ON THE RELATION BETWEEN THE CHOICE
OF *THAT* OR *WHICH* AND THE ARTICLES *THE* AND *A*
IN “COMPLEMENT” RELATIVE CLAUSES

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1. Introduction

In this note, we are concerned with the choice of *that* ($\emptyset$ (=zero form)) or *which* in such relative clauses (henceforth RCs) as those italicized parts in (1) and (2):

- (1) a. She is not the cheerful woman {(that)/*who} *she was before she married.*
b. My lawn-mower is no longer the reliable machine { $\emptyset$ /?which} *it used to be.* ((a), (b): Declerck (1991: 543))
c. He is not the scholar *that his predecessor was.*
(Wood (1952: 11))
- (2) a. His letter (December 5) implies the Soviet Union is a “fascist state” *which, of course, it is not.*
(Sigley (1997: 38))
b. Both the funeral and a lying-in-state which preceded it were garnished with the full rites and panoply of the Catholic Church, suitable to a papal knight and large cash benefactor *which Ben Rosselli was.*

(Nagahara (1990: 115–116))

Nagahara (1990: Ch. 4) claims that the RCs in (1), where the gap in the

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RC corresponds to the complement of *be*, are instances neither of restrictive RCs (henceforth RRCs) nor of nonrestrictive RCs (henceforth NRCs). They are arguably a distinct type of RC, in which case the RC functions as a “complement” to its head noun (=“complement” RCs (henceforth CRCs)). In the constructions of (1), the relative is *that* or ϕ ,¹ and *which* is not permitted. And the article must be the definite *the*. However, in similar relative constructions such as those in (2), where the gap is the complement of *be*, the article to the head noun phrase is indefinite and *which* is used in place of *that*, and ϕ is not acceptable. The factor governing the choice between *that* and *which* in those superficially similar constructions remains to be identified (cf. Nagahara (1990: 115–116)). In what follows, we try to identify such a factor (or factors) by taking into account the RCs (introduced by *that* and *wh*-relatives) that do not seem to be set-theoretically restrictive, and we also discuss the relation between these relatives and the articles *the/a*.

2. Generic Concept and the Relative *Which*

In this section, we sketch the main arguments presented in Nagahara (1990: Ch. 4) for the existence of a separate class of RCs functioning as “complements.”

2.1. Generic Concept and N'

According to one current version of formal semantics (e.g. Heim and Kratzer (1998: 86–88)), ordinary RRCs are a kind of intersective modifier. Let us take “the woman who the man loves” as an example. The RC “who the man loves” is represented as the set of the individuals the man loves (i.e. λx [the man loves x]), and the N' (the RC excluded) “woman” is represented as the set of women (i.e. λx [x is a woman]). And the relation of the two sets is defined by “the,” with the result that

¹ In the present study, we compare *which* and the pair *that/* ϕ by assuming that there is no practical difference in meaning between *that* and ϕ . However, according to my informant, ϕ is the normal use of relative in (1a). *That*, on the other hand, is added to “repeat” the idea of ‘cheerful woman.’ This means that the use of *that* is a careful way of uttering the sentence. This can be said to be a stylistic difference. The same observations are made by Nagahara (1990: 175–177) with respect to RCs of time adjunct, such as *by the time {that/* ϕ *}*

the intersection of the two sets (i.e. λx [x is a woman and the man loves x]) denotes a unique woman. The meaning of “the woman who the man loves” is, then, represented as follows: ιx : x is a woman (and) the man loves x .

According to Nagahara (1990: 97–108), the general head-complement relation can be seen in a certain type of RC. Two criteria—[a] gap-filling, and [b] syntactic distribution—help to “syntactically” diagnose RCs as having complement status. Complements in general function as filling semantic gaps of their head nouns (=criterion [a]). The RC “in which ...” in (3), then, functions as a complement to its head noun, e.g. *way*, in that the noun *way* has in its lexical meaning a “semantic gap,” i.e., it lacks information about the part “in which ...” of “way in which ...”:

- (3) Posture is not only a means of punctuating a conversation, it is also a way [in which people can relate to each other when they are together]. (Nagahara (1990: 99))

Criterion [b] says that one semantic gap must be filled with only one syntactic element. According to this criterion, “in which ...” in (3) should be a complement. To recognize this, consider (4), where two RCs follow the same head noun *ways*:

- (4) In addition to language there are other ways [in which man communicates] [that either reinforce or deny what he has said with words]. (Nagahara (1990: 100))

Since one semantic gap cannot be filled by more than one syntactic element, the two RCs belong to different classes of RC. Criteria [a] and [b] lead us to the conclusion that the RCs “in which ...” in (3) and (4) are complements (CRC), and the RC “that ...” in (4) is a restrictive modifier (RRC).

An RC, a restrictive modifier, combined with its head noun, forms a constituent of N' (which has a classificatory function (cf. Jackendoff (1977: 194))). Assuming with Jackendoff (1977: 194–195) that an N' is interpreted as a “predicate” of a predication *be*, Nagahara (1990: 110–111) argues that because a noun phrase in the post-copular position, i.e. a predicate nominal NP, is not referential but denotes a “class,” the N' as a predicate also denotes a class or a generic concept. If this line of reasoning is correct, it will be the case that an N' involving a “CRC” can also occur in that position because such an N' denotes a generic concept. As expected, in (3) [N *way* [RC *in which ...*]], which is an N' involving a “CRC” and denotes a generic concept, occurs in the predi-

cate position of *be*. There is evidence that the *N'* involving a CRC denotes a generic concept. Nagahara (1990: 112–113) demonstrates that the personal pronouns *it/them* can refer to part of a noun phrase, i.e. *N'*, that denotes a generic concept. According to my informant, the underlined sentence in (5) can be paraphrased as in (6):

- (5) Posture is a way in which people can relate to each other when they are together. There are many of *them*.
- (6) There are many ways in which people can relate to each other when they are together.

The point is that the part “many of them” is paraphrased without a definite article *the* before *ways* (cf. *many of the ways in which ...*). This means that semantically, “many of them” has the same structure as a pseudo-partitive such as “[_{NP} [_{QP} a lot of] [_N boys]].” Therefore, it can be concluded that the *N'* (*way in which ...*) involving the RC (*in which ...*) in (5) denotes a generic concept.

Furthermore, Nagahara (1990: §4.2.4) attempts to clarify the status of *which* in (7), by taking (4) as an example, whose semantic representation is (roughly) (7)² (p. 111):

- (7) $\exists x$ *x is a way [in which man communicates]* (either reinforce or deny what he has said with words (*x*)) (Nagahara (1990: 111))

Nagahara (1990: 111) argues that if the antecedent (*a way*) dictates that the whole noun phrase in the predicate position of a (matrix) *be* is not referential but denotes a generic concept, then it follows that *which* is not referential but denotes a generic concept in terms of the identity condition on the gap inside the RC. Nagahara (op. cit.) accordingly concludes that the relative *which* in “CRCs” in (4) denotes a generic concept.

Now suppose that it is the case that the relative of “CRCs” is the one that denotes a generic concept, i.e. *which* (but see the last paragraph of 4.1), as has just been argued. Then it can reasonably be expected,

² Nagahara (1990: 111) notes that exactly how the semantic structure of “a way [in which ...]” in (7) is to be represented remains to be clarified. In this paper, when we consider the semantic structure of (7), we do *not* adopt the idea of “intersection of the sets” (i.e. the intersection of the set that consists of “all ways” and the set that consists of “all the things with which man communicates”). An anonymous *EL* reviewer suggested to me that in considering the semantic structures of RCs, we need to adopt a semantics that incorporates individuals denoting generic concepts.

according to Nagahara (1990: 113–116), (i) that the noun phrase after the existential *there be* involves a “CRC” in the sense clarified just above, and (ii) the RC whose gap corresponds to the complement of a predicational *be* is a “CRC.”

First consider (i). Woisetschlaeger (1983: 138–146), observing existential *there be* constructions involving a definite noun phrase, such as *There was the smell of pot all over the apartment*, argues that a noun phrase that denotes a generic concept can occur as a focus NP after *there be*. In this case, “definiteness, and the attendant existential pre-supposition, attaches to the concept referred to by the generic, while the existence claim introduced by existential *there* attaches to some instantiation of the generic concept” (p. 143). As expected, in (8) an RC, which is introduced by *which*, occurs within the generic noun phrase (or more accurately, the N′) after *there be*, and the RC is interpreted as ‘there ought to have been some instantiation of the generic concept “a person who guides the people”’ (cf. Nagahara (1990: 115)):

- (8) People got separated a bit and I suppose, really, there was no one actually guiding them or looking after them *which, perhaps, there ought to have been.* (Nagahara (1990: 115))

Now let us turn to the case of (ii) (= (1)). Consider first the sentence in (9):

- (9) He is not [_{Pred Nom} the [kind of man] [_{CP} ϕ [_{IP} he was ___ ten years ago]]].

The predicate nominal NP in (9) is not referential but denotes a “class.” A class can be regarded as denoting generic concept. Because the antecedent *kind of man* dictates that the whole noun phrase as occurring in the predicate position is not referential but denotes a generic concept, the relative ϕ is not referential but denotes a generic concept in terms of the identity condition on the gap inside the RC, and thus we can take this gap to be an N′ which denotes a generic concept.

The two criteria [a] and [b] tell us that the RC (=CP) of (9) is a “CRC.” The RC functions as filling the semantic gap, i.e. the information about what kind of man he was, of the head *kind of man* (= [a]), and so it cannot be omitted (= (10)). As for criterion [b], since one semantic gap cannot be filled by more than one syntactic element, the unacceptability of (11) suggests that the two RCs are of the same type:

- (10) She is the kind of person *(that is always helpful).

- (11) *He is not the kind of man [that he was ten years ago] [that is always helpful].

From the discussions of the nature of the gap and the syntactic arguments concerning the criteria [a] and [b], we can conclude that the RC “[he was ___ten years ago]” in the containing noun phrase of (9) is an instance of “CRC.”

2.2. A Problem: *That* or *Which*?

The case of (ii), the main theme of the present note, poses us a difficult question (Nagahara (1990: 115)). As mentioned in the last section, since the predicate nominal NP after a predication *be* denotes a generic concept, it is expected that this NP can have an RC introduced by the relative *which* as a “CRC.” However, in cases where *which* is used, the article is *indefinite*, as in (2). When a *definite* article is used, on the other hand, the relative is invariably *that* or ϕ , as in (1) (and (9)). To account for these facts, in the next section we explore the possibility of exploiting the notion “generic concept and its instantiation,” as suggested by Nagahara (1990: 116), by using instances involving RCs whose gaps do *not* correspond to the predicate of *be*.

3. The RCs Whose Gaps Do Not Correspond to the Complement of *Be*

Let us first consider the *there be* construction involving an RC introduced by *which*, the gap of the RC corresponding to the subject, as shown in (12):

- (12) There's no simple solution *which will make this Christmas OK*.
(Sigley (1997: 26))

As already seen in 2.1, according to Nagahara (1990: 114), in (12) the RC introduced by the relative *which* denoting a generic concept should occur without violating the identity condition within the noun phrase (or the N') denoting a generic concept after *there be*. Now if it is the case that the existence claim introduced by *there* attaches to some instantiation of the generic concept, then it can be said that in (12) the existence claim is made about some instantiation of the N' denoting the generic concept ‘simple solution.’ To account for the fact that *which* refers to the generic concept ‘simple solution,’ and not to actual instances, we propose here that the RC itself describes the “instantiation” of the generic concept. Thus, in (12), the RC states concerning the generic concept ‘simple solution’ that an instance of ‘simple solution’ will make this Christmas OK. (This point will be clarified in 4.2.)

Next, we are concerned with the question of whether or not an instantiation of a generic concept can also be seen in a context other than *there be* constructions. Let us consider the RC in (13), where the gap corresponds to the subject:

- (13) He emerges in a brown pin-stripe suit, sweater vest, red tie, and tan, Italianate shoes. He seems a bit overdressed for *a man who installs pipes in rail cars for a living*. (DRS, 111)

Notice first that the preposition *for* (before *a man*) is “used to say that a particular quality of someone or something is surprising when you consider what they are” (*Longman Dictionary of Contemporary English*, 4th ed., *for*¹ 17). Let us assume that such a quality tells something about the “generic concept” denoted by a noun phrase after the preposition *for*. If this is correct, it will be expected that the relative of the RC involved in a noun phrase occurring in such a (generic) context also denotes a generic concept by virtue of the identity condition. Consider the N’ *man who installs pipes in rail cars for a living* in (13). This N’ as a whole denotes a generic concept (meaning roughly ‘plumber’). We assume here that ‘a kind (or quality)’ of a generic concept *can* instantiate in cases where *wh*-relatives are used, such as (13), and that *every* instance of that kind is denoted in the gap by way of the “classifying” function of *wh*-relatives (for the relation between classification and instantiation, see section 4.2). The RC describes what these instances are. Now if the antecedent of *who* is (*a*) *man* and it dictates that the whole noun phrase denotes a kind (or quality) of a generic concept, then it follows that *who* also denotes the kind, in terms of the identity condition. In (13) the existence of ‘a kind of man’ is denoted by the indefinite article *a* within the noun phrase (*a man*). Thus the subject gap in the RC is interpreted as ‘every instance of a kind of man,’ and the RC has the interpretation: [Every $x:x$ is an instantiation of x_k] install pipes in rail cars for a living (x).³ (Let x_k be an individual that refers to a kind of man.)

In this section, we have seen that the notion “generic concept and its instantiation” is also available to the RCs whose gaps *do not* correspond to the complement of *be*, as in (12) and (13). We have found out that in RCs such as those of (12) and (13), a *wh*-relative is used, as is the case with (2) and (8) (cf. fn. 6).

³ This interpretation was suggested to me by an anonymous *EL* reviewer.

4. The Functions of the Antecedent Noun Phrase and *That* vs. *Which*

In this section, we are concerned with the functions of the antecedent noun phrase which are supposed to affect the choice between *that* and *which*.

4.1. The Semantic Distinction between *That* and *Which*

The semantic distinction between *that* and *which* is quite common in traditional literature. Wood (1952), for example, notes that "*that* is much less definite than *which* and does not reflect the notion of the noun so clearly" (pp. 12-13), and that "*which* seems to be identified much more closely and strictly with the antecedent noun than does *that*" (p. 11). Note that Nagahara (1990: 111) claims exactly the opposite to Wood with regard to *which*, as can be seen from the discussions so far. Wood (1952) observes that in the type of RC represented by (1c), "the antecedent, though formally a personal one, denotes not so much a person, as a kind of person, or a quality of character" (p. 11). The RC in (14), where the gap of the RC corresponds to the object, might be the same type of RC as that of (1):

(14) He hasn't the position *that Brown has*. (Wood (1952: 11))

In (14) the relative *that* refers to the "kind" (or "quality") of the generic 'position' (= 'as good a position'); the gap could be interpreted as an N' denoting such a "kind" (= 'good position'). The same kind of observation holds more generally of the type of RC shown in (15), where the gap of the RC corresponds to the subject:

(15) a house *that has bay windows* (Wood (1952: 13))

In (15) the RC "specifi[es] some inherent, integral, or pre-existent characteristic" (Wood (1952: 13)), and RCs such as that in (15) tend to use *that* (p. 13). In other words, the content of the RC is a general statement about the kind of the abstract 'house' (= 'the kind of house such that it has bay windows'). It is quite plausible that in both (14) and (15) the RCs are not set-theoretically restrictive because the usual variable interpretation does not seem to be available to them, i.e., *that* seems to refer to some generic concept, or to the kind of the generic concept⁴ (cf. fn. 6).

⁴ In the current theories of generative grammar, the RC introduced by *that* is derived by null operator movement, so that this approach is not congenial to the idea that the relative *that* "refers to or denotes something."

To summarize: we have seen that both *that* and *which* are concerned with generic concept or the kind (or quality) of the generic concept. The latter of the two relatives, i.e. *which*, has already been discussed in Nagahara (1990). What is at stake here is that the functions of *that* and *which* cannot be distinguished in terms only of generic concept. In the next section, we will argue that the relative *which* has the classifying function, while *that* does not have such a function.

4.2. The (In)definiteness of the Antecedent Noun Phrase and *That* vs. *Which*

In this section, we discuss the differences between the RCs in (1) and the RCs in (2) by using (1a) and (2a):

- (1) a. She is not *the cheerful woman* {(that)/*who} *she was before she married.*
- (2) a. ... the Soviet Union is a “fascist state” *which, of course, it is not.*

Let us first consider the definite case in (1a), based on the discussions concerning (9) in section 2.1. Because the antecedent *cheerful woman*, which denotes a “kind” of the generic concept ‘cheerful woman,’ i.e. ‘the *same kind* of cheerful woman’ (see the discussion concerning (14)), dictates that the whole noun phrase is not referential but denotes the kind, the relative *that/ϕ* is not referential but denotes the kind of the generic concept in terms of the identity condition on the gap, and thus we can take this gap to denote the “kind,” i.e. ‘kind of cheerful woman.’ We propose here that the gap (left after null operator movement) in the RC is like [NP [Det X] [N' kind of cheerful woman]], where “X” in the Det position is a variable which is bound (at LF) by the definite article *the* of the head noun phrase. If the value of X is determined, then the interpretation of “the cheerful woman” is determined. In this analysis, it can reasonably be said that the existence of the definite article *the* is “licensed” by the following RC. In this sense, the definite article *the* is “part” of the RC, and it does not itself have a demonstrative or deictic function in the usual sense of the term. What, then, are the grounds for positing in the gap a variable X to be bound by *the*? Consider the sentences in (16)–(18):

- (16) a. *I bought the type of bread.
b. I bought the type of bread you like.

(Schmitt (2000: 311))

- (17) a. *John bought the type of house.

- b. John bought that type of house. (Schmitt (2000: 321))
- (18) a. *John bought the type of house.
- b. John bought the wrong type of house.

(Schmitt (2000: 315))

The examples in (16) illustrate a close Det-RC dependency. The co-occurrence of a definite article in (16) is made acceptable by the use of an RC. More generally, demonstratives and *wrong*-type adjectives behave like RCs in the same contexts: they make the relevant expressions acceptable, as shown in (17) and (18). (Notice that the *wrong*-type adjectives can be regarded as denoting “kind” or “quality” of some kind.) RCs and *wrong*-type adjectives license the definite article *the*, and demonstratives are licensed by replacing *the*. These facts suggest that in this type of expression (cf. “the kind of man” in (9)) ‘what type of’ is denoted in three different ways. From these observations, it can be concluded that the X denoting the “kind” (or “type,” as in (16)) of a generic concept is bound by *the*; in (1a), *the* binds X in [NP [Det X] [N’ kind of cheerful woman]]. (Note that the identity condition involves only the noun or the N’, and not the determiner of the noun phrase in the gap.)

We claim that in the definite case of (1a), the antecedent noun *remains* generic, and *no instantiation* of the kind of generic concept is intended in the gap; in this sense, the antecedent N’ and the N’ in the gap are “equational,” and *that/ϕ* is used to indicate this. The same observations hold of the RCs in (14) and (15). In (1a), the RC functions as a complement by “filling” a semantic gap, i.e. the “kind” that attaches to the generic concept of the head *cheerful woman*.

Next, consider the indefinite case in (2a). In the same way, the part *fascist state* denotes a class or a generic concept and *which* refers to the class or generic concept ‘fascist state’; the RC *which it is not* means ‘the Soviet Union is *not any* instance of “fascist state”.’⁵ We claim that in this type *which* functions as “classifying” (cf. Zandvoort (1975: 161, §457)) the abstract concept of the N’. Let us first take a predicational sentence such as *The Soviet Union is a fascist state*. In this sentence, *the Soviet Union* is “classified” into the class (generic concept)

⁵ We posit “*some* instances of ‘fascist state’” in the gap, and assume that *not* and *some* together make the meaning of ‘not any.’

'fascist state,' meaning 'the Soviet Union is an instance or a member of the class "fascist state".' This instantiation is denoted by the indefinite article of the predicate NP *a fascist state*. Similarly, in the relative construction in (2a), the relative *which* refers to the class or the generic concept 'fascist state,' and "classifies" *the Soviet Union* into the class 'fascist state' by associating it (within the RC) with some instances or members of the class. The gap in the RC, then, is interpreted as 'some instances or members of the class "fascist state".' In an indefinite case such as (2a), the RC functions as a complement by "filling" a semantic gap, i.e. some "instances" of the generic concept of the head *fascist state*. The classifying function of *which* might be reflected (via *which*) in the indefiniteness of the article; that is, the indefinite article *a* represents such an *instantiation* (within the gap) of the generic concept 'fascist state.' We assume that the *wh*-relative *who* also has this classifying function, and thus the same observations hold of (13). We also assume that unlike *the*, *a* belongs to the noun phrase because the indefiniteness of the antecedent is "relevant" in the interpretation of the matrix, i.e., *The Soviet Union is a fascist state (which it is not)* is also interpreted as a classification, independently of the following RC. (Notice that **I bought the type of bread* in (16a) is unacceptable (without an RC).)

5. Concluding Remarks

So far we have been discussing the semantic differences between the RC introduced by *which* and the RC introduced by *that*. In this concluding section, we claim first that the RCs in (1) and the RCs in (2) are subclasses (or variants) of the "same" type of RC, presumably "CRC," and that the details of the two RC subclasses are determined by the nature of the gap of each subclass, as summarized in (19) below. We would also like to claim that there are differences in derivation between the two RCs, one of which lies in the choice of the phrase to be relativized. As Sigley (1997) suggests, relativization on a "predicate" is involved in cases such as those in (2), where the relativized element is the whole predicate nominal NP in the RC. The gap (left after *wh*-movement) is interpreted as an instance (or a member) of the generic concept (=N') (or of the kind or class of the generic concept) denoted by the head noun. The antecedent of *which* corresponds to the N'. The cases of (1), on the other hand, are not instances of relativiza-

tion on a “predicate”; instead, the relativized element corresponds to the *N'* that denotes the “kind” or “quality” of a generic concept (note that the kind or quality part of the gap, i.e. the variable *X* at LF (after null operator movement), is bound by *the*), and *that* is used to refer to that *N'*.

The differences between the two “subclasses” of “CRC”⁶ are summarized as follows:

(19)

gap	antecedent	relative	determiner	e.g.
<i>X</i> kind of generic concept	<i>N'</i>	<i>that/φ</i> (kind or quality)	<i>the</i> (binds <i>X</i>)	(1), (9)
instantiation of (the kind of) generic concept	<i>N'</i>	<i>which/who</i> (classification)	<i>a</i> (instantiation)	(2)

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⁶ Actually, we need “syntactic arguments” (i.e. the criteria [a] and [b]) to know whether or not the RCs in (12)–(15) (with the subject and object gap) are “complements” in the sense of Nagahara (1990).

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