Elements of an e-Platform for Wittgenstein Research

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Introduction

WAB has for many years engaged in the task of building an Open Access (OA) platform for digital Wittgenstein research and learning. This paper presents some of the elements WAB considers key in such a platform. They are partly in the making, partly already in place: 1) Primary sources (5000 pages of the Wittgenstein *Nachlass*, contributed within the DISCOVERY project); 2) Metadata (a new and extended catalogue of the Wittgenstein papers, in the making through an ongoing international cooperative project); 3) Secondary sources (a selection from WAB's *Working Papers* / *Publications* series and audio-visual materials as well as several hundred papers from the Austrian Ludwig Wittgenstein Society's (ALWS) Wittgenstein symposia, contributed within the ongoing AGORA project); 4) A Wittgenstein journal (the new *Nordic Wittgenstein Review*, established within the ongoing AGORA project, in cooperation with the Nordic Wittgenstein Society); 5) Wittgenstein ontologies (for both textual sources and conceptual domains); 6) Software. These elements and resources are provided OA. In the following, they are presented and discussed in more detail.

1. Primary sources

Within the framework of the DISCOVERY project (see Smith 2007), 5000 pages of the Wittgenstein *Nachlass* were made freely available OA through Wittgenstein Source (http://wittgensteinsource.org/). Twenty *Nachlass* items are included in the *Bergen Facsimile Edition* and the *Bergen Text Edition* which are found on Wittgenstein Source:

- From the Notes on Logic complex: Ts-201a1, Ts-201a2 (1913-14)
- From the Lecture on Ethics complex: Ms-139a, Ts-207 (1929)
- From the Big Typescript complex: Ms114, Ms-115 (first part), Ms-148, Ms-149, Ms-150, Ms-153a, Ms-153b, Ms-154, Ms-155, Ms-156a, Ts-212, Ts-213 (1931-34)
- From the Brown Book complex: Ms-115 (second part), Ms-140 (p.40), Ms-141, Ms152, Ts-310 (1934-36)

These items are rendered in both normalized and diplomatic versions.

Fig. 1. Screenshot: Wittgenstein Source Bergen Text Edition (Diplomatic version)

2. Catalogue

In September 2011, a meeting took place in Bergen regarding WAB's work on a new *Bergen Electronic Edition*. It was stressed that today's user of the Bergen edition suffers from a lack of accompanying commentary materials. This meeting led to a cooperative online international project on developing a new, extended and more flexible *Nachlass* catalogue; project partners include Trinity College Cambridge (Smith 2012), the Austrian National Library (Schmidt 2012), WAB, Joachim Schulte, Brian McGuinness, James Klagge (Klagge/Nordmann 2003), Arthur Gibson (Gibson 2010), Nuno Venturinha (Venturinha 2010) and others. This catalogue will permit users not only to achieve an "übersichtliche Darstellung" of *Nachlass* items, but also to choose different access points to them (chronological, text-genetic, document type, genetic context, archive affiliation, …). The project proceeds through a collaborative web space and, once its basics are in place, will be opened for collaborative input, both in terms of data, method and technology. The new catalogue will be fully compatible with the existing von Wright catalogue, but will also allow for alternative and radically different perspectives.

3. Secondary sources

Within the framework of the AGORA project, WAB makes available OA a selection of its own *Working Papers* / *Publications* series (which have a strong focus on Wittgenstein *Nachlass* studies) and a selection from its audio-visual recordings of conference and seminar lectures, as well as, in cooperation with ALWS, several hundred papers from ALWS' annual international Wittgenstein symposia; these materials will be enriched with keywords which enable thematic browsing and their interlinking. The materials are being interlinked with primary sources available on Wittgenstein Source. Each text item is rendered in both PDF of the original print and an HTML version; the latter are produced from an XML transcription of the text prepared at WAB specially for this purpose. In the transcription we record (in TEI P5, see TEI 2007) both bibliographic (author, author affiliation, place of publication, …) and content metadata (references to literature, citation, graphics, emphasis, structure and division of the text, …). This permits not only the production of both screen and paper text outputs, but also prepares the item for further analysis: for instance the ability to query the resource for all items which refer to a certain book or article. The entire resource is built and offered in the Open Journal Systems (OJS, see Willinsky 2005); through the AGORA project further rendering and processing possibilities will be produced (such as Linking Open Data LOD clouds).

4. Journal

Within the framework of AGORA, WAB has also established the new Wittgenstein journal *Nordic Wittgenstein Review* (http://www.nordicwittgensteinreview.com/) in cooperation with the Nordic Wittgenstein Society (NWS). The journal is interdisciplinary in character, and publishes con-

tributions in philosophy and other human and social sciences including philology, linguistics, cognitive science, among others. Each issue includes an invited paper, an interview, a peer-reviewed articles section, a section in which seminal works are re-published or where previously unpublished archive materials are presented, as well as a book review section. The journal is published as a printed journal at ontos Verlag and OA online (three months delay after print). Like all other secondary sources in the AGORA project, the journal contributions will be tagged with keywords and interlinked with primary sources. The journal platform runs on OJS and includes functions for submission, review, editing and all elements standard in the production of a journal. As of May 2012, the journal has about 150 registered users, including authors, editors, reviewers, or just readers. The first issue, to appear in August 2012, contains an invited paper by Stephen Mulhall and an interview with Gottfried Gabriel. The invited paper and articles section of the first issue were open for public pre-review and commenting in April 2012. The first two issues are edited by Alois Pichler and Simo Säätelä from Bergen and the editor-in-chief of the journal is Yrsa Neuman from Åbo. Beginning with the third issue, the journal will travel from the University of Bergen on to other Nordic institutions. The editor-in-chief will, however, not change and the OJS platform shall continue to be run and maintained from Bergen.

5. Ontology and metadata

Bringing work on *Nachlass* metadata (such as remark dating, references to external works or persons, text-genetic relations, semantic content, adherence to philosophical debates, and claims made or questions posed by remarks) and Wittgenstein research in general together with Semantic Web ideas and methods provides the user with the possibility not only to browse materials, both primary and secondary sources, in interlinked ways within the materials, but also with reference to additional external resources. Thus, on the Semantic Web, not only a reference by Wittgenstein to one of his other works can be "linked" together, but also a reference to e.g. one of Goethe's poems. Moreover, within the Semantic Web any of its nodes can be taken as starting point or primary focus of research or learning: the Goethe scholar may start with the Goethe poem and from there find the Wittgenstein remark; the Wittgenstein scholar may work the other way round. At least some Semantic Web browsing is currently provided for in the 5000 pages of Wittgenstein Source – i.e. the Wittgenstein user can browse these pages by dating, reference to external persons or works, and in parts also text-genetic relations. A scholar interested in Wittgenstein's use of Goethe will, for example, be able to find a list of Goethe's works referred to by Wittgenstein (on the basis of Biesenbach 2011), go to the places where they are referred to, and – provided Semantic Web implementation is in place – also to the actual work referred to. WAB is working on the creation of two ontologies (which can be merged): "Source" and "Subject".
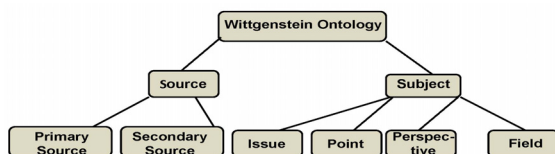
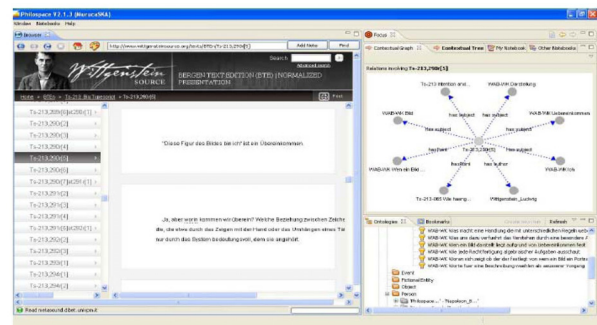Fig. 2: The overall structure of WAB's Wittgenstein ontology

Fig. 3. Screenshot: Browsing WAB's Wittgenstein ontology with Philospace

The Source ontology houses "encyclopaedic" features such as the ones just mentioned; the Subject ontology houses the more contested and debated ones such as: the topic of a certain remark, the claim it makes, the philosophical subject it refers to, the philosophical debate it adheres to. It is designed to contain subjects one typically expects to find in the "subject index" of a comprehensive study of Wittgenstein's philosophy. 'Elementary proposition', 'logical independence', 'picture' and 'state of affairs' thus belong in the latter. Naturally, ontologies in philosophy will be different from ontologies in pharmacy or the food industry: their domain is much more dynamic, non-hierarchical and unstable (even more so in Wittgenstein's case). We wish to take this into account, and our ontology allows for e.g. both "Elementary propositions are independent from each other" and "Elementary propositions are not independent from each other" in its domain. WAB's vision is that users of the ontology will be enabled to browse and access the Wittgenstein ontology in a language of their preference; each label for ontological "nodes" can in principle be rendered in any language ("picture" (English)/ "Bild" (German) / "imagine" (Italian), …), and in this way the same ontology can provide a key to browsing Wittgenstein's work in different languages. Naturally, different languages model the world in different ways, and this is *one* of the interesting challenges of applying computational and Semantic Web thought and technology to humanities domains (see Pichler/Zöllner-Weber 2012 and Wang/Lobis 2012). For our work to succeed, the instances of Wittgenstein's work referred to need be identified through absolutely unique and stable labels – we call them 'sigla' (see Pichler 2010).

6. Software

Naturally, no e-platform runs without software. This includes basic software for the platform to run at all (and on different systems), and to make its single components work well together. In addition there are specific software tools that take care of specific research and learning tasks. Here we want to draw attention to a tool developed recently in cooperation with the Centrum für Informations- und Sprachverarbeitung (CIS) at the LMU Munich (http://uschebti.cis.uni-muenchen.de:10302/WittgensteinIndex/).

One of the deficiencies of the *Bergen Electronic Edition* and actually most electronic editions or online resources is that they do not permit lemmatized searches, e.g. if one wants to find all the places where Wittgenstein discusses "sprechen", one would need to search for "sprech*", "sprich*", "sprach*", "gesprochen". This poses challenges not only to those who have insufficient knowledge of German, but also to the native speaker – simply because of time and attention constraints. Now, with the project "Witt-

genstein in Co-text", a tool has been developed which permits exactly that (and much more): lemmatized searches of the Wittgenstein corpus, be it with regard to verbs or nouns or other inflected word classes (see Hadersbeck et al. 2012).

Another specific tool is WAB's "Interactive Dynamic Presentation" (IDP): using WAB's IDP site http://wab.uib.no/transform/wab.php?modus=opsjoner it is possible to create from WAB's transcriptions of the *Nachlass* text editions which differ from the diplomatic, normalized etc. versions pre-prepared by WAB. This is for example relevant for inclusion/exclusion of handwritten annotations (cf. Kenny 1984) or inclusion/exclusion of line breaks. Text representations which follow the original line order have many advantages, one of them being that they easily permit comparison of edited text and facsimiles. At the same time, the positions of line breaks are often inessential to one's research interests, and it is therefore desirable that one is able to suppress them.

IDP can also be used to filter or rearrange *Nachlass* texts according to the marks and numbers which Wittgenstein often assigns to his *Bemerkungen*. Being able to do so can be of tremendous benefit for research on Wittgenstein's principles for the composition, i.e. arrangement, of his works, and thus also the status of specific items. This is even more important since we don't yet know enough about the function of certain marks (like, for example, the asterisk sign in the "Bände" from the early thirties). Such a filtering tool can permit easy extraction of all *Bemerkungen* and only the *Bemerkungen* which are marked by Wittgenstein with a slash, or an asterisk, or a backslash, etc., or a specific combination of them. Or it can be used to arrange the *Nachlass* texts, on *Bemerkung* level, in chronological rather than document order.

For a site which functions as a portal to all single *Bemerkungen* of the *Nachlass*, visit http://wab.uib.no/cost-a32/overview/NL-mss_overview.page and http://wab.uib.no/cost-a32/overview/NL-tss_overview.page (for memory capacity reasons the portal had to be divided in two sites): here the user can sort the *Nachlass* according to parameters of date, *Bemerkung* identifier ("siglum"), publication in "work", or other parameters.

Conclusion

With these elements in place or currently in the making, an OA Wittgenstein research and learning platform is just around the corner. Two of its assets are that its resources will be strongly interlinked, and that both research and learning can be carried out within a potentially multilingual ontological framework which embeds the materials into a larger web of resources and domains, both philosophy and others. During the presentation at the Kirchberg symposium, we will show samples from all five key elements toward integrated Wittgenstein research in an OA digital environment. We look forward to receiving feedback on their value as such as well as the ways we conceived them.

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