



VvL



Newsletter Vereniging voor Logica

Spring Edition - April 2023

Message from the Board

With the arrival of springtime it is high time for a new edition of the VvL Newsletter. In this newsletter, we reflect on the newly introduced VvL Joint Seminar, and anticipate several events to come. The VvL has now established several regularly recurring events, including the Joint Seminar, Logic at Large and the Dutch Logic PhD Day. Simultaneously, we regularly see logic-related events organized outside of the VvL. We hope to keep both trends going and to add new initiatives to this list.

If you have any comments or suggestions, or if you would rather not receive this newsletter, please send an e-mail to bestuur@verenigingvoorlogica.nl.

Members of the VvL

- The VvL currently has **239 members**. Compared to the last newsletter in November 2022, this is an increase of **3.5%** (and 8 members). If you meet potential new members, don't hesitate to encourage them to apply!
 - We have members from many different institutions, based in Amsterdam, Utrecht, Groningen, Nijmegen, Tilburg, Eindhoven, Delft, Twente, Leiden and Rotterdam, and we even have some internationally based members.
 - Among the 100 most recent membership registrations, 22% are bachelor or master students, 31% are PhD students, 30% are other academic staff, and 17% fall under logic alumni working outside an academic setting and members from the general public.
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News

- **Nationale Wiskunde Dagen (April 14/15, 2023)**. On April 14 and 15, the National Mathematics Days will be hosted at Utrecht University. These days are meant for teachers in high school mathematics, who can join workgroups and listen to talks, in order to gain new ideas and think creatively about their subject. The VvL encourages the representation of logic during these days, so that teachers can introduce logic-related topics early on in students' education. This year, K.P. Hart will talk about "150 years of uncountability of \mathbb{R} ", and Benno van den Berg and Rogier Bos will present "Logic is cool!". See [the website](#) for more information.
- **Call for Nominations (Deadline Extended): VvL Master's Thesis Prize 2023**. The call for nominations of the VvL Master's Thesis Prize has been extended: make sure to submit a thesis in logic or philosophy of the exact sciences before April 15. Last year's winners of the prize can be seen below (left: Anna Dmitrieva, right: Maximilian Siemers,

attending online: Dominik Wehr; photo credit: Marianna Girlando), holding their winnings in the form of a personalized VvL certificate and mug. We are excited to see this year's winners claim their prize. See [the website](#) for more information on the requirements and submission process.

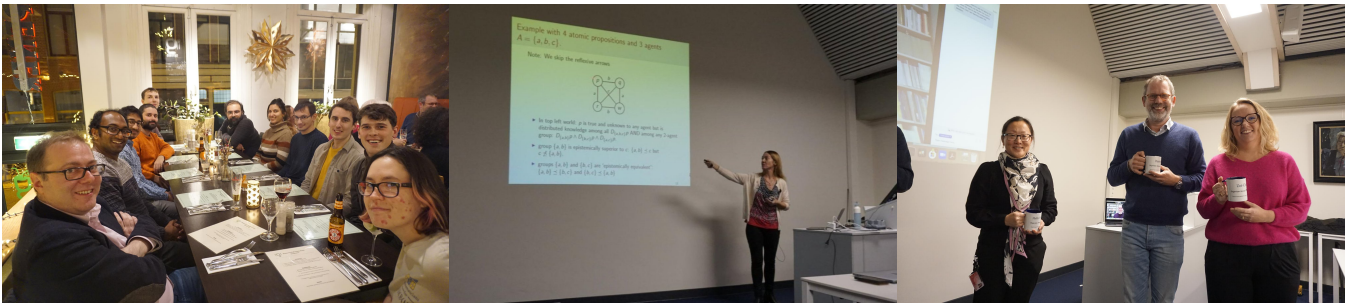


Upcoming Events

- **May 17, 2023 - Nationaal Wiskunde Symposium.** The theme of this year's National Mathematics Symposium is mathematical logic, and it is organized by the mathematics student association Desda and held in Nijmegen. Titled *Logic: the rules of the game*, the symposium will provide introductions to various fields of mathematical logic, including computability theory, infinite games and modal logic. The symposium is targeted primarily at mathematics students (bachelor's or master's), but anyone who is interested is invited. No specific prior knowledge is required. More information can be found on [the website](#).
 - **End of May/beginning of June, 2023 - Logic at Large Lecture.** The VvL Logic at Large Lectures are annual, public lectures organized for a general audience. Last year, Joel David Hamkins presented on *Infinite games, frivolities of the gods*, the recording of which can still be found on [the website](#). This year, the Logic at Large lecture will again take place at the end of May or beginning of June. The precise date and speaker will be announced as soon as possible.
 - **June 23, 2023 - DLPD 2023.** We are very happy to announce that the Dutch Logic PhD Day 2023 is happening on June 23rd, 2023, at the University of Groningen. This event is geared towards PhD students in logic in the Netherlands. Participation is free of charge, so don't hesitate to join if you're interested. The main goal of the Dutch Logic PhD Day 2023 is to foster connections between PhD students in logic and related areas (philosophy, AI and computer science) from different parts of the Netherlands. We hope that by creating opportunities for collaboration and idea exchange, we can help build a stronger and more unified Dutch research community in logic for young researchers. We are excited to announce that our keynote speakers are [Natasha Alechina](#) from Utrecht University and [Herman Geuvers](#) from Radboud University. If you would like to give a talk, please fill out the form at <https://forms.gle/ept3fHgKomyDsquT7>. If you would like to participate, please fill out the form at <https://forms.gle/U5fViBRaqA3KJuyX9>. If you have any questions, check [the website](#) or contact the organizers at dutch.logic.phd.day@gmail.com. Please save the date, and we hope to see you there!
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Past Events

- **January 24, 2023 - Joint VvL-KNAW webinar on causality.** Last January, a webinar on 'Causality in economics, computer science, logic and language' was organized by Balder ten Cate and Rineke Verbrugge. Speakers Guido Imbens, Sara Magliacane, Thomas Icard, and Katrin Schulz discussed topics including the role of causality in machine learning, logic and language. More information can be found [here](#), and a recording of the webinar is available [here](#). The event had over 200 registrations, and received very positive feedback from attendees.
- **December 8, 2022 - VvL Joint Seminar.** Groningen University hosted the first edition of the VvL Joint Seminar on December 8. The event is inspired by the departmental logic seminars that are organized at each university, and aims to unify the universities for a collaborative seminar. The event featured a great main speaker (Sonja Smets), and presentations by the three VvL Master's Thesis Prize winners (Anna Dmitrieva, Maximilian Siemers and Dominik Wehr). After these contributions, everyone had dinner and drinks in the centre of Groningen. For an impression of the event, see the pictures below. We thank the organizers again: Barteld Kooi, Zoé Christoff and Helle Hvid Hansen, and look forward to another edition of this event next winter.



Geef de Pen Door

In this section, a VvL member introduces themselves, so that the association can get to know its diverse collection of members better. For the third edition, Sander Verhaegh (Tilburg University) will introduce himself.

"Thanks for the invitation to introduce myself! My name is Sander Verhaegh and I am an associate professor at Tilburg University. I joined the VvL because I'm interested in the history of logic and philosophy of science. Currently, I am the PI of an ERC StG/NWO Vidi project titled "Exiled Empiricists". This project aims to map the reception of logical empiricism in the United States by computationally analyzing a large number of



journal articles from the period as well as by studying the archival records of a selection of key American philosophers, logicians, and universities. One goal of the project is to determine whether developments within American philosophy contributed to the rise of logical empiricism. Another aim is to reconstruct the intellectual and institutional ties between European and American philosophers/logicians and to investigate how these networks contributed to the success of the logical empiricists in an academic climate that was severely impacted by the Great Depression.

Beyond this project, I mostly work on the history of analytic philosophy and the history of psychology. Together with Jeanne Peijnenburg (University of Groningen), I edited a volume on women in the history of analytic philosophy (which also includes chapters on female logicians such as Ruth Barcan Marcus, Rózsa Péter, Susanne Langer, Rose Rand, and Susan Stebbing) and I published a book on the philosopher W. V. Quine (OUP 2018). I live in Amsterdam (as you can see in the picture) with my partner and cat; and I am a frequent visitor of the many arthouse cinemas the city has to offer."

Questions in Logic

In this section, a VvL member explains what drives their research in logic. They illustrate a question (with or without an answer) in logic in an accessible way: this can be a problem they are currently working on, the motivation behind a broader area of research, or an already known result that they simply find interesting. This time Fan Yang (Utrecht University) will talk about her research.



"What if we evaluate formulas in a model over sets of assignments, instead of single assignments as in traditional Tarskian semantics? What could this semantics (known as team semantics) allow us to characterize?"

In 1997, Hodges introduced team semantics as a compositional semantics for Hintikka and Sandu's independence-friendly logic, a logic that is friendly for expressing independence and dependence notion. Hodges observed that dependency properties can only manifest themselves in multitudes. For example, to determine the truth value of the claim "whether it is raining in most Dutch cities depends on whether the date is a prime number", one must examine the weather report over a period of time rather than a single day. Hence, formulas expressing dependency properties are evaluated over sets of assignments (called teams) instead of single assignments.

In 2007, Väänänen developed team semantics further in his dependence logic, a topic that I have been working on with many collaborators. Over the years, various variants of dependence logic characterizing different dependency properties have been studied. Team semantics offers a general framework for studying dependency notions, but its scope goes beyond that.

In the propositional/modal context, a team (i.e., a set of possible worlds) is an information state, which suggests a connection to natural language. During my PhD, we discovered that inquisitive logic independently adopted team semantics to model inquisitive sentences. Currently, I'm involved in a project using team semantics to model free choice inferences.

A first-order team (i.e., a set of assignments) can be naturally viewed as a database, a dataset, and so on. My collaborators and myself have used the team semantics method to address issues in various fields such as database theory, quantum foundations, social choice, and more. The structure of teams is simple, yet its interpretations are abundant. There is still much to explore with this novel semantics."

Logic Puzzle

Solve the puzzle!

The answer will be given in the next edition of the VvL Newsletter.

A. “BAL” AND “DA”

On a certain island near Haiti, half the inhabitants have been bewitched by voodoo magic and turned into zombies. The zombies of this island do not behave according to the conventional concept: they are not silent or deathlike—they move about and talk in as lively a fashion as do the humans. It’s just that the zombies of this island always lie and the humans of this island always tell the truth.

So far, this sounds like another knight-knave situation in a different dress, doesn’t it? But it isn’t! The situation is enormously complicated by the fact that although all the natives understand English perfectly, an ancient taboo of the island forbids them ever to use non-native words in their speech. Hence whenever you ask them a yes-no question, they reply “Bal” or “Da”—one of which means *yes* and the other *no*. The trouble is that we do not know which of “Bal” or “Da” means *yes* and which means *no*.

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I once met a native of this island and asked him, “Does ‘Bal’ mean *yes*?” He replied, “Bal.”

- (a) Is it possible to infer what “Bal” means?
- (b) Is it possible to infer whether he is a human or a zombie?

The solution to the puzzle in the previous newsletter is given here.

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Inspector Craig indicted Mr. McGregor for falsely claiming there was a robbery, when in fact there couldn’t have been one! His reasoning was as follows.

Step One: Suppose A were guilty. Then he had exactly one accomplice—by (2). Then one of B,C is guilty and the other innocent. This contradicts (3) and (5), which jointly imply that B,C are either both innocent or both guilty. Therefore A must be innocent.

Step Two: Again, by (3) and (5), B and C are both guilty or both innocent. If they were both guilty, then they were the only guilty ones (since A is innocent). Then there would be exactly two guilty ones, which by statement (4) would imply that A is guilty. This is a contradiction, since A is innocent. Therefore B,C are both innocent.

Step Three: Now it is established that A,B,C are all innocent. Yet, by statement (1), no one other than A,B,C had been in the shop on the day of the robbery and could have committed the robbery. Ergo, there was no robbery and McGregor was lying.

Epilogue:

Confronted by Craig’s irrefutable logic, McGregor broke down and confessed that he had indeed lied and was trying to collect insurance.