

# Going plural: compositional routes to multiplicity in natural language

Syllabus - HHU Seminar, WS 2022-23

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## 1 Materials

You can find the syllabus, handouts and a subset of the readings at the following github repository. This will be updated on a regular basis.

- <https://github.com/patrl/hhu-multiplicity>

## 2 Class description

In this class we'll develop a compositional approach to plurality using concepts from Boolean algebra. We'll primarily be following Yoad Winter's 2001 book "Flexibility Principles in Boolean Semantics - the Interpretation of Coordination, Plurality, and Scope in Natural Language", chapter by chapter. We'll begin by asking: what is the role of natural language coordination ("and") in forming *pluralities*? Cross-linguistically, many languages use exactly the same coordinator to express both boolean conjunction, and an operation we might call *group-formation*. We'll investigate exactly why this might be. Later in the course, we'll discuss other semantic phenomena which require reference to pluralities, and ramifications for the compositional apparatus.

## 3 Prerequisites

- At least one introductory class in compositional semantics, with similar coverage to *Semantics in Generative Grammar* (Heim & Kratzer 1998).
- At least one class covering basic formal methods, i.e., logic (up to first order), and set theory.

## 4 Contact information

- Instructor: Patrick Elliott (<https://patrickdelliott.com>)
- Email: [patrick.d.elliott@gmail.com](mailto:patrick.d.elliott@gmail.com)
- Secretary: Tim Marton: [tim.marton@phil.hhu.de](mailto:tim.marton@phil.hhu.de)
- For any content questions, please use the rocket chat channel. You should have received an invitation, but email me for one if not.
- For office hours, please don't hesitate to email me using the above address to schedule an ad-hoc meeting.

## 5 Online and offline info

- Meetings will take place in person, in 23.21.U1.72.
- If circumstances demand that the class temporarily go remote (illness, Deutsche Bahn...), I'll send out a zoom/webex link via rocket chat.
- Mondays, 14:30-16:00.

## 6 Schedule

Total of 15 sessions; 9 topic blocks:

date	topic (tentative)
Mon Oct 10	Preliminaries + flexible coordination 8.1
Mon Oct 17	Flexible coordination cont. 8.1
Mon Oct 24	The type-theoretic approach to multiplicity 8.2
Mon Oct 31	Hydras and pair-quantification 8.3
Mon Nov 7	Indefinites and numerals 8.4
Mon Nov 14	Predicate-quantifier flexibility 8.5
Mon Nov 21	Plural quantification and atom vs. set 8.6
Mon Nov 28	Distributivity 8.7
Mon Dec 5	Cumulativity 8.8
Mon Dec 12	Cumulativity cont. 8.8
<b>winter break</b>	
Mon Dec 19	Homogeneity 8.9
Mon Jan 9	Homogeneity cont. 8.9
Mon Jan 16	Student presentations
Mon Jan 23	Student presentations
Mon Jan 30	Student presentations

## 7 Assessment

### 7.1 Beteiligungsnachweis

- Regular active participation.
- Do the readings.

### 7.2 Abschlussprüfung

- One class presentation (this can be either a reading group style presentation of a paper, or a group discussion of your squib topic).
- A squib (i.e., short research note, preferably around 10 pages, max 12).
  - At least one meeting with me to discuss your squib topic.

The etymology of “squib”, according to Haj Ross:<sup>1</sup>

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<sup>1</sup><https://www.ucl.ac.uk/pals/linguistic-inquiry-squibs-discussion>

“WRT the word: I no longer know – my memory is too foggy over the  $48 \pm$  years since I started collecting them. I got to MIT in January of 1964; George Lakoff was an assistant professor at Harvard; we both were research assistants in Susumu Kuno’s lab, and we squibbed well and truly on a daily basis. I have asked George whether he knows who came up with the term or not; he says he is positive: I was the one. Could be – I certainly can’t deny responsibility.”

“At some point I went looking in the OED to see if it contained a meaning like “short note” or anything like that. My wretched memory tells me that yes, there was such a meaning among the many that the OED offered up, but when I went this morning to look again for it for you, not a bit of it. There is one basic meaning, which has to do with with some kind of firework. But one of the citations is”

“1599 Master Broughtons Lett. 47 Your bookes [are] but squibs, compounds of gunpowder and pisse.”

“Which I think would be an excellent sentence to have at the beginning of every squib section in each issue of LI.”

## **8 Readings**

### **8.1 Flexible coordination**

- Primary: Chapter 1 of (Winter 2001)
- Optional
  - (Partee & Rooth 1983)
  - (Partee 1986)

### **8.2 The type-theoretic approach to multiplicity**

- Primary: Chapter 2 of (Winter 2001)

### **8.3 Hydras and pair-quantification**

- Primary: (Champollion 2016)
- Optional:
  - (Link 1984)

- (Fox & Johnson 2016)

#### **8.4 Indefinites and numerals**

- Primary: Chapter 3 of (Winter 2001)

#### **8.5 Predicate-quantifier flexibility**

- Primary: Chapter 4 of (Winter 2001)
- Optional:
  - (Partee 1986)
  - (Winter 2022)

#### **8.6 Plural quantification and atom vs. set**

- Primary: Chapter 5 of (Winter 2001)
- Optional:
  - (Kuhn 2020)
  - (Winter 1998)
  - (de Vries 2015)

#### **8.7 Distributivity**

- Primary: Chapter 6 of (Winter 2001)

#### **8.8 Cumulativity**

- Primary: (Chatain 2021)

## 8.9 Homogeneity

- (Križ 2017)
- (Bar-Lev 2018)
- (Križ & Spector 2021)

## References

- Bar-Lev, Moshe E. 2018. *Free choice, homogeneity, and innocent inclusion*. The Hebrew University of Jerusalem dissertation.
- Champollion, Lucas. 2016. Ten men and women got married today - Noun Coordination and the Intersective Theory of Conjunction. *Journal of Semantics* 33(3). 561–622. <https://academic.oup.com/jos/article/33/3/561/1753639>.
- Chatain, Keny. 2021. *Cumulativity from Homogeneity*. Massachusetts Institute of Technology Thesis. <https://dspace.mit.edu/handle/1721.1/140123> (8 October, 2022).
- de Vries, Hannah. 2015. *Shifting sets, hidden atoms - the semantics of distributivity, plurality and animacy*. Utrecht University dissertation. <http://dspace.library.uu.nl/handle/1874/312186>.
- Fox, Danny & Kyle Johnson. 2016. QR is restrictor sharing. In Kyeong-min Kim et al. (eds.), *Proceedings of the 33<sup>rd</sup> West Coast Conference on Formal Linguistics*, 1–16. Somerville, MA: Cascadilla Proceedings Project. <http://www.lingref.com/cpp/wccfl/33/>.
- Heim, Irene & Angelika Kratzer. 1998. *Semantics in generative grammar* (Blackwell Textbooks in Linguistics 13). Malden, MA: Blackwell. 324 pp.
- Križ, Manuel. 2017. Bare plurals, multiplicity, and homogeneity. unpublished manuscript. Laboratoire de Sciences Cognitives et Psycholinguistique.
- Križ, Manuel & Benjamin Spector. 2021. Interpreting plural predication: homogeneity and non-maximality. *Linguistics and Philosophy* 44(5). 1131–1178. <https://link.springer.com/10.1007/s10988-020-09311-w> (8 October, 2022).
- Kuhn, Jeremy. 2020. Gather/numerous as a mass/count opposition. *Natural Language Semantics* 28(3). 225–253. <http://link.springer.com/10.1007/s11050-020-09163-x> (8 October, 2022).
- Link, Godehard. 1984. Hydras. On the logic of relative clause constructions with multiple heads. In *Varieties of formal semantics: Proceedings of the fourth amsterdam colloquium, september 1982*, 245–257. Dordrecht Foris. <https://dare.uva.nl/search?identifier=2adcbc0e-4a5d-4855-b58b-d94ac3cd3d0b>.
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- Winter, Yoad. 2022. On Partee's "Noun Phrase Interpretation and Type-Shifting Principles". In Louise McNally & Zoltán Gendler Szabó (eds.), *A Reader's Guide to Classic Papers in Formal Semantics: Volume 100 of Studies in Linguistics and Philosophy* (Studies in Linguistics and Philosophy), 367–385. Cham: Springer International Publishing. [https://doi.org/10.1007/978-3-030-85308-2\\_19](https://doi.org/10.1007/978-3-030-85308-2_19) (22 August, 2022).