

Proefstuderen Filosofie

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Universiteit
Leiden
The Netherlands

Introductie

Een student Filosofie vertelt hoe jouw eerste jaar bij deze opleiding er uit zal zien.

Hoorcollege

Titel

Atomisme: Antieke discussies en hedendaagse filosofische problemen

Korte omschrijving

Democritus, Epicurus en Lucretius zijn de drie belangrijkste antieke bronnen voor het atomisme, dat zich tussen de 4e en 1e eeuw voor Christus ontwikkelde tot een belangrijke tegenspeler van Platonisme en Stoa. Hun belangrijkste stelling was dat alles wat we zien en ervaren kan worden gereduceerd tot de kleinste deeltjes waaruit alles is opgebouwd. In hoeverre staan natuurlijke processen dan bij voorbaat vast? Hoeveel ruimte laat dat model voor vrije keuzes in ons leven?

Docent: Prof.dr. Frans A.J. de Haas (f.a.j.de.haas@phil.leidenuniv.nl)

Frans de Haas is sinds 2003 Hoogleraar Antieke en Middeleeuwse Wijsbegeerte in Leiden. Hij richt zich in zijn onderwijs en onderzoek op de ontwikkeling van de filosofie van Plato en Aristoteles in de latere Oudheid, en op de relatie tussen filosofie en de wiskunde als model voor het wetenschappelijk denken.

Werkcollege

Titel

Achilles, de schildpad, en de logica

Korte omschrijving

In dit college gaan we kijken naar een beroemde paradox over logisch redeneren die bedacht werd door Lewis Carroll, ook bekend als de schrijver van Alice in Wonderland. Stel dat je twee aannames hebt, en dat een bepaalde conclusie daar logisch uit volgt. Bijvoorbeeld: "De moord is gepleegd door de butler of de jachttopziener. De moord is niet gepleegd door de butler." Dus, zouden we logisch willen concluderen: "De moord is gepleegd door de jachttopziener." Wat Carroll laat zien is dat het nog niet zo duidelijk is waarom iemand die het met de aannames eens is, ook de conclusie moet accepteren! We gaan zijn puzzel proberen op te lossen, of in ieder geval te begrijpen.

Docent: Dr. Victor Gijsbers (V.Gijsbers@hum.leidenuniv.nl)

Victor Gijsbers is universitair docent aan het Instituut voor Wijsbegeerte. Hij doceert onder andere over wetenschapsfilosofie, kennisleer, en de filosofie van de 17e en 18e eeuw. Hij houdt zich bezig met onderwerpen als tijd, causaliteit, oneindigheid, de aard van kennis, en de metafysica van Immanuel Kant.

Q&A

Heb je nog vragen over de opleiding? Dan kan de student die hier allemaal beantwoorden!

Voorbereiding

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Achilles en de schildpad

Docent: Victor Gijsbers

Er is een beroemd gedachte-experiment van de Griekse filosoof Zeno van Elea, die beweerde dat de beroemde krijger Achilles niet in staat zou zijn een langzame schildpad in te halen. Vrijwel niemand heeft ooit geloofd dat de *conclusie* van dit argument klopt. Maar waar zit 'm dan precies de fout? Dat blijkt een verrassend subtiele vraag te zijn, die na zo'n 24 eeuwen nog steeds tot discussie leidt.

Opdracht 1: Zoek op hoe het argument van Zeno gaat, en wat voor soort antwoorden erop gegeven zijn. Besteed hier niet al teveel tijd aan – we gaan het namelijk in dit werkcollege over een *ander* gedachte-experiment met Achilles en een schildpad hebben.

In 1895 publiceerde Lewis Carroll, bekend als de schrijver van *Alice in Wonderland*, een kort artikel getiteld 'What the Tortoise Said to Achilles.' Hier gaat het niet over beweging, maar over logisch redeneren. Waar Zeno beweerde dat beweging alleen mogelijk is als je oneindig veel taken verricht, daar suggereert Carroll dat logisch redeneren alleen mogelijk is als je oneindig veel taken verricht – en dus net zo onmogelijk is als Zeno dacht dat beweging was. Natuurlijk gelooft Carroll dit niet echt. Maar het blijkt een verrassend subtiele vraag te zijn waarom niet. Dat is de vraag waar wij over gaan nadenken; wat betekent dat we *filosofie van de logica* gaan doen.

Opdracht 2: Lees het artikel van Lewis Carroll. Het is toegevoegd onderaan deze PDF.

Opdracht 3: Bekijk [deze video](#) waarin ik het artikel en enkele mogelijke antwoorden bespreek. Het is helemaal niet erg als je niet alles begrijpt, we gaan het er juist in het werkcollege verder over hebben!

Opdracht 4: Denk alvast na over de vraag hoe jij denkt dat we met de paradox van Carroll kunnen omgaan.

Tot bij het proefstuderen!

WHAT THE TORTOISE SAID TO ACHILLES.

BY LEWIS CARROLL.

(Van: https://en.wikisource.org/wiki/What_the_Tortoise_Said_to_Achilles)

ACHILLES had overtaken the Tortoise, and had seated himself comfortably on its back.

"So you've got to the end of our race-course?" said the Tortoise. "Even though it *does* consist of an infinite series of distances? I thought some wiseacre or other had proved that the thing couldn't be done?"

"It *can* be done," said Achilles. "It *has* been done! *Solvitur ambulando*. You see the distances were constantly *diminishing*; and so—"

"But if they had been constantly *increasing*?" the Tortoise interrupted. "How then?"

"Then I shouldn't be *here*," Achilles modestly replied; "and *you* would have got several times round the world, by this time!"

"You flatter me—*flatten*, I mean," said the Tortoise; "for you *are* a heavy weight, and *no* mistake! Well now, would you like to hear of a race-course, that most people fancy they can get to the end of in two or three steps, while it *really* consists of an infinite number of distances, each one longer than the previous one?"

"Very much indeed!" said the Grecian warrior, as he drew from his helmet (few Grecian warriors possessed *pockets* in those days) an enormous note-book and a pencil. "Proceed! And speak *slowly*, please! *Short-hand* isn't invented yet!"

"That beautiful First Proposition of Euclid!" the Tortoise murmured dreamily. "You admire Euclid?"

"Passionately! So far, at least, as one *can* admire a treatise that won't be published for some centuries to come!"

"Well, now, let's take a little bit of the argument in that First Proposition—just *two* steps, and the conclusion drawn from them. Kindly enter them in your note-book. And in order to refer to them conveniently, let's call them *A*, *B*, and *Z*:—

(A) Things that are equal to the same are equal to each other.

(B) The two sides of this Triangle are things that are equal to the same.

(Z) The two sides of this Triangle are equal to each other.

Readers of Euclid will grant, I suppose, that *Z* follows logically from *A* and *B*, so that any one who accepts *A* and *B* as true, *must* accept *Z* as true?"

"Undoubtedly! The youngest child in a High School—as soon as High Schools are invented, which will not be till some two thousand years later—will grant *that*."

"And if some reader had *not* yet accepted *A* and *B* as true, he might still accept the *sequence* as a *valid* one, I suppose?"

"No doubt such a reader might exist. He might say 'I accept as true the Hypothetical Proposition that, *if A and B be true, Z must be true*; but, I *don't* accept *A and B* as true.' Such a reader would do wisely in abandoning Euclid, and taking to football."

"And might there not *also* be some reader who would say 'I accept *A and B* as true, but I *don't* accept the Hypothetical'?"

"Certainly there might. *He*, also, had better take to football."

"And *neither* of these readers," the Tortoise continued, is *as yet* under any logical necessity to accept *Z* as true?"

"Quite so," Achilles assented.

"Well, now, I want you to consider *me* as a reader of the *second* kind, and to force me, logically, to accept *Z* as true."

"A tortoise playing football would be—" Achilles was beginning

"—an anomaly, of course," the Tortoise hastily interrupted. "Don't wander from the point. Let's have *Z* first, and football afterwards!"

"I'm to force you to accept *Z*, am I?" Achilles said musingly. "And your present position is that you accept *A and B*, but you *don't* accept the Hypothetical—"

"Let's call it *C*," said the Tortoise.

"—but you *don't* accept
(*C*) If *A and B* are true, *Z* must be true."

"That is my present position," said the Tortoise.

"Then I must ask you to accept *C*."

"I'll do so," said the Tortoise, "as soon as you've entered it in that note-book of yours. What else have you got in it?"

"Only a few memoranda," said Achilles, nervously fluttering the leaves: "a few memoranda of—of the battles in which I have distinguished myself!"

"Plenty of blank leaves, I see!" the Tortoise cheerily remarked. "We shall need them *all!*" (Achilles shuddered.) "Now write as I dictate:—"

- (*A*) Things that are equal to the same are equal to each other.
- (*B*) The two sides of this Triangle are things that are equal to the same.
- (*C*) If *A and B* are true, *Z* must be true.
- (*Z*) The two sides of this Triangle are equal to each other."

"You should call it *D*, not *Z*," said Achilles. "It comes *next* to the other three. If you accept *A and B* and *C*, you *must* accept *Z*."

"And why *must* I?"

"Because it follows *logically* from them. If *A and B* and *C* are true, *Z must* be true. You don't dispute *that*, I imagine?"

"If *A* and *B* and *C* are true, *Z* must be true," the Tortoise thoughtfully repeated. "That's *another* Hypothetical, isn't it? And, if I failed to see its truth, I might accept *A* and *B* and *C*, and *still* not accept *Z*, mightn't I?"

"You might," the candid hero admitted; "though such obtuseness would certainly be phenomenal. Still, the event is *possible*. So I must ask you to grant *one* more Hypothetical."

"Very good. I'm quite willing to grant it, as soon as you've written it down. We will call it
(*D*) If *A* and *B* and *C* are true, then *Z* must be true.
Have you entered that in your note-book?"

"I *have!*" Achilles joyfully exclaimed, as he ran the pencil into its sheath. "And at last we've got to the end of this ideal race-course! Now that you accept *A* and *B* and *C* and *D*, *of course* you accept *Z*."

"Do I?" said the Tortoise innocently. "Let's make that quite clear. I accept *A* and *B* and *C* and *D*. Suppose I *still* refused to accept *Z*?"

"Then Logic would take you by the throat, and *force* you to do it!" Achilles triumphantly replied. "Logic would tell you 'You can't help yourself. Now that you've accepted *A* and *B* and *C* and *D*, you *must* accept *Z*!' So you've no choice, you see."

"Whatever *Logic* is good enough to tell me is worth *writing down*," said the Tortoise. "So enter it in your book, please. We will call it

(*E*) If *A* and *B* and *C* and *D* are true, *Z* must be true.
Until I've granted *that*, of course I needn't grant *Z*. So it's quite a *necessary* step, you see?"

"I see," said Achilles; and there was a touch of sadness in his tone.

Here the narrator, having pressing business at the Bank, was obliged to leave the happy pair, and did not again pass the spot until some months afterwards. When he did so, Achilles was still seated on the back of the much-enduring Tortoise, and was writing in his note-book, which appeared to be nearly full. The Tortoise was saying "Have you got that last step written down? Unless I've lost count, that makes a thousand and one. There are several millions more to come. And *would* you mind, as a personal favour, considering what a lot of instruction this colloquy of ours will provide for the Logicians of the Nineteenth Century—*would* you mind adopting a pun that my cousin the Mock-Turtle will then make, and allowing yourself to be re-named *Taught-Us*?"

"As you please!" replied the weary warrior, in the hollow tones of despair, as he buried his face in his hands. "Provided that *you*, for *your* part, will adopt a pun the Mock-Turtle never made, and allow yourself to be re-named *A Kill-Ease!*"