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**Homogeneity in sentences with plural definites:
Rethinking non-maximal readings**

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The phenomena:

**Homogeneity and
Nonmaximality**

Homogeneity in sentences with plural definites

- (1) The teapots are pink. \rightsquigarrow *All of the teapots are pink.*
- (2) The teapots are not pink. \rightsquigarrow *None of the teapots are pink.*



scenario 1



- (1) is clearly **true**.
(2) is clearly **false**.



scenario 2



- (1) is clearly **false**.
(2) is clearly **true**.

Homogeneity in sentences with plural definites

- (1) The teapots are pink. \rightsquigarrow *All of the teapots are pink.*
- (2) The teapots are not pink. \rightsquigarrow *None of the teapots are pink.*



scenario 3

- **Homogeneity:**

Neither (1) nor (2) seem to be completely true (or completely false) in a mixed context.

(Both sentences can be true in scenario under a **nonmaximal** reading.)

- Plural definites are known to allow for **pragmatic slack**.

(3) The townspeople are asleep.

- **Nonmaximal reading:** (3) is **true** even if *'a few insomniacs are pattering around their houses.'*

Nonmaximality in the presence of homogeneity

- (3) The townspeople are asleep.
- (4) The townspeople aren't asleep.

- **Nonmaximal readings:**

- (3) is **true** even if someone is awake.
- (4) is **true** even if someone is asleep.

- **Homogeneity:**

In a **mixed context** neither (3) nor (4) are completely true or false.

- Some contexts give rise to 'quasi-universal' readings.

Context: *Sleep study. It is crucial that all participants are sleeping in order to move on with the experiment. One experimenter says to the other:*

(5) The participants are asleep.

- (5) is only true if, and only if, actually all participants are sleeping.
- The context **does not allow** for nonmaximal readings.

- Non-maximal readings occur even if the **exceptions are still referenced** by the plural definite.

Context a): *Professors at a PhD defense. All the professors except Smith (who is known to be grumpy) smiled, and then all the professors, including Smith, left.*

(6) The professors smiled and **then all** left the room.

Context b): *All the professors except Smith smiled and then left, leaving Smith behind.*

(7) #The professors smiled and **then all** left the room.

Slack removal: 'All'

- Homogeneity and nonmaximality **appear** and **disappear together**.

All has a **slack regulating** effect and removes homogeneity:

(3) The townspeople are asleep.

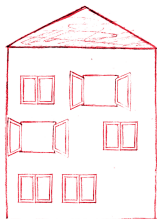
(8) **All** of the townspeople are asleep.

No homogeneity effect: (8) is clearly false if anyone is awake.

No non-maximal readings: (8) does not allow for exceptions.

[Križ, 2016, Križ and Spector, 2021]

Context: *Mary is leaving her house for a car trip with a friend. A few minutes after leaving, they see a storm coming in the direction of her house. She believes that she left at least some windows open and she knows that if at least one window is open, the house is not safe from the storm. Mary says:*



(9) Oh my, we have to go back home, **the windows** are open!

- (9) is true, even if **only a few** windows are open.

'Quasi-existential' readings: SAFE HOUSE

Context: *Mary is leaving her house for a car trip with a friend. A few minutes after leaving, they see a storm coming in the direction of her house. She believes that she left at least some windows open and she knows that if at least one window is open, the house is not safe from the storm. Mary says:*



(9) Oh my, we have to go back home, **the windows** are open!

- **Proposal 1:**

[Bar-Lev, 2021]

Plural definite predication introduces an **existential quantifier** that is oftentimes pragmatically strengthened.

(10) The windows are open. \rightsquigarrow *Some windows are open.*

'Quasi-existential' readings: SAFE HOUSE

Context: *Mary is leaving her house for a car trip with a friend. A few minutes after leaving, they see a storm coming in the direction of her house. She believes that she left at least some windows open and she knows that if at least one window is open, the house is not safe from the storm. Mary says:*



(9) Oh my, we have to go back home, **the windows** are open!

- **Proposal 2:** [Križ, 2015, Križ, 2016, Križ and Spector, 2021]
QUD in (10) gives rise to an **existential reading**.

(11) The windows are open. \rightsquigarrow *Some windows are open.*

'Quasi-existential' readings: SAFE HOUSE

Context: *Mary is leaving her house for a car trip with a friend. A few minutes after leaving, they see a storm coming in the direction of her house. She believes that she left at least some windows open and she knows that if at least one window is open, the house is not safe from the storm. Mary says:*



(9) Oh my, we have to go back home, **the windows** are open!

- **Proposal 2.1:** (refining proposal 2)

There are specific windows that are open and Mary knows which ones:

(12) The windows are open. \rightsquigarrow *There are certain windows* that are open.

\Rightarrow PD predication in terms of **anaphoric genericity**.

Generic predication

What are generics?

- Generics express generalizations.
 - (13) Tigers are striped.
 - (14) Cats are cute.
 - (15) Dogs are intelligent.
 - (16) Linguists are passionate about their work.
- Other than quantified statements (*all*, *some*), generics do not provide information about quantity, that is:
- Generics **do not** express *how many* individuals in the referenced category have a property.

What are generics?

- Generics express generalizations.

(17) Tigers are striped.

(18) Cats are cute.

(19) Dogs are intelligent.

(20) Linguists are passionate about their work.

- **Note:**

We are not talking about *habituals* such as (21).

(21) John smokes after work.

Generic predication vs. episodic predication

- In English, sentences with PDs display **episodic predication** over a restricted domain.
- PDs can appear with **stage level predicates**, e.g. *be happy*.
 - (22) The students are happy.
 - (23) #Students are happy.
- Generics appear with **individual level predicates**, e.g. *written in Dutch*.
 - (24) Books are written in Dutch.
 - (25) The books are written in Dutch.

Homogeneity in generic predication

(26) Dogs are intelligent.

(27) Dogs aren't intelligent.

- (26) is **true** if most dogs *are* intelligent.
- (27) is **true** if most dogs *aren't* intelligent.

- **Neither** (26) not (27) is completely true or false in a *mixed context*.

[Križ, 2015]

Claim:

Generics display the same aspects of nonmaximality as sentences with plural definites.

Nonmaximality in generic predication

Reminder: nonmaximality in episodic predication

- **exception tolerance:**

(3) The townspeople are asleep.

- **quasi-universal readings:**

(5) The participants are asleep.

- **nonmaximality without domain restriction:**

(6) The professors smiled and then all left the room.

- **slack removal:**

(8) **All** of the townspeople are asleep.

- **quasi-existential readings:**

(9) The windows are open.

Exception tolerance in generics

- **Plural definites:**

(3) The townspeople are asleep.

- **Generics:**

(28) Tigers have stripes.

Nonmaximal reading:

(28) is true even if some unusual tigers, e.g. albinos, don't have stripes.

Quasi-universal readings of generics

- **Plural definites:**

(5) The participants are asleep.

- **Generics:**

(29) The inner angles of triangles sum up to 180 degrees.

- (29) is only true if, and only if, actually all triangles satisfy the property.
- The context **does not allow** for nonmaximal readings.

Nonmaximality \neq domain restriction in generics

- **Plural definites:**

(6) The professors smiled and **then all** left the room.

- **Generics:**

(30) Birds lay eggs and can fly.

Slack removal in generics

- **Plural definites:**

(3) The townspeople are asleep.

(8) **All** the townspeople are asleep.

- **Generics:**

(31) Tigers have stripes.

(32) All tigers have stripes.

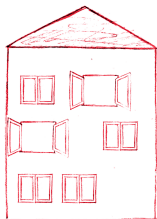
No homogeneity effect: (32) is clearly false if there's a tiger without stripes.

No non-maximal readings: (32) does not allow for exceptions.

Quasi-existential readings of generics

- **Plural definites:**

- (9) Oh my, we have to go back home,
the windows are open!



- **Generics:**

Context: *Birds lay eggs, mammals don't. But have you considered the Platypus? Turns out:*

- (33) Mammals lay eggs, too.

[Cohen, 2004]

Nonmaximality in generic predication





	Plural definites	Generics
exception tolerance:	<i>The townspeople are asleep.</i>	<i>Tigers have stripes.</i>
quasi-universal readings:	<i>The participants are asleep.</i>	<i>The inner angles of triangles sum up to 180 degrees.</i>
nonmaximality without domain restriction:	<i>The professors smiled and left the room.</i>	<i>Birds lay eggs and can fly.</i>
slack removal:	All <i>of the townspeople are asleep.</i>	All <i>tigers have stripes.</i>
quasi-existential readings:	<i>The windows are open.</i>	<i>Mammals lay eggs.</i>

Generic-like predication of plural definites

- Generics pattern with **homogeneity and nonmaximality observations** in sentences with plural definites.
- Generic predication **differs** from episodic predication with respect to the referenced domain.
- Generic and episodic predication might **align** in the way the predicate distributes over the referenced plurality.
- The parallels between generic and episodic predication provide a starting point for the development of a **dynamic framework** for the **QUD-based interpretation** of plural definites.

Thank you! :)

References I

-  Bar-Lev, M. E. (2021).
An implicature account of homogeneity and non-maximality.
Linguistics and Philosophy, 44(5):1045–1097.
-  Cohen, A. (2004).
Existential generics.
Linguistics and Philosophy, 27(2):137–168.
-  Križ, M. (2015).
Homogeneity effects in natural language semantics.
PhD thesis, niversity of Vienna.
-  Križ, M. (2016).
Homogeneity, non-maximality, and all.
Journal of Semantics, 33(3):493–539.

References II



Križ, M. and Spector, B. (2021).

Interpreting plural predication: homogeneity and non-maximality.
Linguistics and Philosophy, 44(5):1131–1178.



Laserson, P. (1999).

Pragmatic halos.
Language, 75:522–551.



Malamud, S. (2012).

The meaning of plural definites: A decision-theoretic approach.
Semantics and Pragmatics, 5:1–58.