since the antecedents of relatives are indefinite, the existence of their referents is not presupposed, and then the relatives cannot be interpreted as amount relatives. In (5c) and (5d), in addition to the definiteness restriction, scalar implicatures are involved in the grammaticality of them. When we are surprised at certain elements, these elements must be at the extreme end of some contextually determined scale. Then, universal quantifiers such as *every*, *all*, and *any* can occur in antecedents of amount relatives, and are preferred to other quantifiers. With this scalar implicature in mind, we can explain the following contrast:

- (6) a. *The sailor that there was on the island drowned.
 b. The {one / single / only} sailor that there was on the island drowned.
 (Grosu and Landman (1998:149))

As Carlson (1977) stated, sentence (6a) is unacceptable, because singular count nouns cannot imply the amount or number of their referents. In sentence (6b), on the other hand, although the singular count noun appears as the antecedent of the relative clause, the sentence is grammatical, and the relative can be interpreted as an amount relative. This is because the adjectives in (6b) emphasize that the amount or number of something is minimal (at the end of scale).

The expressions that focus on the end of a certain scale are also used to emphasize speaker's subjective judgments of value in Japanese, as illustrated in (7).

- (7) Datte watasi no kumi no hito wa minna motteiru noyo.
 because I-Gen class-Gen people-Top everyone has Particle
 "Because everyone in my class has it."

In this sentence, *minna* does not correctly refer to all of the people around the speaker. Rather, it just means that the speaker subjectively evaluates the number of such a person. The way that we express speaker's subjective judgments of value exactly reflects a general and fundamental human activity.

The account in this thesis suggests that there exists the parallelism between amount relatives and concealed exclamatives. Concealed exclamatives are constructions which express speaker's subjective judgments of value.

- (8) It's amazing the strange things he says. (Grimshaw (1979:298))

When we use this type of exclamatives, we make a subjective judgment of a value of property which an entity describes. Other than the occurrence of relative clauses, concealed exclamatives show the same syntactic pattern as amount relatives. For examples, relative clauses in concealed exclamatives also require their antecedents to be definite, as shown below:

- (9) a. It's amazing the strange things he says.
 b. *It is amazing a strange things he says.

The antecedent of the relative in sentence (9a) contains a subjective judgment of value in a similar way to absolute exclamations (e.g. *What strange things he says!*).

As stated above, amount relatives are similar to exclamatory expressions in that the speaker's subjective judgments of value are involved in both constructions. As a result, we can explain the following parallelism between them:

- (10) a. It's amazing the strange things he says.
 b. *It isn't amazing the strange things he says.
 c. *Is it amazing the strange things he says? (Paul and Zanuttini (2005:59))

Negating or questioning the predicate in (10a) gives rise to ungrammaticality. Portner and Zanuttini (2005) claim that this is because negation denies a large degree of amazement, or extreme scalar quality, of the proposition, and interrogative sentences cast into doubt extreme scalar qualities which exclamatives generate. This property of exclamatives generates characteristic conventional scalar implicatures to the effect that certain elements are at the extreme end of some contextually determined scale. The same property is observed in amount relatives:

- (11) a. It would take us the rest of our lives to drink the champagne that they spilled that evening.
 b. *It would not take us the rest of our lives to drink the champagne that they spilled that evening.
 c. # Would it take us the rest of our lives to drink the champagne that they spilled that evening?

In conclusion, the assumption that speaker's subjective judgments of value are involved in amount relatives makes it possible to give a unified and comprehensive account for a semantic characteristic of amount relatives. We, thereby, categorize amount relatives into the same class as the exclamatory expressions.