Expanding Perspectives on Open Science: Communities, Cultures and Diversity in Concepts and Practices

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Imparting Knowledge in Humanities. About Some Practices of Scientific Blogging on *Hypothèses*

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Abstract. My contribution aims to explain how a platform of electronic publishing such as *OpenEdition* might reach a larger public outside the academic sphere, and contribute to the revealing of research in the Humanities to civil society. Practices of academic blogging have expanded since the 2000's. Its potential as a vulgarization tool was acknowledged early. However, most initiatives in scientific blogging are concerned with the field of STM (*Science, Technology, and Medicine*). A quick overview of the classical literature about vulgarization shows that a great deal of attention is being paid to STM. As such, I propose to examine what the practices of communication are towards civil society in Humanities through *Hypothèses*, the blogging platform of *OpenEdition*.

Keywords. citizen science, scientific blogging, humanities, OpenEdition, vulgarization

1. Introduction

It is commonplace to say that the digital environment has deeply transformed scientific communication, which for a long time has been diffused through conferences, seminars, monographs and journals. In regards to the written field, forms of books and periodicals have been transformed, first by digitization and then by their digital native feature that allows new accessibility, new dimensions, or even interactivities and connections. But the technical possibility of an unlimited diffusion can be restrained by an editor's authorizations. The Open Access movement has then intervened with another strategy that is promoting a broader diffusion of knowledge, by making available and appropriable scientific results that are still for the most part financed by public funds [1–3]. Open Access can be considered as an opportunity to systematize direct scientific communication [4], which is not submitted to a peer-reviewed process and takes place in specific infrastructures such as archival depots, platforms, personal websites, etc.² Scientific blogging belongs to this category, and many researchers have

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²According to Martin Eve, Open Access can be defined as "the removal of price and permission barriers to scholarly research. Open access means *peer-reviewed* academic research work that is free to read online and that anybody may redistribute and reuse, with some restrictions." [2] (p. 1). In this sense, blogging cannot really be considered as belonging to Open Access. But in Peter Suber's view, blogging is well included in this context [1] (p. 65). I have choose to follow him on this point, due to the fact that Open

invested in it to communicate about their research in progress to the scientific community – but also to a broader public, by popularizing science.

What is popularizing science (particularly in regards to the Humanities)? How can a scientific blog help such a project? My contribution aims to explain how a platform of scientific blogging such as *Hypothèses* might reach a broader public than the academic sphere and contribute to the diffusion of Humanities research to civil society.

2. Short State of the Art and Problem

2.1. Popularizing Knowledge

In a synthetic note, Jacobi, Schiele and Cyr offer to talk not about vulgarization (in the singular) but about vulgarizations (in the plural), defined as "the attempts at the socio-dissemination of science outside the educational framework" [5] (p. 82, my translation). This term should encompass others like popularization, divulgation, scientific public communication, etc. that can also be used on this matter. Such a definition is established from the basis of the Anglo-Saxon concept of informal education [6] that underlines the role of vulgarization in general scientific culture outside educational institutions.

Indeed, practices of the diffusion of scientific knowledge through civil society are many and vary over time. The project of imparting science to a non-technical public is linked to the formation of the modern public sphere and the ideal of an individual emancipation carried out by the Enlightenment [7]. The first journals that circulated in the literate Salons during the classical Century, such as *Le Journal des Sçavans* or *The Philosophical Transaction* played a big role from this point of view [8]. According to Bensaude-Vincent [9], France in the 19th Century experienced, on one hand, a conception of *popular science*, which means an alternative science for a public of skilled amateurs that can be illustrated by Camille Flammarion's *Astronomie populaire*; and on the other hand, a conception of scientific vulgarization, which means that the scientist will "translate" science for an ignorant audience.

This last conception persisted into the 20th Century, even if the bad connotation attached to the term had decreased. Journalists are then called upon as mediators to build bridges between the scientific world and the non-scientific world, conceived as separated fields. In the 70's, the approach of vulgarization was questioned in a sociological perspective [10,11] and its relevance criticized by Roqueplo as a self-legitimization practice from the socio-intellectual elite³. Sharing knowledge would be an illusion, it is just like a show and the gap between scientists and non-scientists is impassable. Daniel Jacobi's works in the 80's [13,14] reintroduced vulgarization in the field of the scientific activities, through the idea that there is a continuum between specialist discourses and vulgarized discourses. According to him, the act of producing knowledge can't be distinguished from communicating it. Popularizing science is thus the researchers' assignment and not the journalists' charge. Thereafter, Fayard [15] notes the increasing demand from the audience for scientific information, and pleads to replace the old term of *vulgarization* with *public scientific communication*, a term

Access has given an impulse to open science in general, and has thus raised the need to take into account new avenues for communicating research.

³ For this point as well as others, Yves Jeanneret's book Écrire la science [12] can also be referred to.

favoured by the emerging new medias. More recently, Stilgoe writes about the *citizen scientists*, "people who intertwine their work and their citizenship, doing science differently, working with different people, drawing new connections and helping to redefine what it means to be a scientist" [16] (p. 11). Imparting knowledge would thus contribute to democracy, by leading research in accordance with the common interest as well as by allowing citizens to understand issues that could be a matter of choice in their society. Moreover, it does not exclude contributions from citizens to build science (for instance with a call for crowdsourcing in research projects), and bring a dimension of feedback not existing before.

As we can see, imparting knowledge to a non-scientist public can be done with different purposes and depends on the intellectual and technical context. In summary, using Jacobi, Schiele and Cyr's terms, we have passed from a paradigm of *rupture* with a scission between scientific and non-scientific spheres to a paradigm of *continuity* – and now even *action* or *interactivity* that can be added with *citizen science*. Therein Open Access should constitute a huge opportunity since scientific communication is inserted into the reticularity of the web and nourish what J.-C. Guédon named the "big scientific conversation" [17]. Scientific blogging spreads in such an environment, and completes other forms of diffusion.

2.2. Scientific Blogging

Publishing a blog requires a researcher to implement other means of scientific communication than traditional means. A blog post is characterized by its relative brevity, its link to the actuality (as we know, posts are usually displayed in reverse chronological order) and the possibility for the reader to engage in a dialogue by posting comments. Blogging implies the use of specific modes of writing due to the technical substrate of a digital text/discourse that enables to use of hypertextuality, intermediality, etc.⁴. The practice of academic blogging has expanded since the 2000's [21,22]. There are several reasons for publishing an academic blog [23,24]. For a scientist, it could be the place to introduce himself and promote his work by increasing its visibility. Doing so, he positions himself in a professional network [25] and maximizes his chances of being read. An academic blog is also an interface that can show research in progress, record scientist's actualities, or diffuse new from a disciplinary field. Finally, writing on a blog can help a scientist elaborate a reasoning and express it clearly; in this sense, this is a formative exercise that supports the process of reflection.

However, the value of such scientific texts that are not peer reviewed can be questioned. More specifically, what are their contribution to science? The arguments that are most given are that they provide publicity for research in progress and enable interactivity with readers. From this point of view, it reintroduces the dialogism of oral scientific communication like conferences or seminars. Such an idea has been developed by Melissa Gregg [26] for whom blogging is a "conversational scholarship". Interacting with peers in a community gives the opportunity to improve research results, or even interact with a non-technical audience in a bottom-up dynamic [22]. This conversation thus exceeds the academic sphere, and the potential of blogs as a tool for

⁴ Such issues have been treated in the field of discourse analysis by Marie-Anne Paveau [18,19]. About hypertext as a *figure of reading*, we can also mentioned Alexandra Saemmer's book *Rhétorique du texte numérique* [20].

popularization [27,28] or for scientific journalism was acknowledged early. While the expected audience for a scientific book or journal is a research community, blogs might be consulted by a broader public because of the Open Access element. As a result subjects and lexicons can be adjusted in this particular context.

2.3. What about Humanities?

As Marin Dacos (who is *OpenEdition*'s director) has underlined [29], there remains a research gap about blogging in SSH (Social Science and Humanities) and its infrastructures while platforms of blogging in STM (Science, Technique, Medicine) like *ScienceBlog, ResearchBlogging* or, for popularization, *C@fé des sciences* are well known. In the English-speaking field, we can mention the platform Hastac, which is interdisciplinary and mixes "hard" and "soft" science. The development of *Hypothèses* (2010) on the platform *OpenEdition*, after *Revues.org* (1999, dedicated to journals) and *Calenda* (2000, which is a calendar for scientific activities) is an attempt to fill this gap. *Hypothèses* began in French, and has since become multilingual (blogs can be read in German, English, Spanish or even Portuguese).

Such a research gap can similarly be observed in studies about the popularization of science. References that have just been quoted speak a lot about popularizing or imparting knowledge in the physical, medical or technical sciences, but not so much about Humanities (which Stilgoe does not even mention in *Citizen Science*). This is quite surprising, since Humanities are funded to question and explain the human environment and culture; in this way, they are basically linked to the concerns of citizens⁵. Through an overview of the practices that has been developed in the "nonspecialists blogs" on *Hypothèses*, I wish to ask, (i) what paradigms of imparting knowledge have been used and, (ii) what means are used to impart knowledge towards a non-specialist audience. I should indicate that in the framework of a short paper, my purpose is to present an overview and not an accurate analysis of these blogs⁶.

3. About the Corpus from Hypothèses

To establish my corpus, I have taken as a starting point the blogs' catalogue on *Hypothèses*, activating the "non-specialist blog" filter⁷. Through research led in March 2017, I have obtained 57 results. I then reduced these results to the disciplines in Humanities, excluding psychology, economics, politics, sociology, and also geography that are sometimes include in⁸. At the end, I removed the blogs which had not been

⁵ The observation of a gap concerning Humanities in citizen science was also made by Dobreva & Azzopardi [30] – but in this case, citizen science was conceived as an active contribution from citizen to science, and focused on the uses of crowdsourcing in Humanities research. I will focus more on the scientists' practices.

⁶I cannot make such an analysis anyway due to my very poor knowledge of German, Spanish and Portuguese.

⁷ Such categorization is suggested by the blog's editor when he submits his project to the editorial team, who can then review it. This process can be discussed, since some other blogs of the platform are undeniably non-specialist blogs but not categorized as such (ex. *Mondes sociaux*). On the other hand some blogs of this category are maybe not really accessible to a non-specialist audience. However, it offers a working basis in the framework of this short paper.

⁸ The Humanities can be described in a nutshell as "the study of how people process and document the human experience", cf. Liu [31].

updated since 2013 as well as those where Humanities were much too marginal. In doing so, I obtained a final corpus of 37 blogs. Most are in French (18) or in German (12). Some are in Spanish (4), English (2) or even Portuguese (1)⁹ [see Table 1].

Table 1. Corpus Tab

Blog	URL	Nr of visits in 2016 ¹⁰
The Recipes Project: Food, Magic, Science, and Medicine	https://recipes.hypotheses.org/	525 452
El vellocino de oro, Blog de contenido sobre cultura griega y romana.	https://vellocinodeoro.hypotheses.org/	167 340
1914-1918: Ein rheinisches Tagebuch, Quellen aus Archiven des Rheinlands	http://archivewk1.hypotheses.org/	135 056
Historisch denken Geschichte machen: Anmerkungen zu Geschichte Vergangenheit Geschichtsunterricht Geschichtsdidaktik Blog von Christoph Pallaske @pallaske @segu_geschichte	https://historischdenken.hypotheses.org /	122 705
Weber World Café: Transregionale Dialoge zwischen Wissenschaft, Gesellschaft und Kultur	http://wwc.hypotheses.org/	64 917
Geisteswissenschaft im Dialog	https://gid.hypotheses.org/	63 503
Dipnot: Note de bas de page en turc - Réflexions des chercheurs de l'IFEA	https://dipnot.hypotheses.org/	58 424
Krosworldia: Geschichte, Archäologie und die Welt der Geisteswissenschaften in Medien und Gesellschaft	https://kristinoswald.hypotheses.org/	54 433
Sottovoce. Espacio virtual de divulgación científica en español sobre la voz humana	http://sottovoce.hypotheses.org/	42 334
Actualité des études anciennes: Activités scientifiques autour de la Revue des Études Anciennes	http://reainfo.hypotheses.org/	40 671
Angles droit: actualités scientifiques du droit et de la science politique de l'Université de Bordeaux	https://anglesdroit.hypotheses.org/	33 202
Publier une correspondance: Méthode et contenu	https://puc.hypotheses.org/	32 193
En route to a shared identity [Zu einer gemeinsamen Identität: Quellen zur Geschichte Mitteleuropas im digitalen Zeitalter]	http://dighist.hypotheses.org/	29 631
Conserver, enseigner, chercher, Réflexions autour du patrimoine scientifique d'Aix-Marseille Université	http://tresoramu.hypotheses.org/	28 296
Philosophie - Phisolophie, Besser durch den Alltag mit Reflexion	https://philophiso.hypotheses.org/	28 181
The French Revolution Network, Revolutionary transitions from the eighteenth century to the present	http://revolution.hypotheses.org/	27 367
Marginalien: Religionswissenschaftliche Randbemerkungen	http://marginalie.hypotheses.org/	26 605
E-pigraphia, Epigrafía en Internet	https://epigraphia.hypotheses.org/	26 143
Bling: Blog de linguistiques illustré	http://bling.hypotheses.org/	23 665
Mes langues aux chats: Limpide linguistique et analyse de discours 3.0	https://lac.hypotheses.org/	22 951
Dada, Merz and Co. Historische Avantgarde im	http://merzdadaco.hypotheses.org/	21 685

 $^{^9}$ It is in fact the main language of the blog, since some blogs can publish posts in another language (for instance *Dipnot* is also published in Turkish, <u>Weber World Café</u> displays posts both in German and English, etc.).

¹⁰ According to the public statistics available on http://logs.openedition.org/

Spiegel der Gegenwart		
Histoires lyonnaises: Des érudits vous racontent leur histoire de Lyon!	http://lyonnais.hypotheses.org/	20 226
Erinnern in Speyer 1933-1945: Das Blog stellt eine Dokumentation über Zwangsarbeiter in Speyer und Umgebung in den Jahren 1933 bis 1945 dar.Erinnern in Speyer 1933-1945	https://speyermemo.hypotheses.org/	20 028
Ecdotique	http://ecdotique.hypotheses.org/	19 877
La bitácora de Carriazo: Una bitácora sobre las actividades académicas del profesor José-Ramón Carriazo	http://carriazo.hypotheses.org/	19 510
Archivum Rhenanum: Archives numérisées du Rhin supérieur	https://archives-fr.hypotheses.org/	14 449
Onomatique: Traitement automatique et onomastique	https://onomastique.hypotheses.org/	11 047
Les langues à l'EHESS: Langues étrangères appliquées aux sciences sociales : allemand, anglais, français langue étrangère (FLE)	http://bdl.hypotheses.org/	8016
Janvier / novembre 2015. Réfléchir après	http://apres2015.hypotheses.org/	6 678
O "case" Santa Rita (Rio de Janeiro): Arqueologia da transição Arquitetura da persuasão Antropologia da devoção	http://santarita.hypotheses.org/	6 316
Call me, Sprachen lernen mit digitalen Medien	http://callme.hypotheses.org/	5 783
NDig, Neuburg und der große Krieg. Ein Pilotprojekt zur Stadtgeschichte im 19. und 20. Jahrhundert	http://neuburg.hypotheses.org/	5 624
Gedenkstättenpädagogik-Blog	http://gedenkpaed.hypotheses.org/	5 183
Plongée avec Pline l'Ancien: Carnet de recherche sur la biodiversité aquatique décrite au livre IX de l'Histoire Naturelle de Pline L'Ancien	http://hstpline.hypotheses.org/	3 835
Mémoires méditerranéennes: Association pour la sauvegarde et la valorisation du patrimoine documentaire méditerranéen	http://memoirmed.hypotheses.org/	2 712
Anchora: Médiation culturelle des textes scientifiques latins et grecs de l'Académie de marine de Brest (culture matérielle et mer)	http://anchora.hypotheses.org/	273
Les archives et le web: Blog de recherche d'un étudiant de master	http://archiveweb.hypotheses.org/	245

3.1. What Ways for Imparting Knowledge in the Humanities?

In the corpus, three ways to impart knowledge to a non-specialist audience can be identified:

• Applied Humanities i.e. using knowledge in Humanities to explain a given subject in the realm of SSH, creating a clearer understanding of some phenomena. For instance, explaining the sense or the uses of French expressions (Bling or Mes langues au chat), or the function of the vocal apparatus (Sottovoce); giving a historical perspective on revolutions (The French Revolution Network); introducing methods and results of names studies (Onomatic); providing a reading of social or politic actualities through legal systems (Angles droits), etc.

- Cultural mediation i.e. enhancing and promoting a historical/cultural/patrimonial issue that could be avant-garde (Dada, Merz and Co.), monuments (O "case" Santa Rita (Rio de Janeiro)), cities (Lyon, Neuburg), ancients texts (Anchora), cultures (El vellocino de oro, Actualité des études anciennes); letters (Publier une correspondance), or artifacts (Conserver, enseigner, chercher) etc.. This can also take the form of a virtual exhibit: 1914-1918: Ein rheinisches Tagebuch, Erinnern in Speyer 1933-1945.
- **Publishing activities** i.e. making visible some activities of an academic team or institution, by promoting an academic program (*Les langues à l'EHESS*); by publishing proceedings as well as videos or texts of lectures (*Geisteswissenschaft im Dialog, En Route for a Shared Identity, Weber World Café*). It can also occur through publishing actualities of a disciplinary field, a research group, or a project by scientific watching (*E-pigrafia, Dipnot, Archivum Rhenanum*).

These applications could be non-exclusive. As an exemple, the blog *Janvier-décembre 2015*. *Réfléchir après*... is concerned with the Paris attacks of 2015 and its implications. It wishes to clarify "the sense and the geopolitical, political and social factors of these events" (my translation). In this sense, it contributes to the treatment, with methods in SSH (such as history, philology, medias studies etc.), of phenomena – such as how religion may or may not play a role in terrorism, what the Rule of law becomes under terrorism, how the media could build an interior enemy, etc. But this is also a place to publish conference texts or make a scientific watch linked to this subject, because this blog is linked to a conference cycle. Texts are thus adequately published for non-specialists.

3.2. Expected Audiences

What does "non-specialist" mean or, in other terms, what is the expected audience for these blogs? It is not an easy issue, since this is, for the most part, not specified on the blog. On the other hand, some of these blogs can obviously not be consulted by the layman, despite their categorization as a "non-specialist blog". However, in certain cases the expected audience is clearly specified. Some blogs are directed at students, like El vellocino de oro (which is very popular). It can also be professionals or scholarly (even if other audiences are not excluded): for instance, Ecdotique or E-Pigraphia are concerned with publishing ancient sources; or The French Revolution Network, that plans to gather scholars from all disciplines. Without surprise, some other blogs claim their accessibility to the general audience, with a specific interest on a given subject, for instance, religion in Marginalien, or recipes of all kinds for Recipes projets - as the short title indicates "Food, Magic, Art, Science, and Medicine". This last blog has to be highlighted because it is the most consulted in the corpus. It federates a large community by investigating a folk topic that is transversal since it exists in every cultural area. Moreover, such an issue is treated in an interdisciplinary perspective that can interest a lot of people. The blog also has a significant presence on social media (Facebook, Twitter) that could favor its success.

¹¹ «À propos», *Janvier-décembre 2015* [cited 27 March 2017]. Available from: https://apres2015.hypotheses.org/a-propos.

4. Conclusion

I will now link the overview of my corpus with the question raised earlier on what paradigms of vulgarization are used within this corpus. It is clear that *Hypothèses* takes place in the paradigm of *continuity* due to the fact that researchers communicate their research themselves. Popularization is done by scientists and not by a third party (journalist, mediator, etc.). Moreover, popularization is brought together with other scientific practices (eg. *Hypothèses* is a platform to be read by peers as well as a broader audience. Research blogs and non-specialist blogs coexist on the same platform). OpenScience is taken as an opportunity to make scientific communication public. However, there remains a subject I have no time to address in this short paper, which is the big difference that might exist between providing access to scientific knowledge, making it visible, and making it appropriable by non-scientists. I think some examples in the corpus could testify to some confusion about this subject.

Are these practices related to citizen science? In some ways, they are. One cannot say there is a real bottom up conversation, since in general very few comments are left after the posts. As an example, the very popular blog 1914-1918: Ein rheinisches Tagebuch expects that the readers comment and, if they could, provide more information on the archival documents that are exhibited¹². But, in practice, they don't - while the blog is one of the most visited in the corpus¹³. The impact should then be measured by other indicators such as browsing statistics, backlinks or shares on social media that may better capture what Marin Dacos named the silent conversation [32]. But citizen science is not just science made with the help of citizens; more importantly, it is science that serves the common interest. How can Open Science in Humanities serve the common interest? As Peter Suber said in his introduction to Martin Eve's OpenAccess and the Humanities, "In the case of the sciences, that can mean new medicines and useful technologies, and in the case of the humanities it can mean enriched education, politics, compassion, imagination and understanding." [2] [p. ix]. Some practices of imparting knowledge to non-specialists are directly related to this project of a better understanding of social matters in order to act as a cultivated citizen¹⁴. In that way, imparting knowledge in Humanities contributes to making the world intelligible and we may consider that the practices, such as those we have overviewed, fit fully into that framework.

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^{12 &}quot;Editorial", 1914-1918: Ein rheinisches Tagebuch, s.d.. Online: http://archivewk1.hypotheses.org/uber.

¹³ This is also the case with a blog like <u>Geisteswissenschaft im Dialog</u>, which attempts to open a discussion following the posts (some rules of good behaviors are even specified in the section "Über das Blog").

Blog ").

14 This is also the sense of Marin Dacos' speech "Le savoir est une arme" (2016) given at the awarding of his Medal of Innovation (CNRS).

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¹⁵ All the links were checked on March 27th 2017.

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