LogiLogi:
Philosophy Beyond the Paper

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Abstract

This paper sets out to show that philosophy has much to gain from the web, and what philosophy on the web might be like. We argue that philosophers usage of the web will undeniably go beyond on-line journals, and the distribution of .pdf files. The failure of historical attempts at making the web work for philosophy are investigated and explained, such as the Xanadu and Discovery projects, and plain web-forums. LogiLogi, a working prototype of a philosophical discussion platform, is introduced. LogiLogi is different from forums and wikis and tries to overcome their limitations. It does so by aiming for an informal middle-road between good conversations and journal-papers and by providing a form of quick, informal publication, peer-review, and annotation of short philosophical texts. The paper concludes with a tentative analysis of what philosophy on the web should be like, and how LogiLogi is tailored to this conception of philosophy.

1 Introduction

The growth of the web has been rather invisible for philosophy so far, and while quite some philosophizing has been done about what the web could mean for the human condition, not much has yet been said about what it could mean for philosophy itself.[1] An exception is some early enthusiasm for newsgroups and forums in the nineties, but that quickly died out when it became apparent that those were not suitable for in-depth philosophizing at all. The web as a medium however is more than these two examples of early web-systems, and in the meantime it has further matured with what some call Web 2.0, or social software (sites such as *MySpace*, *Delicious* and *Wikipedia*).[2] Time for a second look...

LogiLogi Manta, the new version of LogiLogi, is a hypertext platform featuring a rating-system that tries to combine the virtues of good conversations and the written word.[3] It hopes — albeit informally and experimentally — to allow philosophers and people who are interested in philosophy to use the possibilities that the internet has in stock for them too.

It was started with a very small grant from the department of Philosophy of the University of Groningen. It is Free / Open Source

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[1] *Institute for the Future of the Book*. 2009. URL: `http://www.futureofthebook.org/`; Theodor Holm Nelson. *Literary machines : the report on and of, project Xanadu, concerning word processing, electronic publishing, hypertext, thinkertoys ...* 1992; Pierre Levy. *Collective intelligence : mankind's emerging world in cyberspace*. 1997. ISBN: 0-306-45635-4.

[2] *MySpace*. 2009. URL: `http://www.myspace.com/`; . *Delicious: Social Bookmarking*. 2009. URL: `http://delicious.com/`; . *Wikipedia*. 2009. URL: `http://www.wikipedia.org/`.

[3] *LogiLogi.org - Philosophy Beyond the Book*. 2009. URL: `http://en.logilogi.org`; . *The LogiLogi Foundation - Software Libre for Your Web of Free Deliberation*. 2009. URL: `http://foundation.logilogi.org/`.

Software, consists of 15.000 lines of code, has been under development for almost 3 years by between 2 and 10 people at the same time, represents 8 person-years of work (which would be $500.000 in value), and is currently live as a public beta. It is written in Ruby, and uses the Ruby on Rails framework.

It is intended for all those ideas that you're unable to turn into a full sized journal paper, but that you deem too interesting to leave to the winds. Its central values are openness and quality of content, and to combine these it models peer review and other valuable social processes surrounding academic writing. Contrary to early web-systems it does not make use of forum-threads (avoiding their many problems), but of tags and links. Most notably it also allows people other than the original author of a document to add outgoing links behind words, while it does not allow them to change the underlying text, so the author's intellectual responsibility is guarded.

In this paper we will describe LogiLogi, and examine whether it may actually make a difference for philosophy. In order to do this we will begin by answering the question why philosophers might want to move beyond journal papers and print publications in the first place. We will examine the web as a new medium, see how it combines the two classical media of philosophy, how it facilitates collaboration, provides increased intertextuality, and allows one to do much more with texts than just copying them. At the end of this part we will take a more analytical approach and make our case for going beyond journals.

Then we will look into the causes and reasons behind the failure of previous, and other systems. First we will look at some systems that appeared before the World Wide Web. Next we will discuss web-systems that are currently popular, such as forums and wikis, and show why they made the web fail for philosophy. And lastly we will be looking at two systems other than LogiLogi that are currently under development: Discovery and Liquid-Pub. In the last section of this part we will give an overview of the perils that stranded

and/or are threatening the other projects.

In the third part we take a look at LogiLogi itself. First we will describe it in some detail, starting with its approach to hypertexts, and its innovative use of links. Continuing we will describe how its meritocratic rating- and ranking system works, and the ideas behind it. After which we will explain its system of self-organizing peer groups, which allow for a diversity of views. Then we will first briefly show that the design of LogiLogi is coherent, followed by an analysis of how LogiLogi attempts to circumvent the perils that took other systems by surprise.

In the last part we will give our thoughts on what philosophy on the web could look like. Here we will introduce Entity Oriented Philosophy, for which we will consecutively look at: using short texts and expressing one idea at a time; not relying on formal logic, using natural language, and broadly integrating texts through links; and arriving at a purely conceptual, and collective 'truth' by aggregating over the views of many individuals. Then we analyse the strong and weak points of philosophizing on the web. And the paper will be concluded with some cautionary remarks, and a few reasons for thinking even beyond LogiLogi.

2   Why go beyond papers ?

In this section we argue that philosophers eventually will make use of the posibillities that the web as a medium offers, and thus will go beyond the downloading and printing of digitized journal-papers.

2.1   A new Medium: Born in 1991 (embryotic before)

The web is a relatively new medium, and new media are usually interpreted wrongly. The mistakes here go beyond the usual problems that come with prediction. New media are namely usually interpreted in terms of the old medium they generalize. This has been called the *horseless carriage syndrome*;[4] according

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[4] M. McLuhan. *Understanding Media: The Extensions of Man*. Routledge, 2001.

to which a car is a carriage without a horse, film only records theatre-plays, and — most recently — the web enables the downloading of journals. This while, — to speak with McLuhan — each medium has its 'own grammar'. Such as film offering varying camera-positions, slow-motion effects, shots at different locations/sets, and weaving these all together into a single movie. New media could be said to provide a basis for new patterns of communication and new related communities, almost like life-forms in the sense of Wittgenstein II (Wittgenstein in his later period).

However a wrong interpretation of a medium can also lead to its overestimation, especially in the short term. For example already in 1960 (even before ARPANET, the predecessor of the Internet started in 1969) Harvard student Ted Nelson — the inventor of Hypertext — dreamed of the disappearance of disciplines by storing all texts and data in electronic form, and connecting them though a system of elegant links.[5] Then in the 1990's, as the internet started its first boom, there was a short lived enthusiasm for web-forums and mailing-lists in philosophy, where people dreamt of global, virtual cooperation. And even before that, in 1909 did Filippo Marinetti — the founding father of Italian Futurism — declare the end of the traditional book, which, according to him: *'has for a long time been fated to disappear like cathedrals, towers, crenellated walls...'*[6] This clearly was misguided.

Still it is only to be expected that new media take their time. Their development is exponential, and while exponential developments are generally overestimated in the short term, they are also always under-estimated in the long term.[7] In addition, if new media eventually are successful, they always appear besides, and not instead of existing media. And

they usually never entirely replace their alternatives. For example decades after the appearance of the scientific journal of the Royal Society in the 16th century, it still was the case that only books were taken seriously and articles were mainly used to let others know what one was working on. Now this has changed and journals did become the place where 'it happens' in academia, or at least in science.[8] And there is no a-priori reason why something like this should not happen again.

We should not forget that the web still is a very young medium, which only began to become known to, and used by many philosophers around 1991, or even 1993, when the first point-and-click graphical browsers were introduced. For comparison; many decades after the introduction of writing it was — based on the archaeological knowledge we have — still only being used for bookkeeping in temples. Even as the web is coming of age now, it still has many developments ahead. The most advanced Web2.0 software for example — which also models social relations, such as friendship between people, trust, or knowledgeability, and allows people to easily create, share, and integrate their own content — is still relatively primitive and hard to interconnect compared to desktop software, theoretical software designs, or even books that easily fit on any shelve. But these things are changing, and quickly.

2.2 Between the Spoken and the Written: The Classical Media of Philosophy

In addition to being new, the web also is a medium that lives between the spoken and the written. The advantages of the first of these; conversations can be summed up as follows: They are easy and informal (especially among friends). And because the number of receivers can be limited, and the receivers are known, speech can be very focused and tailored to its audience. Additionally, the interactivity of conversations, and the fast feedback they allow, can make having a good conversation

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[5] Nelson, *Literary machines*.

[6] Jos Mul. *Cyberspace Odyssee*. 2005. ISBN: 90-77070-12-5, p. 69.

[7] J. Mul. *Filosofie in cyberspace: reflecties op de informatie-en communicatietechnologie*. Kampen, 2002, p. 344.

[8] Marie Boas Hall. *Henry Oldenburg: Shaping the Royal Society*. 2002. ISBN: 0-19-851053-5.

a very fluid experience.[9] Now for the written word: Writings can be revised, re-visited, and reflected upon as long as necessary by their authors, even until they are perfect, or at least a lot better than spontaneous speech would have been. And because of their possible length, cross-references, and the ability of readers to silently re-read passages, texts have a capacity for much more complexity. They also are fixed, and thus come to stand on their own, and can easily be referenced. And lastly, they are also lasting through time, and easy to share and copy, especially thanks to modern technologies.[10]

Plato lived, spoke and wrote during the transition from an oral, to our written culture. And he was aware of some of the differences between them. But unexpectedly enough he was quite sceptical about writing. In *Phaedrus* he stated that true philosophy is only possible verbally:[11]

> *"Then he [who knows the just and good and honourable] will not seriously incline to write his thoughts [which he values and which he wishes to bear fruit] in water with pen and ink, sowing words which can neither speak for themselves nor teach the truth adequately to others?"*

He saw writing as a derived form, derived from speech, further from the true thought. Besides, texts were passive, that is: helpless. They could not defend their contents from misinterpretation. He thus saw writing mainly as an aid to memory.[12] A remarkable case of the horseless carriage syndrome, and one which lasted for hundreds of years, because texts were for a long time still read aloud, memorized, and really contemplated about only after all this. Ironically enough, Plato's 'memory aid' nevertheless unleashed a long philosophical tradition.[13] That is to say; Philosophy is a footnote to Plato, largely — if not only — because writing allows for reflection, commentary, ...and of course footnotes.[14]

Walter J. Ong predicted that the web would bring a new orality, but so far it is rather more of a mix, a fusing of media, among which in the form of hypertext: foremostly writing and speech.[15] It thus is a move back to orality, but only relatively so, as it rather combines their advantages than taking steps back: It, first of all, is fast, interactive and can be easy and informal; as easy as talking to a colleague at a social event. Additionally hypertexts can handle immense complexity (such as the 300.000 pages large manual for the F16), can be stored over time, and are much easier to share and access.[16] One literally doesn't have to leave ones chair to browse between hypertexts created, stored and maintained on different continents.

Now hypertext does have its own peculiarities, such as the constant choices readers have to face, and the discontinuity between the parts of a hypertext, but most academic philosophers already read books in non-linear ways anyway (hardly ever from cover to cover), so besides requiring yet a different reading strategy (such as the transition from reading aloud to silently), it does not necessarily need to lead to a lesser form of philosophy.[17] It is interesting to wonder what Plato would have thought of the web, which

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[9] Mul, *Cyberspace Odyssee*, pp. 247, 261.

[10] C. Vandendorpe, P. Aronoff, and H. Scott. *From Papyrus to Hypertext: Toward the Universal Digital Library*. University of Illinois Press, 2009, p. 2; Mul, *Cyberspace Odyssee*, p. 82.

[11] Ann Van Sevenant. *Met water schrijven : de filosofie in het computertijdperk*. 1997. ISBN: 90-5240-403-8, pp. 19-20.

[12] Ibid., pp. 20, 116.

[13] Vandendorpe, Aronoff, and Scott, *From Papyrus to Hypertext: Toward the Universal Digital Library*, p. 10; Mul, *Cyberspace Odyssee*, p. 248.

[14] Mul, *Cyberspace Odyssee*, p. 248.

[15] W. J. Ong. "Orality, literacy, and medieval textualization". In: *New Literary History* (1984), pp. 1–12.

[16] Vandendorpe, Aronoff, and Scott, *From Papyrus to Hypertext: Toward the Universal Digital Library*, pp. 145, 111, 160; Luciano Floridi. *Philosophy and computing : an introduction*. 1999. ISBN: 0-415-18024-4, pp. 71-74.

[17] Vandendorpe, Aronoff, and Scott, *From Papyrus to Hypertext: Toward the Universal Digital Library*, pp. 57, 113.

unites the medium he cherished with the one that made his thought immortal: conversation and writing; the two classical media of philosophy. Paradoxically, he might have been a lot more welcoming towards the web than many philosophers are today.

2.3 A Global Collaborative Sphere: Worldviews, Books, Articles, ?

Some would say that we have seen new media before, such as radio for example. But previous new media, among which especially radio and TV, were mass-media (*one to many*), and thus not very suitable for philosophy. They favoured the *factory model of culture*, according to which culture is a product, centrally produced, boxed, branded and then channeled to a mass audience.[18] Under such a model of culture, broad common denominators have to be found in order to be successful. The web on the other hand is *many to many*, and thereby enables something called *peer to peer* production.[19] Which is another word for voluntary co-creation, not very different from what people have historically been doing in their studies and on village squares.[20] The difference is that now, with Web2.0, there is not just a global village announcer, but a global cultural society too.

And similarly to how the globalisation of markets has brought increased economic development, the internet is now enlarging the social sphere, and with it the ease, reach and effectiveness of (voluntary) cooperation on cultural creation.[21] A well known example of something produced in this way is *Wikipedia*: the 7th most visited website in the world, containing more than 2.8 million articles in English, and in excess of 8 million articles in 235 other languages, as opposed to the 0.7 million in the Encyclopedia Britannica.[22] Another, earlier example is Free Software: without much coordination ten-thousands of volunteers have created software of the highest quality, like the *Linux* operating system, *OpenOffice* and the *Firefox* browser [23].

Eric S. Raymond described this last example as a move from the *cathedral*- to the *bazaar*-model of software-development.[24] The *cathedral*-model has a single architect or author who is responsible for the grand design, and who only presents his creation to the world when it is perfect, while in the *bazaar*-model the design gradually evolves from collective contributions. The adage there is *release early and release often*. And while all this might sound futuristic or far-fetched, the *bazaar*-model shares much with academic tradition. The move in philosophy from the classical schools with their all-encompassing world-views, to the medieval book as a philosopher's magnum opus in which all predecessors were repeated, to the journal-article of the enlightenment, in which they are summarised and referred to, can be seen as a move in the direction of a *bazaar*-model. Other similarities are decentralized operation and peer-review.

If we reckon that the move to journals came about because articles are shorter and more focused, have much faster turnover times for the 'conversation', and thus make cooperation easier, then the web can bring many improvements in these respects. Especially because the only really new thing of the Free Software example was its use of the web which — through its shorter turnaround times, its *many-to-many* nature, and its global reach — has

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[18] T. W. Adorno and A. G. Rabinbach. "Culture industry reconsidered". In: *New German Critique* 6 (1975), pp. 12–19; R Boomkens. *Topkitsch en slow science : kritiek van de academische rede*. 2008, p. 122.

[19] Y. Benkler. *The wealth of networks*. New Haven: Yale University Press, 2006.

[20] Mul, *Filosofie in cyberspace: reflecties op de informatie- en communicatietechnologie*, p. 158.

[21] Benkler, *The wealth of networks*.

[22] *Wikipedia*; Vandendorpe, Aronoff, and Scott, *From Papyrus to Hypertext: Toward the Universal Digital Library*, pp. 155-157.

[23] This paper was written on Ubuntu Linux, edited with the Free Software editor VIM, type-set with the FOSS LaTeX type-setting package, the footnotes and list of literature were managed with the help of BibTex and the Firefox Zotero-plugin

[24] Eric S. Raymond. *The cathedral and the bazaar : musings on Linux and open source by an accidental revolutionary*. 2001. ISBN: 0-596-00131-2.

proven to be very suitable for *peer to peer* production. The web — to paraphrase McLuhan — "*compresses time and space*" more than the journal, and even more than the book.[25] Thus if we are allowed to extrapolate, then at the very least, there should be room for the web as an informal medium for philosophy, next to journals and books.

2.4 Increased Inter-Textuality: Papering Plato's Cave

The web also fits well with a development within philosophy itself: Jean-François Lyotard in his *La Condition Postmoderne* proclaimed the end of great stories and overarching theories.[26] Instead he saw a diversity of small stories, each competing with others in their own domains. If we can assume that this is happening within philosophy, then we can also see a move to a *bazaar*-model in the content of philosophical thinking itself. A second development that Lyotard pointed out was the increasing importance of texts, textual production, and language. At the same time Saussure argues for the disappearance of the referent in word-meanings, Baudrillard pointed out the virtualisation of society, and Derrida and Foucault spoke of the materiality of texts, where texts and intertextuality gave meaning instead of 'pure' ideas.[27]

This increasing materiality of texts is not surprising if one looks at the increasing amount of texts that philosophers have to deal with. Eventhough the re-reading, re-interpretation and reviving of the writings of previous philosophers is an old tradition in philosophy, the more extreme current-day cases are sometimes jokingly called philosopherology, instead of philosophy. However, normally in philosophy there is a thinking in response to texts, where the text itself is a source for inquiry. Then, when commentaries are written down, and related to other texts, these become a part of the shared textual space again. In this way a textual universe, with its own meanings and key-words, is constructed around every specialisation (the textual counter-part of Wittgenstein II's language games), almost like a cave of Plato, with the difference that currently postmodernism doesn't assume the existence of pure ideas outside of it anymore.[28] And where Weber already called machines congealed spirit, text in intertextuality almost literally functions like it.[29]

This cave of sources, and experiences in the light of those sources, has become the world of our ideas. It is an externalisation of thinking. Now of course this statement should not be taken literally, as a magically transcendent mega-brain or something alike, but it can provide a good metaphor for understanding the collective intelligence that the web can encode: with its billions of texts, connected by hyperlinks, created, shifted and maintained by people who traverse them; readers, writers and people rating things.[30] And at least both for simple organisms (ants finding the shortest path to food), and in humans for simple instances (the average of all guesses of the number of beans in a pot is always very accurate), collective/swarm intelligence has already been proven to be effective. In a similar vein the web could enable an increased collective intelligence by providing a virtual textual space that can represent or come to represent a continuously sifted and sorted representation of collective wisdom.

As a clear example of what an increased intertextuality can mean, we can have a look at Sic et Non (1120), by Peter Abelard. In this work the contradictions between church fathers were problematized by consistently juxtaposing them by theme and concluding with

[25] McLuhan, *Understanding Media: The Extensions of Man*.

[26] Jean-François Lyotard. *La condition postmoderne : rapport sur le savoir*. 1979. ISBN: 2-7073-0276-7.

[27] E. Berns. *Denken in Parijs : taal en Lacan, Foucault, Althusser, Derrida*. 1981. ISBN: 90-14-03085-1; Christopher Norris. *Derrida*. 1987. ISBN: 0-674-19823-9.

[28] Floridi, *Philosophy and computing*, pp. 92, 99.

[29] M. Weber. "Parlament und Regierung im neugeordneten Deutschland". In: *Weber, Gesammelte Politische Schriften* (1988), pp. 234–431; Mul, *Cyberspace Odyssee*, p. 50.

[30] Mul, *Cyberspace Odyssee*, p. 268.

a synthesizing analysis, while paying careful notice to differences in the meaning of words in different contexts. It started the scholastic tradition.[31] And while scholasticism has its problems (especially later scholasticism), it was very suitable for dealing with the almost post-modern textual reality of their high-context, religious texts. Now the web as a medium allows for even more and easier intertextuality. Collaboratively annotating, juxtaposing, creating, expanding and publishing texts has never been technically possible to the extent that the web can provide. This is what inspired Michael Heim to call the web 'Platonism as a working product'.[32] And we argue that it will work.

2.5 Dynamic Texts: Beyond the Tablets of Moses

Hypertext, first of all, is non-linear. With this we do not mean, that it for the first time allows one to select which bits of a text to read, or in which order to do so — the codex (modern-day book) already allows this —, but that hypertext is making this much easier, and the natural default.[33] The reader has to draw his own line, and is autonomous in a web of possible lines. To speak with McLuhan again; the web (and thus the reader) carries the press, as the press carried writing, writing carried speech, and speech carried thought. Besides determining the order in which parts are read, hypertext can also break open the running text, so that it can — at least in modern systems — be annotated. The text thereby is no longer closed or static, but is becoming responsive.[34] This can make a difference, as currently annotations are mainly published in elaborated commentaries, which thus require their authors to deem the source text worthy of a considerable time-investment. And such implicit pre-selection of commentators could

create a positive bias. [35]

Historically there have been many improvements in our ways of handling texts. After orality came the papyrus scroll, which was purely linear and had no pages, then the codex was introduced, which could be randomly accessed, but was still most often read aloud. Then came printing, the page-number, tables of contents, and indices.[36] Journals arrived for selection, quality control and periodic dissemination, followed by public libraries and archives for storage and wide access.[37] And now there is IT, which, besides even faster access, so far offers elaborate searching as an answer to the ever greater amount of information available. But this is inadequate as the amount is still far greater than anyone can keep up with or find one's way around in. In the near future, being able to inter-connect texts, or to drop a comment here and there, could make historic knowledge lot less like a sacred, but shimmering, decaying labyrinth, and more like an ever updated space to add to. Therefore we agree with L. Floridi that IT-tools will become fundamental to our way of handling information-overload.[38]

One way in which the development of such tools can be eased is by separating publication and review. Because when these become separated, many ways and variations of reviewing the same stream of articles can be devised, developed, and experimented with. Experimentation is important here, as on the web most successful applications were only gradually improved after initially being successful 'by accident': evolved instead of invented, rising from a sea of many unsuccessful variations. Allowing for diversity can thus speed up the improvement of techniques for handling our information overload. Additionally, separating publication from review is sensible in itself too, as computer-memory and bandwidth

[31] John Marenbon. *The philosophy of Peter Abelard*. 1997. ISBN: 0-521-55397-0.

[32] Mul, *Cyberspace Odyssee*, p. 74.

[33] Mul, *Filosofie in cyberspace: reflecties op de informatie- en communicatietechnologie*, p. 175.

[34] Vandendorpe, Aronoff, and Scott, *From Papyrus to Hypertext: Toward the Universal Digital Library*, p. 52.

[35] "This is completely irrelevant now that it is known that X!" is something which currently cannot easily be expressed in public by someone other than the author.

[36] Vandendorpe, Aronoff, and Scott, *From Papyrus to Hypertext: Toward the Universal Digital Library*, p. 32.

[37] Floridi, *Philosophy and computing*, pp. 10-14, 96.

[38] Ibid., pp. 81-85.

are extremely cheap nowadays (0.10 US dollars for transferring and storing 2,000 book-sized texts). The time and attention of scholars is the only really expensive and valuable thing. Furthermore, the splitting up of texts into smaller bits, and publishing them under Creative Commons Licenses could also improve this situation [39]. It would allow them to be imported and re-used in a wide variety of web-systems.

Now ultimately, whether one sees something as hypertext or not, is a matter of the level of abstraction (LOA) at which one looks at it. At the most distant level of abstraction current libraries with their footnotes, references and quotes, their inter-library loan-systems, and journals with their various review-processes and policies, are already a bristling kind of hyperspace. And one which most academics (including your author) feel at home in, and a system which seems to be working reasonably well. But nevertheless, when looking at it from a more up-close LOA — the level of individual texts — these systems appear horribly inefficient and static compared to what is — as illustrated — already becoming possible.[40] It should be remembered that historic hypertext systems are primitive versions of an advanced technology, while the books and journals we generally compare them with are advanced examples of a primitive technology.[41] Thus something a bit more dynamic than current articles, which still are as static as the Tablets of Moses, should at least be possible and advantageous.

2.6 Beyond Because: Digitized Journals are Not the End of It

Now for some analysis; To reiterate first of all the web is a new medium. Current academic web-systems are like the proverbial horseless carriages. They mainly focus on digitally recording and transmitting the classical forms of the book, the journal, and the article, often in addition to printed editions. And even when they are on-line-only, like open publishing journals, they still take a classical approach in terms of review by hand-picked experts, and are periodically releasing bundles of articles in 'virtual issues'. So they leave the unique properties of the web largely untapped.[42] Nevertheless some well-known publishers like Elsevier and Springer are already dipping their toes into more authentic web projects such as *2Collab* (shared bookmarking for academics), and *CiteULike* (expressing favourites among papers), so change is on the horizon.

Secondly the web has the potential to be especially valuable for philosophy as it combines the two classical media of philosophy: the written and the spoken. Other branches of science such as physics or mathematics are expected to benefit much less from it, as for the former other things than texts or conversations, such as experiments or statistical data-analysis, form the most important components of their research, and for the latter — to some extent for both — the written form is much more appropriate than the spoken. Now while they actually currently benefit much more from computing than philosophy, they do it by using computers as powerhouse calculators, rather than as the collaborative text-processors, which web-technologies allow them to become. Also the interactivity, and the being tailored to one's audience of the spoken, can be specifically useful to philosophy. It may allow us to move back to the sparkling philosophical style of our classical masters, while uniting it with the stability and easy dissemination that writing provides.

In addition, the web allows for more cooperation. Now while it may be true that philosophers don't cooperate that much in practice, they are definitely involved in competition, and they do hold conversations in which they try to convince one another (and especially those listening in/reading along).

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[39] Creative Commons Licenses are licenses that to varying degrees allow for re-publication and re-use of works, while maintaining attribution

[40] Floridi, *Philosophy and computing*, p. 124.

[41] Vandendorpe, Aronoff, and Scott, *From Papyrus to Hypertext: Toward the Universal Digital Library*, p. 86.

[42] Kathleen Fitzpatrick. "Peer-to-peer Review". In: *Interdisciplines: Scientific Publications 3.0* (2008).

And this process can be speeded up, and be made much easier with web-technology, and thus more productive. Moreover, if smaller contributions could be made useful, it would result in more cooperation, in the form of using materials created by others to make one's case, instead of writing (bits of) them again, even if this would not result in more direct forms of cooperation. Secondly, competition can lead to (more) cooperation depending on what is credited. Currently only full-sized publications are rewarded, and thus many are created, often about the same research, but under different titles, with only minor changes between them (so called salami science).[43] Thus when single annotations can be accounted for too, they may become more valued.

While many philosophers dismiss expected increases in intertextuality, or even any talk of intertextuality as post-modernist nonsense, it simply can be observed when positioning oneself in-between two disciplines. Historians and philosophers, for example, turn to different kinds of texts when approaching a similar subject. There is nothing wrong with this, as they are consciously taking different approaches, but what shows intertextuality, is that they are turning to texts first, not to the subject: they are reviving the spirits of different giants, in order that they can hover over their shoulders. Still, intertextuality can be problematic when philosophers use theories of historical philosophers which were divised with a totally different understanding of the world than what is accepted science today. While of course 'is' is different from 'ought', and there is nothing wrong with assuming things for the sake of argument, but if authoritative philosophers are used as something self-justifying (philosophistry) then this is a problem. Ought should be different from 'because Hegel said so' too. More intertextuality, and especially more diversity in intertextuality, can make a difference here.

Lastly, the web allows us to transcend the text. That is, to go beyond the static text set in stone when printed on paper. Texts now can be publicly annotated and linked and soon be accessed from a wide variety of applications. This allows for a diversity of experimental usages. Ultimately hypertext is a super-set of (can be made to look like) all other known textual forms, so even if much remains the same, it, and more, can be done with hypertext.[44] Nevertheless the kind of carriage the web will become after people don't envisage it as missing its horse(s) anymore, is a complex matter. It will be a strange car for sure, and getting to run will probably bring, and require many technological and social changes.[45] But nevertheless it is certain that, sooner or later, this paper will be read and annotated from the information-highway as something which is by then beating the following dead horse: The downloading of PDF's from digital journals will not be the end of it.

3   Why isn't it happening (so far) ?

Now we will examine why projects trying to overcome the usage of paper, or the practices of journals, haven't been successful so far, and what projects are currently trying to make it happen for philosophy. At the end of it we will give an analysis of the reasons for their failure, resp. the problems they are facing.

3.1   Pre-web projects: Memex, OnLine, Xanadu, Interdisciplin

In our examination we will only be looking at systems that actually were/are trying to facilitate philosophizing in a collaborative, networked environment. We will thus not look at systems that are only for personal note-taking, or that do not allow for multi-user collaboration on their output, such as mind-mapping software, hypertext gener-

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[43] David Koepsell. "Back to Basics: How Technology and the Open Source Movement Can Save Science". In: *Interdisciplines: Scientific Publications 3.0* (2008).

[44] D. A. Kolb. "The revenge of the page". In: *Proceedings of the nineteenth ACM conference on Hypertext and hypermedia*. ACM New York, NY, USA, 2008, pp. 89–96.

[45] D. G. Johnson. "Is the global information infrastructure a democratic technology?" In: *ACM SIGCAS Computers and Society* 27.3 (1997), pp. 20–26.

ators such as *Storyspace* and *Tinderbox*, and the *Pliny* note-taking toolset.[46] We will also only look at text-centred systems, not at logic modelling systems or formal logic calculators. This excludes *Prover9*, *Bertrand*, and *Co-here*, among others.[47] The reasons for this are partially practical, as in space constraints, but are also related to a skepticism towards the usefulness of formal logic for many kinds of philosophy. On a more pragmatic level, systems for handling texts and links can also serve texts with (simple) formalized logical claims and/or propositions. Thus they are more generic and versatile, and thus stand a bigger chance of success in our times.

The first system is Vannevar Bushs' *Memex* (Memory Extension). He proposed it in 1945, just after the first computers had been built.[48] But this was before they had become widely known or practical, so interestingly enough the design of *Memex* was based on the mechanical processing of microfilms, not electronic computing. Microfilms of books, articles and photographed notes were to be stored in a desk-sized machine, the pages of which — at the touch of a lever— could then be browsed through in any sequence, also across works. And such sequences of reading — what he called trails — could then be stored, and copied, and shared. The idea was far ahead of its time (most current systems are at best like the *Memex*, as in being page-centred but less responsive, and harder to use), and widely influential, though no one ever tried to build a *Memex* as described.

The second is Douglas Engelbart's *oNLine*

System (*NLS*).[49] It was first described in 1962. The idea was to augment the human intellect by devising computer tools that made the manipulation of texts and models a lot easier. This would allow us to better approach and solve humanities many complex problems, and also to further improve the *NLS* system itself (bootstrapping). Engelbart was one of the first to see electronic computers as something more than number-crunchers. Among the innovations his team at the ARC (Augmentation Research Center, Stanford University) developed were: rudimentary graphical user-interfaces, collaborative tools, hypertext, and the mouse.[50] His lab was also one of the two nodes being connected to form the beginning of the ARPANET. Nevertheless in the end his particular system was not widely used, especially because of many people misjudging its potentials, and because it had quite a steep learning-curve. But some of the inventions he made — such as the mouse — have become ubiquitous.

The next system is *Xanadu*.[51] Its aim was to build a global hypertext system that would end the division between disciplines. It was started in 1960 by Harvard student Ted Nelson. Central features were keeping track of versions of documents, side-by-side comparison of changes, non-breaking two-way links that could be stored separately, inserting continuously updated parts of text from other documents, providing micro-payments to authors, security, and all this, and much more, in a networked, multi-user environment.[52] Some parts of it are really well-thought out (LogiLogi for example, modelled its versioning- and linking-system after

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[46] *Storyspace*. 2009. URL: http://www.eastgate.com/storyspace/index.html; . *Tinderbox: The Tool For Notes*. 2009. URL: http://www.eastgate.com/Tinderbox/; . *Pliny: A Note Manager*. 2009. URL: http://pliny.cch.kcl.ac.uk/.

[47] *Prover9*. 2009. URL: http://www.cs.unm.edu/~mccune/prover9/; . *Bertrand*. 2009. URL: http://www.uwosh.edu/faculty_staff/herzberg/; . *Cohere: Make the Connection*. 2009. URL: http://cohere.open.ac.uk/.

[48] Vannevar Bush. "As We May Think". In: *Library Computing: Internet & Software Applications for Information Professionals* 3 (2000), p180. ISSN: 0742-5759.

[49] *Doug Engelbart Institute*. 2009. URL: http://dougengelbart.org/.

[50] D. Engelbart. "A conceptual framework for the augmentation of man's intellect". In: *Computer-supported cooperative work: A book of readings* (1988), pp. 36–65; D. C. Engelbart. "Toward high-performance knowledge workers". In: *Computer-supported Cooperative Work: A Book of Readings* (1988), p. 67.

[51] *Project Xanadu: Founded 1960: The Original Hypertext Project*. 2009. URL: http://www.xanadu.net/.

[52] Nelson, *Literary machines*.

Xanadu's), but the whole of it is overly complex. If not at the technical level, then for end-users. Who were, and to some extent still are, used to paper, and thus — to paraphrase Ted Nelson's words — expected computers to provide paper-simulations. This, and perfectionism on the part of the people working on *Xanadu*, caused it to fail (...so far, as Ted Nelson is still working on it).

The last is *Intermedia* by Norman Meyrowitz. It was started in 1985 and it allowed for easily linking texts and images, was multi-user, stored links separately, and could handle some changes and updates to texts (though in a bit more primitive way than *Xanadu*). A special feature of *Intermedia* was that it bundled links in so called webs, which could be chosen between, to allow linking for different projects/viewpoints. It had a graphical user-interface, and was relatively easy to use.[53] While being well-used in places where they had it, it nevertheless failed to fulfil its promising start, because it was highly tied to the less well known A/UX Unix system, which only ran on Apple hardware. In 1991, changes in A/UX, and lack of funding ended the project.

3.2 Live websites: Forums, Wikis, Everything2, Blogs

The systems discussed here are all more or less successful on the web, but for other uses than philosophizing at any depth. The first are newsgroups, mailing-lists and forums, which all do the same, albeit with different underlying technologies. They have an opening-post posing a question or setting a topic, to which replies then come in, ordered chronologically in a thread (a tree-structure, by what posts they replied to and the order at which they came in). Forums are much like the proverbial carriage without a horse. Their thread-based structure needlessly copies over the tempo-ral linearity of spoken conversations. This thread-based structure discourages revisiting previous posts, and thus the use of hyperlinks to link to earlier posts instead of writing a new one. Consequently on most forums the same conversations are repeating themselves in new threads every few months. And in addition, threads easily go off-topic as replies tend to only go into one aspect of the single post they reply to. All this prevents depth. A second reason for the failure of forums for philosophy is that they are notably missing quality control and peer review, allowing those who have most time on their hands to dominate the discussions, thereby driving out knowledgeable readers, and authors who can publish in more reputed places.

Then there are wiki's, named after the Hawaiian word wiki-wiki, which means quick, swift or volatile. The first wiki, *WikiWikiWeb* was created in 1994 by Ward Cunningham.[54] Its most essential feature is that everyone can edit all pages, using a normal web-browser. Also creating links between pages is very easy, in the first wiki it just was a matter of putting more than one capital letter in a word, like WikiWiki, which then creates a link to the page of the same name. Only one page with the same name can exist in every wiki. And this can lead to problems when there are two pages that best would have the same name, or when disagreements arise about what viewpoint a text should take. This because allowing for multiple viewpoints or discussion in a single page usually results in long, chaotic texts. For descriptive, neutral texts this is not such a big problem, which is why *Wikipedia*'s huge success was not prevented by it. But for in-depth philosophical debate about new ideas it definitely is. In addition, allowing everyone to edit every page doesn't fit well with the academic tradition of intellectual responsibility. Thus, while for philosophy there are a few wikis, such as the *Philosophical Investigations* wiki, none are

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[53] L. N. Garrett, K. E. Smith, and N. Meyrowitz. "Intermedia: issues, strategies, and tactics in the design of a hypermedia document system". In: *Proceedings of the 1986 ACM conference on Computer-supported cooperative work*. ACM New York, NY, USA, 1986, pp. 163–174.

[54] *WikiWikiWeb*. 2009. URL: http://www.c2.com/cgi/wiki.

really taking off.[55]

Another system is *Everything2*.[56] It first of all differs from wikis and forums in that it is a single site and not a type of site. It allows people to create short write-ups on any topic (tag/name) of their choosing. And its most distinctive feature is that these stories can be rated. Sufficient stories and good ratings earn their writers XP-points and, through them, a title (one of 15 levels), more voting-power and other privileges. It hosts a wide variety of topics, but the majority of writings, and especially those with the highest ratings, are foremostly humorous. While there is nothing wrong with this per se, humour being the common denominator doesn't make it very suitable for in-depth philosophy. Thus *Everything2* is a system that is socially rewarding, motivating, and there is a meritocratic form of quality control, but its common denominator is too broad, and its sense of quality is not philosophical.

Now to the web-log, or blog. Blogs have gained enormous popularity since the 2000's (110 million blogs exist today). The first blogs started out as personal commentaries or diaries and came online in 1994. Many blogs often are still quite personal and a bit self-centered, but blogs on less personal topics, and by institutions, have also appeared. This made them more like personal journals. An innovation closely linked to blogs is the RSS (Really Simple Syndication) set of protocols. What they allow one to do is to subscribe to blogs from other sites or programs, like an RSS reader. These then can collect all new posts, so readers can easily keep track of many blogs. Also tags (index-words) are regularly added to blog-posts, so visitors can easily browse old posts. The on-line portfolio a blog creates, coupled with many types of blogging software and many possible layout-

customizations, can make having a blog very rewarding. And some bloggers actually do reach great fame as journalists or technology experts. Nevertheless, because of their chronological ordering, and the fact that there is not much of a conversation going on between bloggers that reaches back to, or builds upon much older blog-posts, posts are normally not very lasting. And even though there are a few good philosophy blogs, blogs are currently much more suitable for news or columns, than for philosophy.

3.3 New projects: Discovery and LiquidPub

The first of the new projects is the *Discovery Project*.[57] It is a cooperation between six partners with different competencies, among which the French ITEM, Italian ILIESI and the Wittgenstein Archives in Bergen, and it is funded by the EU (2006-2009). It is headed towards classical academic research and intends to make philosophical source-texts available, and to provide a publishing framework for philosophical writings. It is based on Semantic Web technologies and consists of two parts. The first part is *Philosource*, which is is a webplatform whose instances form a network of repositories, each of which stores documents (identified with unique, stable names, so called URIs, referable also when working offline) and is interoperable with databases (via so called SQL queries). Each node is intended to aggregate the community of scholars on a single topic or philosopher. Texts can be original writings with different editions. They are organized by means of several domain ontologies (one per node), which organize knowledge inside the node, and by an upper ontology which eases the search for relationships among documents. [58]

Philospace is the second part of the Dis-

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[55] *Philosophical Investigations: Examining Current Issues in Science and Society.* 2009. URL: http://philosophical-investigations.wikidot.com/.

[56] *Everything2.com: Everything@Everything2.com.* 2009. URL: http://everything2.com/.

[57] *Discovery Project - The Discovery Project: Philosophy in the Digital Era?* 2009. URL: http://www.discovery-project.eu/home.html.

[58] In Computer Science ontologies are restricted, standardised sets of terminology

covery project. It is a desktop application that allows users to browse *Philosource* nodes, to annotate documents with personal notes, and to work offline. Later versions of *Philospace* will also allow direct submissions to *Philosource*, and the creation of *channels* to share comments and opinions on philosophical work. On *Philospace* and its channels, the reliability of sources and other circulating material are delegated to each user, who can decide what to use or filter out. Contrary, each *Philosource* node has an editorial board, consisting of invited experts nominated by *Discovery's* content partners, who have to assess the quality of all texts. Works submitted to a node are published only after positive review.[59] Recently the first *Philosource* node (on Nietzsche) has gone on-line, providing valuable expert-annotated source-texts.[60] But so far there is no trace of inter-activity. Also with their use of traditional editorial boards, they do not seem to be using web-technology to its fullest extent, as in ratings-based peer-review. It thus remains to be seen how successful and lasting the project will be.

Then there is *LiquidPub*, which is being developed by the University of Trente, and Springer Verlag, among others. It has a (computer-)science audience in mind, but it also wants to be useful for academic philosophers.[61] First of all it leaves the limiting nature of static texts behind by allowing publications to be composed of parts of other publications, and for them to be continuously updated. They also want to separate publication from review, and diversify the review-process. Parts of papers can be reviewed separately, and review can be done both by traditional peer-review, and/or by communities. They can even be based on implicit behaviour, such as to which authors many people sub-

scribed (e.g. telling: give me anything new written by author X). More generally they want to turn journals into dynamic filters — make them liquid as they call it — so they can either be composed in the classical way, or be filled based on a set of filtering-rules (for example: rated above Y, and not excluded by a reviewer). In addition they can be continuous, monitoring papers as they are finished and improved, or optionally still be static issues that are released at (fixed) time-intervals.[62]

While *LiquidPub* has great potential, its architecture is quite complex. Not only does it consist of 3 separate tiers, but it also is intended to deal with many media types, and to handle liquid articles, liquid journals, prestige metrics/indices, and conference review processes too. Both Discovery and *LiquidPub* have complexity in common. They are by large consortia of partners and funded with one or more formal grants. This probably required them to to boast comprehensiveness, and to include everyone's pet-features. First of all comprehensiveness, and trying to surpass the functionality of existing systems/sites is increasingly difficult, and will in addition bring a project on a collision course with more existing practices and/or software than might be necessary. Secondly the result is always a complex system. And until projects begin to be implemented it is often missed that complexity grows more or less exponentially in large software systems, leading to delays upon delays. And even where the complexity turns out to be manageable by the designers/programmers, a multitude of features leads to poor usability, which then kills the project off in terms of the user-base it can gather anyway.

3.4 Perils: Complexity and Network Effects

Now we will analyse the dangers that previous systems have faced. The first kind are those that disturb or prematurely end the de-

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[59] W. Wiersma and S. David. "Two Scholarly Web-Agoras: The LogiLogi and Talia/Philospace Approaches". In: *ECAP 2009 Abstract*. 2009.

[60] *Nietzsche Source*. 2009. URL: http : / / www . nietzschesource.org/.

[61] *Liquid Publications: Scientific Publications meet the Web*. 2009. URL: http://project.liquidpub. org/.

[62] M. Baez and F. Casati. "Liquid Journals: Knowledge Dissemination in the Web Era". In: *LiquidPub Site* (2009); Cristhian Parra and Fabio Casati. "Liquid Pub: Scientific Communities Model". In: *LiquidPub Site* (2009).

velopment of the application. This assumes that the development is initiated at all, which it didn't in case of the *Memex*-project. If work does begin, there is the risk that it is never finished. And this is more common than one may think (30% of software projects are never finished, and only 16% are finished on-time and on-budget). With software, the ambition to create a comprehensive solution, and to solve all problems one can think of (impressing grant-awarding bodies in the process), can easily result in an overly complex design. And because the complexity of software increases exponentially with the feature-set, and most things seem a lot simpler at the start than they appear to be when implementation is in progress, this strands many projects. Especially if there are financial-, time- or organisational constraints or competing, smaller projects which move faster. It is what happened to the *Xanadu*-project, and for the *Discovery* and *LiquidPub* projects it likely is a weak-spot too. Additionally, a decline in the popularity of the software platform for which an application is developed, can finish off a project too (especially if it is desktop-software). This is what ended the *Intermedia* project.

The second kind are those related to the usability of the system. That is, how easy the finished system is for people to use or learn. Complexity is the root of the problem here too, as applications having too many features can easily overwhelm users (though architectural complexity can sometimes successfully be hidden from users). Especially *LiquidPub* is in the danger-zone in this respect. Another cause of bad usability is that the people designing the user-interface often have too much knowledge about the software. This causes them to see too many things as self-evident, while they are not for the average user, who most likely does not only know nothing about the application, but also will see no reason to learn about it, until its benefits are clear to him, producing a deadlock situation ('must be an useless carriage, without a horse'-thinking). Don't make users think

(at least not about the software), clearly summarises the view of usability experts on the problem.[63] Especially Engelbart's *NLS* system was hit hard by usability problems, and how *Discovery* and *LiquidPub* will do, is to be seen.

The third set of problems an application can run into are those related to the formation of communities. First of all, collaborative applications need a minimum number of users before any collaboration can get going. This is called an applications critical mass. And the problem is that before it is reached, most applications seeking to serve communities, do not present any additional benefit to potential users, making it a chicken and egg problem. This, together with usability problems, is what ends or stalls many web-initiatives. And overcoming it will be a great challenge for all of the systems for philosophy currently under development (including LogiLogi). An opposite problem appears when a community does appear and grow, but then becomes the wrong kind of community, or comes to be dominated by the wrong kind of discourse. Quality control and setting standards is the problem here, and from the perspective of in-depth philosophy, forums and wikis are suffering from this problem.

The last kind of perils are related to the interplay between communities. The most simple is inter-operability. Does the new software play nicely with processes, practices, or software used by the target audience ? It is the reason why currently software helping with the digitalization of journals and books is successful, while the rest failed so far (in the academy). Changing existing practices overnight is hard, if not impossible, so trying to be inter-operable is not a bad move. However not trying to be comprehensive, and thus replacing less, or staking out new territory by going sideways, can also be good alternatives. The reason why things are so hard to change, are so called network-effects, and they are the more complicated hazard. While being first

[63] Steve Krug. *Don't Make Me Think: A Common Sense Approach to Web Usability*. 2006. ISBN: 0-321-34475-8.

observed in early 20th century phone companies, they are most visible on the web today: To new users of Web2.0 sites (such as *Facebook*) those with most users are most valuable because they have more people to connect to, and be seen by.[64] Thus systems having many users get more and more, even if they are worse in all other respects. Network-effects create a 'winner takes it all' situation, and this is the most lethal project-killer that roams the web. The remaining dominance of journals (coupled to publishing requirements for career advancement) can also be partially understood in terms of it.

4   What is LogiLogi ?

We will now give a basic description of the LogiLogi platform, and at the end of it we will analyse how it tries to circumvent the factors that brought other platforms down.

4.1   Hypertexts: Slim, Smart Hypertexts

Texts are kept short within LogiLogi, at maximum around 1.000 words. They are kept so short in order to maximize the advantages of hypertext. A philosophical treatise split up in short texts is more modular, and can be more easily linked to, from other texts. Especially when the parts are written concisely, and make only one point or express one main idea each. Also in a practical sense, keeping them short allows them to be easily displayed and read on-screen. In addition, texts on LogiLogi don't need to be fully developed or perfect when published. They can be informal drafts at first, which can then be improved upon later, possibly only when they arouse enough interest. This allows one to explore and share many more ideas than would be possible in fully fledged journal articles.

On LogiLogi texts are called logis. This name is derived from the Greek word 'logos', which denotes word, saying, thought, language, principle, thesis, and logic. It was also used by Aristotle to denote rational discourse. The duplication of the word logos in LogiLogi can be read as it being a logi of logis. It was initially thought of because the names of many disciplins end in 'logi', such as biology, and sociology. And a more practical reason is that the domain name logilogi.org was still free at the time the project was started (February 2003), while logi-, and logos.org were not. In addition the same duplication of terms is also found in *WikiWikiWeb* (the first Wiki). However LogiLogi is not a Wiki because, among other differences, pages on LogiLogi can only be edited by their authors. This to allow authors to keep intellectual responsibility over their writings, which is necessary for philosophy, and an important value in the academic world.

Nevertheless texts on LogiLogi are fully interactive hypertexts. That is, while others cannot change the text of a logi, they are able to annotate any text, word or phrase with annotations, and to add links to other logis into the text. This is like the adding of a footnote to all copies of an already published article. Also, links don't interfere with normal reading because annotations and links only show up when a reader hovers his mouse-pointer over them. They appear like little text-balloons which, besides the link, also contain the remark resp. the first few sentences of any logis referred to. An example is shown in the text-balloon screenshot. Additionally, there can be multiple links/annotations/etc. behind the same word or phrase. So there are no problems when users add links overlapping with those added by the author or other users.

In addition to inserting links or annotations into logis, people can also reply to logis. Here we differentiate between commenting logis and remarks. Remarks are meant for short spontaneous notices or questions, and thus cannot be replied to in a threaded way, nor can they be annotated themselves. They are shown at the side of the logi, and they expire over time (see the remarks screenshot). Commenting logis on the other hand are like any other normal logi, and thus can be annotated, and receive replies themselves. The first few lines of all commenting logis are shown below

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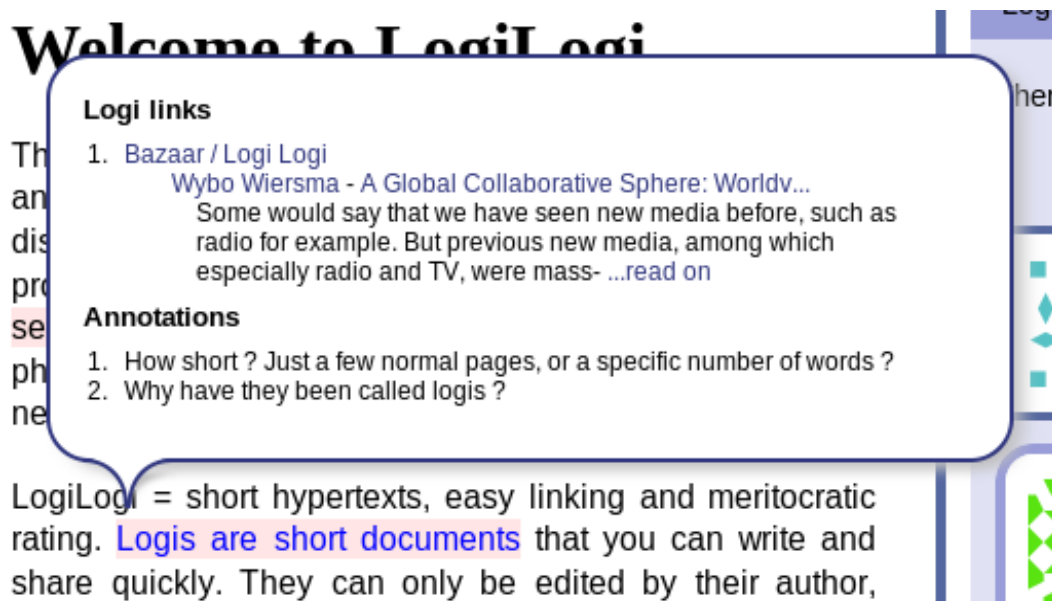[64] *Welcome to Facebook!* 2009. URL: http://www.facebook.com/.

Figure 1: *A text-balloon showing a link and two annotations attached to the same phrase.*

the logi they are commenting on.

Differentiating between remarks and logis is done in order to make commenting logis more like journal articles, than like forum replies: they can be referenced to on their own, and also be brought into other discussions later on. To make this even easier, every logi has a permanent link (so called permalink), which is a stable reference that always will refer to the same logi. Thus, when citing a logi in a paper, this is also best done via its permalink. In addition it is also possible to refer to any specific version of a logi (including the current), because the history of all previous versions of logis is kept, and there are special permalinks to versions too.

4.2   Links: A Diversity of dynamic Links

Links are not just for references, but they are used inside LogiLogi too. As noted, they can refer to logis and to versions of logis, but by default they refer to tags. Where tags are like index-words, given to a logi by its author. Logis can be tagged with one or more tags. And multiple logis can have the same tags. The following is an example of a tag-link (the url of the LogiLogi server, such as http://en.logilogi.org should normally be prepended):

/Aristotle/History

This link refers to two different tags, namely 'Aristotle' and 'History'. All logis tagged with both of these tags will be in the set referred to. If there are multiple logis in the set, they will all be shown in the pop-over balloon on mouse-over. If the link is clicked directly, instead of hovered over, then the user will immediately be led to the logi with the highest rating. If there are no logis tagged with both tags, then the link will refer to all logis having at least the tag 'Aristotle'. More generally speaking, when there is a row of N tags for which no logis are found, the last is removed, so there are N - 1 tags, and finding a matching logi is retried, until either a logi is found, or only the tag at the front remains. In the latter case the link is considered unresolvable.
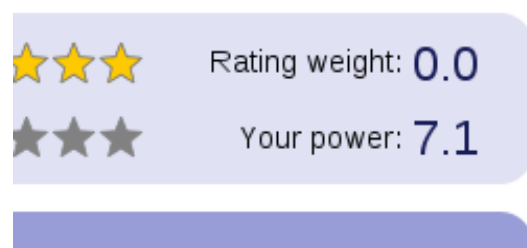
Linking to tag-sets allows one to easily refer to concepts within a certain context, and even incrementally so. In our simple example the historical meaning of Aristotle will be different from his meaning for philosophy. So 'Aristotle/History' should refer to a different description than 'Aristotle/Philosophy', but when an 'Aristotle/History' page has not yet been created, one would be content with the

easy linking and meritocratic
ments that you can write and
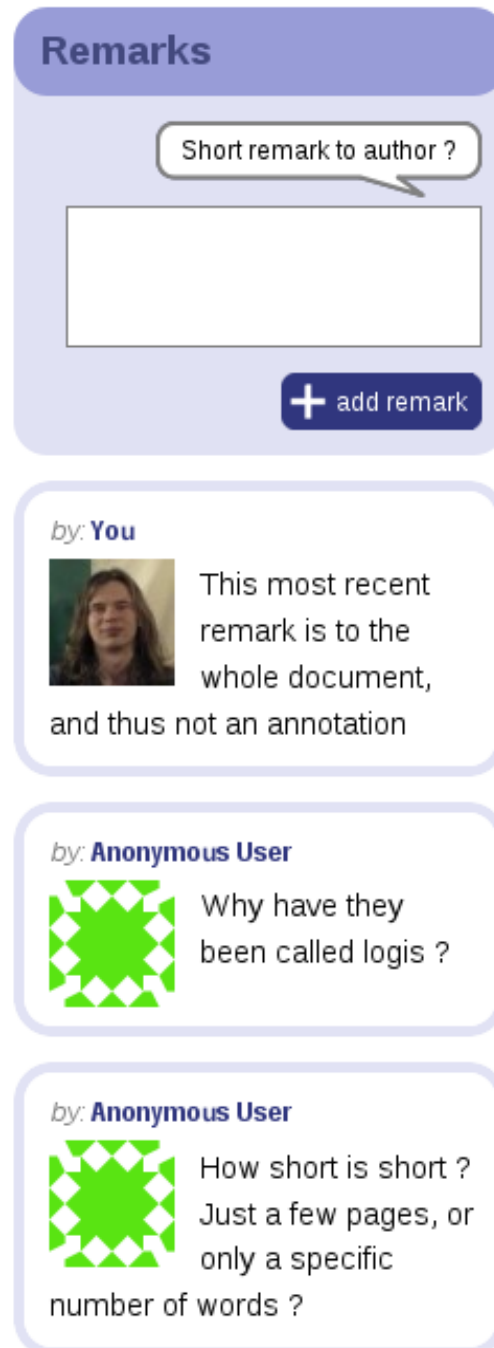be edited by their author, while
e inserted by all.

at function like categories. You
ne or more of these tags (such
gether as: Logi_Logi/Manta).
with the same tags, and if more
or a tag-set, then their ratings

viewpoints of a variety of
elect which peergroup to use as
atings decide what they see.
up and what voting-power you
s determined by the ratings that
m other members.

tion to LogiLogi and it's relation
browse the logi's on LogiLogi,
ds) paper: English, Français.
e Software.

Remarks

Short remark to author ?

＋ add remark

by: **You**

This most recent
remark is to the
whole document,
and thus not an annotation

by: **Anonymous User**

Why have they
been called logis ?

by: **Anonymous User**

How short is short ?
Just a few pages, or
only a specific
number of words ?

Rating weight: 0.0
Your power: 7.1

Figure 2: *Remarks are shown at the side of logis: both remarks inserted as annotations, and remarks on the whole document. The latter are created through the single-field form above the list.*

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'Aristotle'- or 'Aristotle/Philosophy'-page. In a more realistic setting this would allow an author to easily define or clarify concepts such as Heideggers 'Dasein' as he or other philosophers use, and understand them, possibly only after readers indicate their usage is unclear to them. Thus by referring to a page in context, authors can already point out in which direction they are thinking, even before having to create the pages referred to. And of course when a page with a contextualized tag-set is created, such as 'Aristotle/History', there will be no name-clash (with the other 'Aristotle' pages).

Now on to the other link-types; Here is an example of a permalink to a specific logi.

/Aristotle/History=Ed_Lee_32

The first two segments of the link are the tags again, while the last part is the name of the author ('Ed Lee' in this example), followed by a number, which together form an unique identifier. The number is the 'opus' number of the logi; that is the Nth logi written by its author. The whole link is a stable reference to the logi, even if the logi is tagged differently, because the system only uses the last part of the link to identify the logi. The tags are just there to provide context once a visitor lands on the page. In addition, a version-link is similar in shape. It only adds a version-number at the end, as can be seen below.

/Aristotle/History=Ed_Lee_32=v2

When links are added to a logi, they are kept track of separately from the text. Thus, while editing a logi, the links are not present in the text, or in its underlying representation. So one can focus on the text, and freely restructure it, without the risk of strange things happening to links or remarks. This is possible because LogiLogi stores links separately from the text, just like the *Xanadu* project does. It works as follows: the *string* of characters that a text is, is first of all stored separately from the *view* on this *string* that the current version provides. The *view* initially

consists of a set of pointers to the begin- and end-points of the *string*. Then, when for example, in a new version a paragraph is added to the middle of the text, its characters are appended to the end of the *string*. While a set of pointers to the new characters is inserted in the middle of the *view*. This new *view* is then stored as the second version. Now when links are attached, they are anchored to the *string* of characters, and not to the *view*, so their references remain stable, no matter what happens to the surface text (the *view*) [65]. It is illustrated in the view, string, inserts image.

4.3 Meritocracy: A Fierce and Fair Meritocracy

LogiLogi combines openness with quality control. It does this by allowing logis to be rated, and then showing the best rated logis first. In addition, voting-power varies between authors depending on how well their own writings were rated previously. Authors can thus gain 'standing' and 'influence' through their work.[66] This makes LogiLogi not just a democracy, but a peer-reviewed meritocracy, quite comparable to what we, according to Bruno Latours philosophy of science, encounter in the various structures surrounding journals.[67]

The ratings in LogiLogi are essentially grades, given by visitors and other authors. With each vote a score can be given on a scale of -2 to 5. The average of these scores forms the rating of the logi. These averages are weighted averages, because voting-powers can vary. Anonymous users and people with accounts begin with 0.1 resp. 1.0 voting power. This is their *base power*. In addi-

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[65] A longest-common-substring diff algoritm is used to keep track of any text that has been moved around. You can find it as a Ruby gem at http://difflcs.rubyforge.org/. Links and remarks attached to words or phrases that are no longer visible in the latest version of a logi are, for now, always automatically removed.

[66] W. Wiersma and M. Lezama. "LogiLogi: Combining Openness and Quality of Content". In: *FKFT 2008 Proceedings*. 2008.

[67] Bruno Latour. *Science in action : how to follow scientists and engineers through society*. 1987. ISBN: 0-674-79290-4.
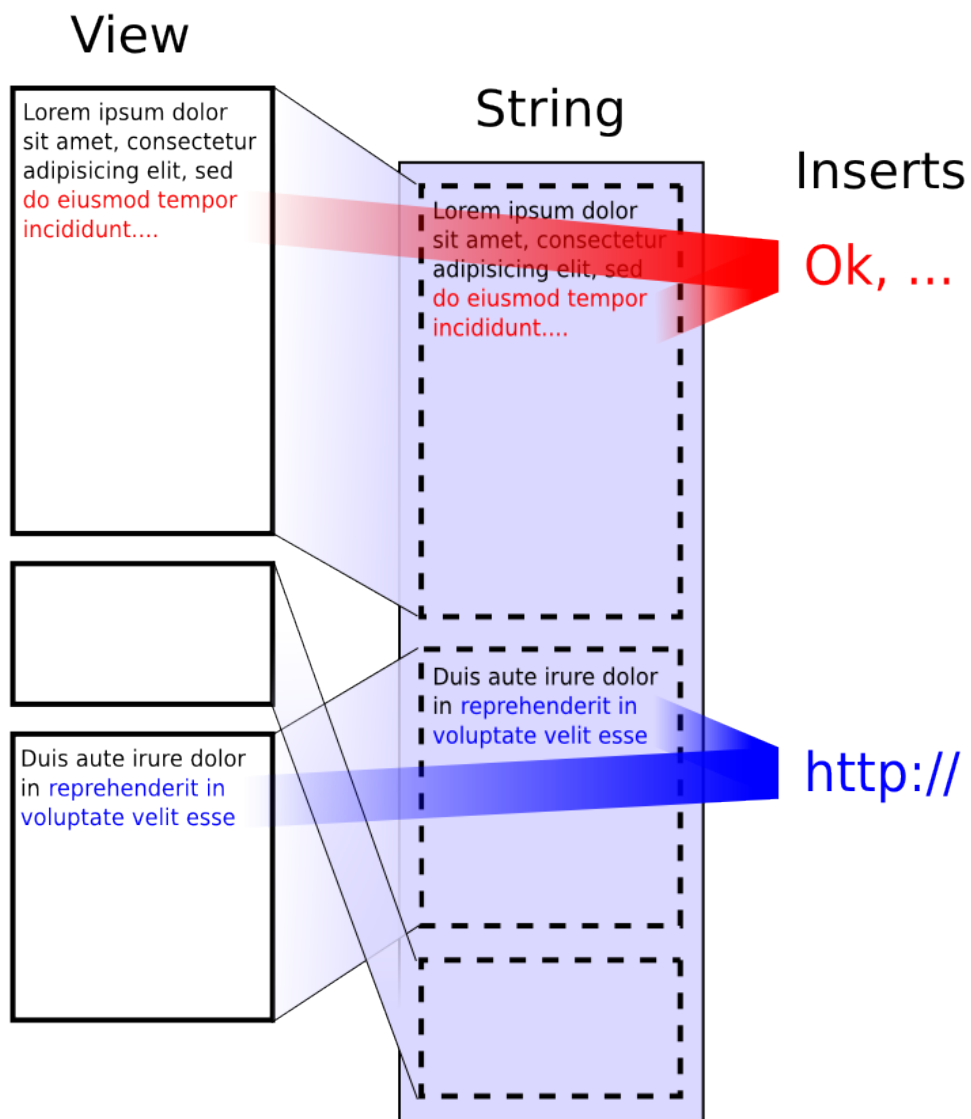
Figure 3: *A version view, a logi string, and two inserts: a remark and a link. The inserts are stored separately from the text, but they have stable begin- and end-pointers into the string, so they don't break in every new view*

tion, people with an account can receive extra voting powers (so called *honours powers*) for each of their logis which are positively rated.

The formula for awarding the extra voting-powers based on the rating, is currently quite simple. It is calculated as follows:

$$rating^2 * 0.05$$

So it is 0.05 percent of the square of the rating (0.05, 0.2, 0.45, 0.8, 1.25 for scores 1 to 5). The rating is — as noted — the weighted average of all votes given to the logi. So *honours powers* are not given for every vote, only for their standing weighted average. And they are given in realtime, so when the scores given in new votes are lower than this average, the extra voting-power received from the rating can be reduced again.

Now for the calculation of ratings: the rating of a logi is the weighted average of all the scores it received through votes. It, besides having a score between -2 and 5 (let's call it its *height*), also has a *weight*. Initially this *weight* would be equal to the powers of all votes it received. Thus for example a new vote of 5, with power 1 added to a current rating of 1 with *weight* 3, results in a new rating of 2, with *weight* 4. Now of course this would lead to the entrenchment of ratings over time: it would make ratings ever harder to change by subsequent votes.

To fix this problem — and to give new votes a chance — the *weight* of the rating is decreased each night with a fraction in such a way as to result in a half-life of one week. So at the end of the week the *weight* of the rating is half as big as it was at the beginning of the week. If no new votes come in the *height* of the rating remains as it is (its *weight* just drops), but if they do come in, they can influence the rating more easily because of its lesser *weight*. It should be noted that no half-life applies to the voting-power of authors. Their voting-power does not change as long as their logis ratings are not voted up or down (because *honours powers* are based on the *height* of ratings, not their *weight*).

4.4 Peergroups: A Plurality of Peergroups

In order to allow for diversity, logis can be rated from the viewpoints of — what we call — *peergroups*. There are multiple *peergroups*, and they basically are a duplication of the just described rating-system. Thus contributions can be rated from the viewpoints of different *peergroups*, logis can have multiple ratings, and authors won't have the same voting-power within each *peergroup*. And when browsing LogiLogi, visitors can pick which *peergroup* to use as their filter. Thus except meritocratic, LogiLogi is also open to a diversity of schools and paradigms in the sense of early Thomas Kuhn.[68] And this is not a far-fetched requirement for a philosophy platform such as LogiLogi, because within philosophy there are lots of different views on what constitutes good philosophy.

Anonymous users, and most users who just received an account, are only members of the *General Peergroup*. They can use other *peergroups* as filters, but they do not have any voting-power in them. Only users with accounts can become members of other *peergroups* and this can happen in one of two ways. Firstly an user can be invited by e-mail; either as a co-founder or as normal member, in which case his voting-power becomes 5.0, resp the normal *base-power* (1.0) in that *peergroup*. Secondly, when an author's logi is rated positively by a member of a *peergroup* that he (the author) is not yet a member of, he will automatically receive a membership, with *base-power*. In addition he also will get the *honours powers* for the rated logi. From then on he will be able to rate the logis of others and receive *honours powers* for his own logis, just like all other members. *Peergroups* are thus largely self-organizing.

The distinction between beginning authors and distinguished reviewers is thus a gradual one. This allows for a more natural representation of the differences in experience and knowledge between people. On the *peergroup*

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[68] Thomas S. Kuhn. *The structure of scientific revolutions.* 1996. ISBN: 0-226-45808-3.

Figure 4: *The rating-bar for a logi when logged in as an user who has voting-powers larger than 1.0*

Figure 5: *All you need to found a new peergroup is an account and a name for it.*

home-page members are listed and ranked by their voting-power. They even receive a percentile to show their rank relative to other authors in the same *peergroup*. An example is shown in the ranking screenshot. It remains to be seen to what extent such precision in ranking is practical, and will be appreciated by authors, but it is at least possible. In future versions of LogiLogi we hope to make these things — as well as the formula for rewarding *honours* voting *powers* — configurable by the founders of peer-groups, so they can decide for themselves how hierarchical or egalitarian they want them to be. This will allow for experimentation and, hopefully, for finding optima.

It already is the case that new *peergroups* can be created by anyone on LogiLogi, just as it is possible for anyone to post logis on LogiLogi. Thus not only is review separated from publication, but review can be done by multiple groups (and in the future, methods). So plurality is ensured, and there is room for a diversity of refreshing views and approaches. Now of course, both getting one's logi rated

well by a distinguished *peergroup*, and drawing users and authors to newly created *peergroups*, will be hard, but that's only natural, as time and attention (contrary to computer memory) are scarce. Here we assume, similarly to what currently is the case in the world of journals, that both authors and readers will be able to figure out what are the good *peergroups*. The difference with the current situation, however, is that creating a new *peergroup* — unlike a new journal — does not bring startup-costs.

4.5   LogiLogi is: Coherent and Agile

Now we will analyse how LogiLogi can circumvent the problems that plagued previous systems. First of all LogiLogi is a coherent system. Logis are kept short, so people can easily refer to them, and they can each express a single, particular idea. Links can have three scopes: tags, logis or versions. Thus one can easily either refer to an idea, or a set of reasons, to an author's updated view of an idea, or to a specific description of an idea. Links usually are to tags, so new logis matching the
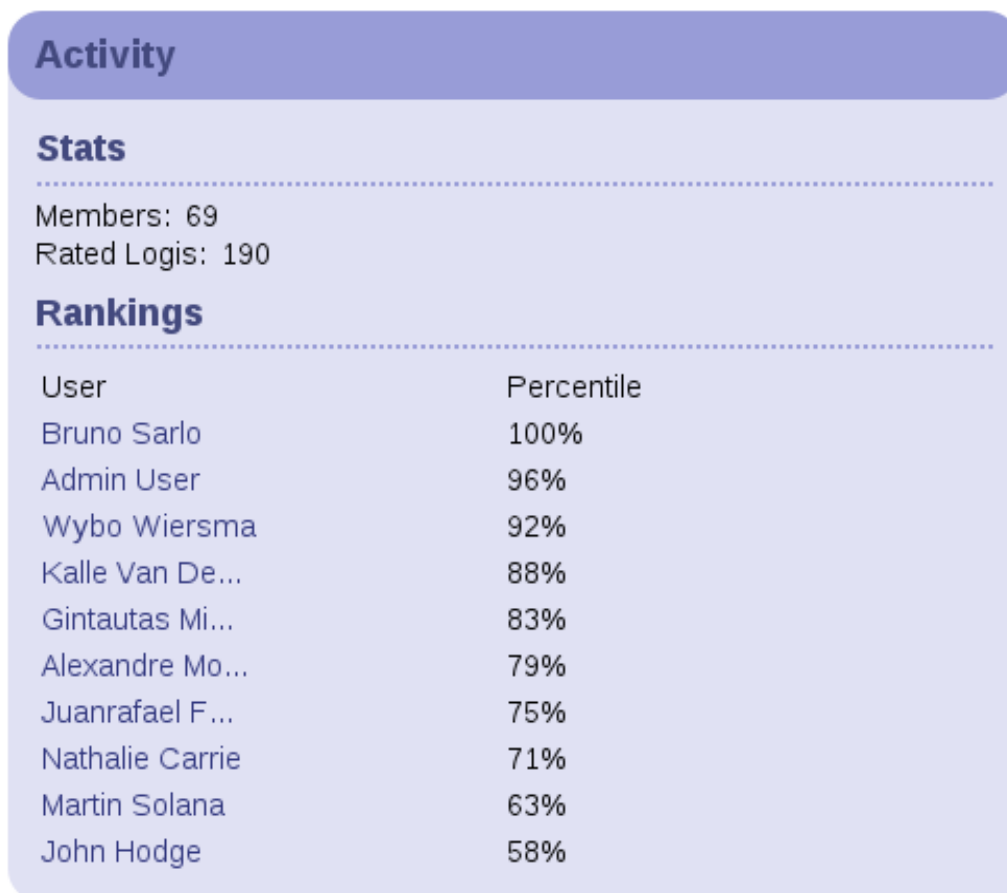
Figure 6: *Rankings: authors as ranked in the General Peergroup on August 9, 2009.*

tags are automatically included. And multiple logis, attempting at providing better descriptions of, or thoughts about the same idea, are in competition with one another, and thus can, and will, improve over time. Allowing more tags per logi, and multiple logis to have the same tags, also prevents name-squatting, and enables logis to remain focussed — to clearly describe one view, or one idea — instead of requiring compromises in ever larger, vaguer descriptions. And lastly, *peergroups* offer the possibility of various viewpoints to co-exist, and prevent a lowest common denominator from dominating the discourse. So all the pieces of LogiLogi fit together. And this while still being simple and minimalistic.

In fact LogiLogi is simple on purpose: to limit complexity. It does not aim to be a fully fledged publishing framework, a conference-tool, an universal library, or a replacement for all uses of wikis and mailing-lists. LogiLogi is not meant to hold historic texts (many sites are better at that already), but it is specifically designed for new contributions. It aims at providing an informal philosophical discussion platform for those many ideas that one is unable to turn into a full-sized journal paper because of time-constraints. It has these narrow aims both for the practical reason that it is a small project (2 to 10 volunteers), but also because narrow aims mean simpler, and easier to use software. In addition, LogiLogi is a singular site (like Wikipedia or Facebook), that works in any modern browser. It does not provide a federative, or peer-to-peer structure.[69] Both this, and its simple architecture mean that updating, improving, and adapting it, are as easy and swift as they can be. Moreover, keeping it singular also gives users the full advantages of forming a global community, and thus a maximum of network-effects.

In the Web2.0 world it actually is considered good practice to go 80% of the way with 20% of the software. There even is a whole paradigm behind this, which is called Ag-

ile Software development. It comes down to keeping the design as simple as it needs to be for doing one thing, and for doing it really well. When new features are needed (ideally requested by users) the design can be refactored, but only to accommodate the complexity needed at that time. Also using frameworks (such as Ruby on Rails) which provide a straightjacket of good practice, by taking away many needless choices, and using (well-designed) existing libraries and standards, wherever possible, are part of it. An example of the use of standards is that LogiLogi is providing REST and RSS API's for integrating it with existing websites. Thus, through LogiLogi's narrow aims, and inteoperability with other sites, we try to avoid the comprehensiveness trap. Where software physically runs is of little relevance for how, and on which pages, it can be shown to users. Thus sites can be singular, and still federative in their appearance.

In line with this LogiLogi simply tries to be something that philosophers can begin using at the side. It does not even try to hook into existing institutions, nor to replace any part of the journal-based publishing ecosystem. What LogiLogi tries to be, is easy, simple, inviting, rewarding and fun for users. For example our tag-system does not start with a formal ontology to which users have to adhere, but is a folksonomy that can grow and be adapted over time: easy. Similarly we don't have links expressing the kind of relationship between documents (such as refutes or explains): simple. Also the *peergroup*-system that grants people voting-powers and memberships on positive votes allows for them to be self-organizing: inviting. In addition, as more people start using LogiLogi, being highly ranked in a *peergroup* is hard and really means something in terms of a proven quality of work: rewarding. Becoming something you and other people on the web will love to use is the goal of LogiLogi, not meeting all the formal requirements of self-prescribed grant-contracts, solving every problem out there, or perfectly mirroring ex-

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[69] Though we are contemplating dividing it along functional lines, splitting it up into separate services. But these still would be multiple, singular services

isting practices.

5   How to Philosophize on LogiLogi ?

Now we will describe how one can best philosophize on LogiLogi, and what we think that philosophy on the web should be like. At the end we will tentatively analyse the differences between it, and analytic and continental philosophy, and see how the web and academia are already reaching towards eachother.

5.1   Concise and Integral: One Idea at a Time

The kind of philosophy that could flourish on the web, and to which LogiLogi is specifically tailored, is a form of philosophy that combines the advantages of writings and conversations. In line with the written it is lasting, can be re-read, and referenced, while at the same time it is interactive, informal, and as fast as communication can be, just like the spoken. In addition, to maximize the advantages of hypertexts, writing concisely is encouraged on LogiLogi, as is trying to make only one point, or communicating one main idea per logi. This makes it easier to quickly read, refer to, and to criticise logis. Also, so far, research into hypertext has shown that the one-page, one-idea approach works best.[70] Moreover the size of logis is based on the assumption that meaning does not exist at the level of propositions or single sentences, but at the level of texts. That is, the literal/surface meaning of words and sentences is much too shallow to allow for the formulation philosophical ideas at any depth. At least a few hundred words are needed for any interesting and unambiguous philosophical meaning to appear.

But they neither need to be longer than a couple of hundreds of words. The ideas expressed through LogiLogi can be as complex as any other. Many related, or assumed ideas can be linked to. The only difference is that they are not described or summarized every time they are used. While summarizing things was handy in journal-papers and books, they are a waste of the reader's time/scanning skills now that we have hyperlinks that can be followed instantly. Logis can be dense, and still be accessible for people new to their subject, because complex or ambiguous concepts can be explained in other logis, and be linked to. Experts or people that have similar backgrounds then only need to read the logi explaining the main idea, while those that have questions or that are sceptical can follow the links to related concepts and/or ask questions. Interactive hypertexts are thus better tailored to a diverse audience. They come close to Plato's ideal of texts that are tailored to every audience and that can 'defend themselves'.

In addition, writing out the main idea and publishing it immediately also can save authors a lot of time. This because it is possible now to provide elaborate explanations only when questions are raised, so they need only be written when needed, instead of having to write them all out beforehand. And as most papers (80% in the humanities) are never cited, and thus presumably not read or considered interesting (by many people), it might be very sensible not to invest too much time in a particular idea before it has been considered interesting by someone, somewhere in the world.[71] Thus, at least publishing those many ideas on LogiLogi, for which one has no time to turn them into full-sized publications, or even turning only ones most popular logis into journal-papers, might be a way to keep one's thinking in touch with demand. It allows one to share and explore many more ideas than is possible with normal journal-publications, and thus keeps one's thinking agile.

Now exploring more ideas, of course does not mean practising shallow or sloppy philosophy. On the contrary. On LogiLogi precise and accurate philosophizing means a care-

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[70] Vandendorpe, Aronoff, and Scott, *From Papyrus to Hypertext: Toward the Universal Digital Library*, p. 138.

[71] Vincent Lariviere. "The decline in the concentration of citations, 1900-2007". In: *Journal of the American Society for Information Science and Technology* 4 (2009), p. 858. ISSN: 1532-2882.

ful use of concepts and related ideas, writing clearly, to the point, and especially defining and linking to things in context. In this way more precision can be reached, more easily than through other means, because on LogiLogi it is much easier to link to the exact aspect of, or interpretation of, the concepts one uses. In the example of the various uses of 'Dasein' by different philosophers, it, for example, is possible to unambiguously work with more than one of them at the same time, or even to introduce minor variations oneself. And while it was possible to do this on paper too, the ease at which LogiLogi allows one to do this, makes the difference here. A quantitative difference can, after all, lead to a qualitative difference.

5.2   Differentiated, not Disconnected: Contextualized Language

LogiLogi does not work with propositions and a set of logical relations to connect them, because we think that formal logic is 'very limited'. While it can work for simple cases — where it is not very useful —, it breaks down in the complex cases — where it would have been useful. This breakdown happens for three reasons. The first is that the translation of interesting philosophical problems, into logic is extremely difficult, if not impossible. The interesting aspects of the problem are usually lost in the translation to the rigid, logical language, so everything is already decided in the translation-phase (which, by the way, is never a logical process itself). The second reason is that formal logic is too remote from how humans normally think. Most humans can think best in terms of natural language, and are much better at remembering and contemplating stories and analogies than logical formulas. The third reason is related to this, but more fundamental: As more is added to a logical model — where things get interesting — logical models rapidly become more complicated.

And as long as philosophy is human-to-human (instead of artificial-intelligence-to-artificial-intelligence), the marginal bene-

fit of this increasing complexity diminishes quickly. Formal logic (at least the normal kind) is general, context-independent and objective, and it tries to reduce problems to a single, consistent plane of artificial language, on which all relations are logical and all concepts are globally defined.[72] Thus for each new difference, a new distinction has to be introduced in the model, which then applies throughout the whole system, instead of just where it makes a relevant difference. For smaller systems this is relatively harmless, but as they grow, complexity grows faster. Let alone what would happen if one tried to relate everything to everything in a logical hypertext system. It would lead to an explosion of complexity that no one would ever be willing, or able to read.

This is similar to the problem that programmers ran into when they were still programming in a procedural way, using 'GOTO' statements and global variables. GOTO statements tell a program to go to a specific line anywhere in the program (can become spaghetti-like if there are many), and global variables can be set and accessed anywhere too. Programming in this way made larger programs ever harder to maintain and understand. Now in Object Oriented programming they found a way around this: encapsulating variables and functions in the context of objects from which they could only be used; changed and accessed. This made things a lot simpler. In part, because objects could nicely match things that should be modelled (like a chess-piece or a student).

The trick here is to allow for local definitions. And our daily language already contains these (this is why logic buffs call daily speech fuzzy): daily language is not Euclidic; it is curved. This curvature of language reduces complexity in the sense of Niklas Luhmann's cause of differentiation.[73] Take human intelligence as fixed and you see that special-

[72] Mul, *Filosofie in cyberspace: reflecties op de informatie- en communicatietechnologie*, p. 75.

[73] Christiaan Blom. *Complexiteit en contingentie : een kritische inleiding tot de sociologie van Niklas Luhmann*. 1997. ISBN: 90-391-0730-0.

ized language (or 'curved' as in space curved around our cognitive limits) can locally allow for a more precise and in-depth analysis. And the web seems to be especially suitable to allow for more fine grained discussion of ideas and concepts in context. Thus instead of undoing the proliferation of paradigms, as Ted Nelson thought it would, the web will likely bring increased specialisation and differentiation.

However the web can also bring greater integration, but along different lines. That is, philosophy can specialize more towards the subjects or entities it studies, instead of, or in addition to, the school/philosopher/tradition approach that is common today. With hypertext it is very easy to bring many views and texts on topics together, to link them to their various sources, and to add to them. Such a re-alignment to more fluid and integrated forms of specialisation. It, and philosophy for the web as so far described would be what we call Entity Oriented Philosophy (EOP). And just like the compilation of the 'Sic et Non' book by Abelard, it might well bring about a similar blooming of conceptual refinement.

5.3 Competitive Meritocracy: Collective Sense

One of the greatest things that the web and computers can do for philosophy is enabling a more fluent form of quality control: one that combines quality with openness. Thus not appointing a board of experts, and then expecting them to be the sole and almighty gatekeepers (quality control, but no openness), nor letting everyone post whatever they want without any control or filtering (total openness, but no quality control), but rather having a self-organizing meritocratic quality control system which bridges the gap between openness and quality. Thus on LogiLogi we put faith in collective judgements and give experts gradually a bigger vote, but never anything like an absolute vote. Now it might seem bold to suggest such a democratic system for philosophy, because if anything would be remote from majority rule, it would be philosophical truth.

But even many philosophers think that truth does not exist in itself, independent from anything, or at the very least that it can never be reached directly.

First of all Kant argued that our perception and our thinking are determined by the categories of our minds: without our concepts we are blind. And even if we have concepts, we never can reach the 'dingen an sich'. So first of all we have only access to human, conceptual truths. And more recently Wittgenstein II argued that concepts have no meaning separately from how they are used by the groups which use them: they are only meaningful within the 'life forms' in which they function. Thus we only have collective, human, conceptual truths. This does not mean that '*anything goes*' of course, but what it does mean is that the best people to ask what their concepts mean and how to use them, or which new concepts would work well, are the people/philosophers using them. Also this is why LogiLogi avoids imposing logic modelling: its free form texts stay close to the language already used by many philosophers.

There is another factor behind having meritocratic quality control after publication, and it is that the only thing that is naturally scarce now that we have the web and ubiquitous computers, is the attention of scholars, not space in journals. Thus we should use a method that distributes attention most efficiently. One in which what articles are seen most, is determined by the small decisions of many individuals (such as writing, voting and linking), instead of by the decisions of a small clique. Then these choices will — in general — be better, can be made quicker, and will no longer be binary yes/no decisions that can keep valuable ideas hidden. Also, because it allows reviewing to be an ongoing process, ideas can be phased out more explicitly, so theories which have been proven dubious, are less likely to get a new following in other disciplines (such as Freudianism). In addition, decisions reached through a meritocracy will be more transparent and more neutral, especially if the formula is simple, and (non-

negative) ratings are made public. This because just like in the free market, aggregating over the small decisions of many different individuals limits opportunities for corruption and favouritism.

In a sense, the rating and ranking system proposed, is very much like a market. To speak with the words of sociologer Niklas Luhmann again, it provides a symbolically generalized medium (SGM) for representing philosophical value. Current examples are money, votes, military ranks, clerical roles and academic titles. The easier they are to count and to put trust in, the more effective such media are. Not surprisingly in current day society by far the most developed of these is money. The others, such as academic titles, are relatively crude in comparison, and thus less central to our increasingly globalised society.[74] It is particularly because of this that, after the theocracy of the middle-ages, and the nationalism of the early 20th century, now economism abounds and money talks loudest (ever more is calculated in terms of money, and economic discourse dominates even universities).[75] A way to offset this imbalance could be creating more granular and powerful generalized media for the other values — among which foremostly truth — so they can play their proper role again. Thus the web, and the meritocratic quality control it can enable, might soon allow us to have an invisible brain at work in society, next to the invisible hand.

5.4 The Philosophy is: Continental and Analytic

First of all Entity Oriented Philosophy is a coherent mode of philosophy that fits the web well. Keeping hypertexts short allows them to be modular and easily to refer to. And what is lost in size, is gained in easy and fast linking, and thus in better integration, and more precise definitions in context. Also modularity and linking lead to more opportunities for direct use of work by others, and for inter-

disciplinary connections, or at least for analysis across schools. The entities — whether abstract or concrete — under scrutiny can become the gathering point, not just traditions or philosophers. In addition it is an open system in which everyone can publish, but a multitude of meritocratic, market-like systems, are in place to provide efficient and transparent quality control, and author-ranking. In addition, writing short hypertexts that can be finished and disseminated over the web within a few hours, keeps thinking agile, and reduces the time spent on ideas that appeal to no one. Thus combining the advantages of conversations and writing, and harnessing the specific advantages of the web.

It is a form of philosophy especially suited for quickly exploring many new ideas, without losing too much time on every individual one. Those many ideas that otherwise would have ended up in a dusty note-book, or would be forgotten again, can now receive feedback, be credited, and used by others. Showing things in a different light, or philosophizing near the edges of language, is also much easier in EOP. This because complex concepts can quickly be defined or explained in context. And even new language can be created, as new concepts can of course also be described or defined, and be used immediately. Not just by oneself, but also by other authors. Offline this would burden such authors with summarizing it, or waiting until it has become general knowledge among the target-audience, while on the web — requiring only a link — useful concepts can spread much faster. This also works for concepts from other disciplines, and thus inter-disciplinary work will also win by it. In addition EOP is also valuable for describing or examining ideas with many subtle inter-connections and/or circular constructions, such as the thinking of Niklas Luhmann, and many other continental philosophers.

At the same time we should acknowledge that it is not suitable for every kind of philosophical endeavour. Calmly designing, build-

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[74] Blom, *Complexiteit en contingentie.*

[75] Boomkens, *Topkitsch en slow science*, pp. 74, 98, 138.

ing or reconstructing a *cathedral* of philosophical thought on LogiLogi, can be difficult. Not because the site or EOP does not allow for it, but because the many questions, and/or criticisms that one's work might receive while it is still incomplete, can make it very difficult for an author to remain determined. While this may have advantages, such as when the *cathedral* really is of bad design to begin with, or when the ideas and motivation interaction provides, could help towards a better piece, something will be lost nevertheless. But contrary to what Lyotard said, large, abstract stories, in the sense of macro-descriptions will not be lost. As it is not necessary to go ever closer to the parts, or to the things themselves. Macro-abstractions are still possible. Just their hierarchical connection with the smaller ones — grounded in logic is — and the illusion that they would be valid outside the macro-level (their life-form).

Where foundation, linearity and priority were important in scholasticism, and to some extent in logical positivism and similar philosophical methods, EOP is about connection and local coherence, about showing things in a new or different light, instead of pinning them down in a final synthesis, poiesis instead of mimesis, and simulation instead of calculation. It thus is probably more lateral-thinking, and creative, and thus close to continental philosophy, but at the same time it also has many of the virtues of analytic philosophy. While determining their exact relations requires more research, the use of local, contextualized meanings in EOP, and the central position that texts and stories take are rather continental, while the creation of new language, the precise definition of concepts, and its pragmatic approach to truth are more analytic. The main difference with both is, though, that EOP explicitly tries to approach truth in an empirical sense. Not by testing them against the things in themselves, a-priori truths, or facts as logical atoms, but against philosophers, against thinkers. Through this it stays in contact with the collective sense.

5.5 Beyond LogiLogi: Between the Wider Web and Academia

While LogiLogi is tailored to Entity Oriented Philosophy, and LogiLogi looks like a perfect match for it and the web, there are good reasons to think beyond the platform. First of all LogiLogi is still very experimental, and in many ways nothing more than a mere attempt at building something interesting. Secondly, prediction is hard, especially of the future of the web. The web is currently developing at an enormous pace, and in very unpredictable ways. New sites, web-services and mashups (combinations of web-services) are appearing all the time. Browsers are introducing all kinds of new possibilities such as plugins, while removing others, and a new version of HTML (version 5) is just around the corner. At the same time, under the pressure provided by quality journalism on blogs, newspapers and their publishers are facing difficult times. Some expect similar problems for scientific journal-publishers soon too. And this might attract many initiatives; both commercial and academic, to try and find alternatives. Not that this would be bad for philosophy — it would rather be good —, but it could trample LogiLogi. A small project like LogiLogi can never be expected to outrun Google, or any similar party.

And in a sense, Google, and many other web-sites are already closing in on philosophy and meritocratic peer-review, eventhough they are not specifically meant for philosophy. For blogs for example, there are sites that offer rating and ranking. The most well-known example being *Digg*, where people can submit urls, or votes by clicking on a button shown with the article.[76] Votes are only positive, they have no scale, and the ratings that people's own writings receive are not kept track of. Another is *Technorati*, which basically looks at the number of references blog-articles receive from other blog-articles.[77] Both sites are hugely popular and

[76] *Digg.* 2009. URL: http://digg.com/.
[77] *Technorati: What's Percolating in Blogs Now.* 2009. URL: http://technorati.com/.

used by millions for selecting what to read on a daily basis. There are also more specialized ones, such as *Hacker News* (read daily by your author), which focuses on news and reflections on technology.[78] In addition there is the *BestThinking* site, whose goals are quite similar to LogiLogi's, and Google already runs *Google Scholar*, launched *Knol* some time ago (competition to *Wikipedia*), and will be releasing *Google Wave*, a real-time discussion-board, in a few months.[79] Now while these and similar projects are not tailored to philosophy, they may soon have so many people behind them, that they will do better than any specialized site.

And from the other side academic projects, some of which commercial, are moving in. First of all there is *Academia*, which is like a directory of academics, also offering rudimentary paper-rating and comments.[80] Next there is the already mentioned *CiteULike*, which is like a *Delicious* for papers, that allows academics to bookmark, tag, and rate them.[81] In addition it also allows papers to be uploaded. A similar project is *Mendeley*, but this is a peer-to-peer desktop-application, which also allows for the publication, reviewing and sharing of papers.[82] In addition it provides popularity metrics for papers, and an *Amazon.com*-like suggestion-service.[83] For biology and medicine there is the *Faculty of 1000* project, which also involves ex-

perts in the review-process of papers and has its own detailed ranking-system.[84] Now of course these projects are still only concerned with static PDF-files, and none of them provides any hypertext functionality, but they are already widely used. And projects like *Diigo* already allow one to annotate any web-page.[85] So they are only a small step away, and the web and the academic world are, it seems, about to embrace one another.

LogiLogi's greatest weakness is that it does not handle PDF's, nor texts the size of the average article. This makes it miss out on thousands of academics taking only a few minutes here and there to give the papers they wrote for a journal anyway, a bit more presence on the web. While this limit results from LogiLogi's use of hypertext, and from its view of what philosophy on the web should be, and likely what Entity Oriented Philosophy on the web will ultimately look like, it may very well be that LogiLogi fails nevertheless, even at its modest goal of being something that is used at the side. This because while LogiLogi already is like a complete, — but in terms of users — miniature philosophy platform, the other systems, while each only (crudely) solving part of the problem, and leaving many bits unresolved (such as hypertext functionality), may very well, over time, provide the whole solution. This would make them like the bricks in a gigantic archway, which, half-completed, is suspended in mid-air, while it is finding scaffolding in existing practices. Whether a touchstone will be placed in the arch, whether LogiLogi will grow, or at least be useful to people like you and me in the meantime (which we hope), and whether the web will be more like academia, or academia more like the web, is still unclear. But what should be clear by now, is that the web will change publishing and philosophy, with, or

[78] *Hacker News*. 2009. URL: `http://news.ycombinator.com/`.

[79] *BestThinking: Where do you do your Best Thinking*. 2009. URL: `http://www.bestthinking.com/`; . *Google Knol: A Unit of Knowledge*. 2009. URL: `http://knol.google.com/k`; . *Google Scholar*. 2009. URL: `http://scholar.google.com/`; . *Google Wave: Preview*. 2009. URL: `http://wave.google.com/`.

[80] *Academia.edu - Who's researching what*. 2009. URL: `http://www.academia.edu/`.

[81] *CiteULike: Everyone's library*. 2009. URL: `http://www.citeulike.org/`; *Delicious: Social Bookmarking*.

[82] *Mendeley: Research Networks*. 2009. URL: `http://www.mendeley.com/`.

[83] *Amazon.com: Online Shopping for Electronics, Apparel, Computers, Books, DVDs & more*. 2009. URL: `http://www.amazon.com/`.

[84] *Faculty of 1000: Expert opinions on key papers in biology and medicine*. 2009. URL: `http://facultyof1000.com/`.

[85] *Diigo - Web Highlighter and Sticky Notes, Social Bookmarking and Annotation, Social Information Network!* 2009. URL: `http://www.diigo.com/`.

without LogiLogi.

6 Conclusion

To reiterate: It makes sense for philosophy to look beyond papers and journals, as the web is a new medium that is fusing speech and writing in interactive hypertexts: the two classical media of philosophy. Secondly the failure of previous systems can be explained in terms of problems with development, usability, community formation, and interoperability, which in turn can largely be attributed to over-complexity and unfavourable network-effects. In short they were, or tried to be, too far ahead of their time. And those which everyone knows, and which are successful on the web already, such as forums, wiki's and blogs, are still primitive forms of a technology that can bring us philosophers much more in the future.

LogiLogi, while being minimalistic, and still very experimental, will offer an easy to use hypertext-environment that combines the informal, incremental and interactive qualities of good conversations, with conservation over time and space, as we traditionally know this from papers. It keeps texts short, so quickly sharing many ideas is possible, while at the same time thoroughly linking them to definitions and related ideas. And thanks to LogiLogi's transparent rating system, a combination of quality and openness will be achieved: everyone can contribute, and even start new peer groups, but within these groups quality is the determining factor.

Additionally, what philosophy on the web can be, and to which LogiLogi is specifically tailored, has been proposed in the form of Entity Oriented Philosophy: An approach to philosophy that suggests focusing on the entity under scrutiny — whether abstract or concrete —, while bringing together the viewpoints from many schools of thought on the issue. And one that does not eschew making use of, or devising, local definitions and interpretations of concepts. Using natural, curved language is central to it, because this reduces complexity and thus allows for more precision

where it matters. It stands for increased specialisation, but specialisation of a connected, interdisciplinary kind. Also, for approaching 'truth', a market-like, empirical approach is suggested, which tests ideas through philosophers, not through chains of rigid logic.

The paper you are reading has also been published on LogiLogi.[86] And while it has largely been structured in such a way as to make it modular enough so it could be split up in logis, it, for academic reasons also had to conform to the format of a journal-paper. Thus compromises had to be made here and there in terms of summarizing things instead of linking to them, treating more than one idea in each part, and in general writing things in such a way that they could still be read in a linear fashion. Nevertheless we expect that this paper still perfectly matches with the ideas of incremental improvement and explication where needed. As many of the viewpoints and arguments put forth in this paper will likely still raise more questions than they answer, and here and there may even be in need of further clarification.

Thus you are cordially invited to discuss, annotate, and criticise all you just read on LogiLogi.

7 Acknowledgements

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[86] At: `http://en.logilogi.org/Logi_Logi/Beyond_Paper/Introduction=Wybo_Wiersma_84`

for the initial small grant that got LogiLogi Manta started, and the University of Nijmegen which twice provided a group of Computer- and Information Science students to work on LogiLogi for credits as part of their GIPHouse program. In addition we are grateful to the OFSET (Organization for Free Software in Education and Teaching) foundation for supporting us with a small grant, and we wish to personally name Odile Benassy, for the French translation she made of the first, short version of this paper.[87]

In addition we would like to thank the audiences of our presentations at the FOSDEM (Free and Open source Software Developers' European Meeting) of 2007 and 2009 in Brussels, the TDOSE (Technical Dutch Open Source Event) of 2007 in Eindhoven, the Netherlands, the ECAP (European conference on Computing and Philosophy) conferences of 2008 and 2009 in Montpellier and Barcelona, the Digital Humanities 2008 conference in Oulu, Finland, the RMLL (Rencontres Mondiales du Logiciel Libre) of 2008 in Mont-de-Marssan, France, the FKFT (Free Knowledge, Free Technology Conference) of 2008 in Barcelona, and the Philosophers Rally of 2009 in Enschede, the Netherlands, for their questions and insightful comments.

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