

Notes on class operators: *And the like, or the like, etc.*

Seungho Nam

1 Class constructions and class operators

Natural language has various ways of denoting plural entities – sets, sums, and groups. A simple plural morphology like English *-s* (as in *cat-s*) is a stereotype of plural marking, and some languages employ a bit more extended morphology like reduplicative plurals in Samoan and Salish. But many do not have a special morpheme for plurality, so common nouns in Korean and Japanese may denote either a singular or a plural reading depending on the context. Overt quantifiers or determiners often render the whole DP as denoting a plural entity, whereas some common nouns are inherently plural, i.e., *committee*, *team*, and *family* denote a group of people. Another way to denote a plural entity is to coordinate NPs/DPs, so *Marge and Homer* may denote a couple or a set of two individuals. Plural entities are sometimes denoted by a bare plural as in English. So *birds fly* means ‘generically, normal birds fly’ even though there might well be many exceptions.

The above plural constructions have all been treated as denoting a closed set, sum, or group, whose membership is determinate. But this article is concerned with some constructions which do not denote a determinate set or group but denote an open, non-determinate “class” of entities. For instance, the following sentences contain a sequence of words followed by *and/or the like*. These constructions do not determine a closed set or group with the enumerated exemplars, but they denote a plural entity like an ‘open sum’ of entities which covers the exemplars “and/or the like.”

- (1) a. We're also making ourselves available to the media for [*interviews and talk shows and the like*]. (AP)
- b. ... the popular science fantasy films such as [*Star Wars, Superman, and the like*]. (BNC)
- c. Some plays may live on – in [*York or Wakefield or the like*]. (BNC)

Let us call such expressions “class/c-constructions,” and they are claimed to denote a “class” – an open non-determinate plural entity. Thus a c-construction contains a sequence of exemplars and a special expression – *and/or the like* – which we dub “a class operator” or c-operator.

- (2) Class constructions: [exemplars + C-operator]
 $Ex_1, Ex_2, \dots Ex_n, O_{CL}$
Soccer, basketball, baseball, and the like

We will illustrate some other c-constructions in English, and we will focus on Korean counterparts of c-constructions. Korean has a special particle of class operator *tung* ('the like'), which corresponds to *and/or the like*, *and/or the others*; *etcetera*, and *so on/forth* in English. Thus for instance,

- (3) Selnal-ey-nun *ttek.kwuk, songphen, yakkwa*
 NewYearDay-on-Top rice cake.soup, stuffed rice cake, honey cookies
tung-ul mek-nun-ta
 TUNG-Acc eat-Pres-Decl
 'On the New Year's Day, We eat rice cake soup, stuffed rice cake, honey cookies
 and the like.'

This particle *tung* is not an independent noun, so it cannot stand in a subject or object position by itself. It can also take a sequence of verbal exemplars as well as nominals, thus we have:

- (4) na-nun hywuil-ey *yenghwa-lul po-kena tungsan-ul ha-nun*
 I-Top holiday-on movie-Acc see-or tracking-Acc do-Adn
tung yeka.hwaltong-ul culkinta
 TUNG leisure.activity-Acc enjoy
 'I enjoy leisure activities like going to see a movie or go tracking or the like
 on holidays.'

The following illustrates some more c-constructions in Korean, whose c-operator is either *ilen ke/ttawi* ('things like these') or *kulen ke/ttawi* ('things like those').

- (5) Hankuk.salam.tul-un *chwukkwu-hako/-na yakwu, kuliko nongkwu*
 Koreans-Top soccer-and/-or baseball, and basketball
ilen ke-lul cohaha-n-ta
 these thing-Acc like-Decl
 'Koreans like soccer, baseball, basketball and/or the like.'

2 Distribution of C-construction

2.1 C-constructions may have one or more exemplars, so a class operator can take a single exemplar to yield a class denotation. On the other hand, the list of exemplars can be extended as many as needed.

- (6) i.wel imsi kwukhoy-eyse *kwukka.poan.pep tung-ul*
 February temporary Assembly-at NSL TUNG-Acc
cheliha-l.yeceng.ita
 process-schedule.BE
 'The National Assembly meeting in Feb is scheduled to deal with *National Security Law and the like*.'

2.2 Exemplars can be given by simple enumeration, or conjunction, or disjunction. Thus, the class operators ignore the Boolean combinations of exemplars, so the following c-constructions denote the same 'class.'

- (7) a. hankukin-un *chwukkwu, nongkwu, yakwu* tung-ul culkinta
Koreans-Top soccer basketball baseball TUNG-Acc enjoy
'Koreans enjoy soccer, basketball, baseball and the like.'
- b. *chwukkwu-na, nongkwu-na, yakwu* tung-ul culkinta
soccer-or basketball-or baseball TUNG-Acc enjoy
- c. *chwukkwu-wa, nongkwu-wa, yakwu* tung-ul culkinta
soccer-and basketball-and baseball TUNG-Acc enjoy
'Koreans enjoy soccer, basketball, baseball or/and the like.'

English c-operators exhibit the same behavior, thus we have *and the like*, and *or the like* interchangeable in the following c-constructions.

- (8) a. the popular science fantasy films such as *Star Wars, Superman, and the like*. (BNC)
- b. This is surprising in view of the time which people spend in *committees, task forces and the like*. (BNC)
- c. Very few people could say when it is without consulting *a diary or the like*. (BNC)
- d. Some plays may live on — in *York or Wakefield or the like*. (BNC)
- e. There are no prohibitions against the formation of associations or societies for any lawful object — *religious, social, political, philanthropic, or the like*. (BNC)

2.3 C-constructions can take various types of exemplars, thus they might be entities, properties, or events as illustrated below:

- (9) a. There are no prohibitions against the formation of associations or societies for any lawful object – *religious, social, political, philanthropic, or the like*. (BNC)
- b. We're also doing radio and TV ads and making ourselves available to the media for *interviews and talk shows and the like*. (AP)
- c. *Yuli.chang-ul kkay-kena mun-ul puswu-nun tung-uy*
glass.window-Acc break-or door-Acc destroy-Adnom TUNG-Gen
pangpep-ulo ...
method-with
'by breaking a glass window or destroying a door, ...'

3 Semantics of “class”

As mentioned earlier, a class denotes a plural entity, which can be determined by exemplars in the c-construction. Then we say the c-construction implies a characteristic property of the class, “class property” in short.

3.1 Unlike other plural entities – set, sum, group, kind – classes do not denote a total function but a partial function. Thus a ‘class’ is not a categorically closed but an open entity, and it might be extended by more exemplars. So the more exemplars there appear, the more deterministic the class property is. Thus (10a) below gives more restricted class property than (10b) does.

- (10) a. *basketball, volleyball, soccer, baseball, beach volleyball, and the like.*
 b. *basketball, volleyball, and the like.*

Further, the more homogeneous exemplars there are given, the more restricted the class property is. Thus (11a) denotes ‘Eastern European countries’ while (11b) ‘European countries in general.’ But the class property is heavily dependent on the utterance context.

- (11) a. *Poland, Hungary, Slovakia, Romania, etc.*
 b. *Poland, Romania, France, Germany, Spain, etc.*

3.2 Scope behaviors: C-constructions can be interpreted as a ‘sorting key’ of a distributive reading. So in (12) below the class of Asian cities may scope over the ‘many K-pop stars’.

- (12) *manhun K-pop star.tul-i Tokyo, Beijing, Taipei tung-eyse kongyenha-ess-ta*
 many K-pop stars-Nom TUNG-Loc performed
 ‘Many K-pop stars performed at Tokyo, Beijing, Taipei and so on.’

Thus the above sentence is ambiguous in scope readings. The following sentence is also ambiguous between the distributive and the collective reading.

- (13) *England, France, Germany tung (Europe sencin.kwuk.tul)-un*
 TUNG (Europe developed.countries)-Top
may-nyen IMF-ey 100-ek euro isang chulyenha-n-ta
 each-year IMF-to more.than donate
 ‘(Such developed countries as) England, France, and Germany donate to IMF more than 10 billion euros each year.’

A class denotation in a question should scope under the question operator, so the following sentence does not allow distributive/pair-list reading.

- (14) *Nwuka Tokyo, Beijing, Taipei tung-eyse kongyenha-ess-ni?*
 who TUNG-Loc performed?
 ‘Who performed at Tokyo, Beijing, Taipei and so on?’

Without the c-operator *tung*, however, the sentence allows a distributive reading as well.

- (15) *Tokyo-hako Beijing, kuliko Taipei-eyse nwuka kongyenha-ess-ni?*
 T-and B and T -Loc who performed?
 ‘Who performed at Tokyo, Beijing, Taipei?’

3.3 Scope relation between ‘class’ and negation: When the scope construction shows up in a negative sentence, class operator should take a wide scope over negation. Thus the following sentence only yields a distributive reading, and it does not derive a collective reading.

- (16) *England-na/-wa*, *France*, *kuliko Germany tung-un* nam.kuk-ey yenkwuso-lul
 -or/-and and TUNG-Top South.Pole-at institute-Acc

yel-kay isang sellipha-ci.anh-ass.ta

ten-CL more.than set.up-not-Past

‘(Countries like) England, France, and Germany did not establish more than ten institutes at the South Pole.’

4 Concluding remarks

A class construction denotes a plural entity like an unorganized sum of individuals. The individual entities of a class do not form a nice lattice but a poorly organized plural. A class is highly unrestricted partial function, and its denotation is heavily dependent on the context. This fuzziness might be due to the speaker's intention or the lack of full information. We have introduced some features of 'class', but the fuzzy nature of its identity calls for further study.

Affiliation

Seungho Nam
Department of Linguistics
Seoul National University
nam@snu.ac.kr