The Open Science Interviews by Kaja Scheliga

Interview with Cristobal Cobo, Brussels, April 2013

KS: Can you please introduce yourself?

CC: Sure. I am Dr. Cristobal Cobo, I am a research fellow at the Oxford Internet Institute, I have been working there for three years. My main activities there are working in EU projects, in areas like learning and crowdsourcing, I would say, and knowledge diffusion. Lately, after publishing a book about education, now I am working more in digital humanities, I am exploring new ways of knowledge dissemination and the sort of mismatch between the current trends and what is going on within the university.

KS: Okay. What is your understanding of open science?

CC: Straight to the bottom. For me open science is basically ways of making and disseminating science that are inclusive in terms of disciplines but also in terms of access. So you can make combinations between open creation, open creation and multidisciplinary, open dissemination, open dissemination and multidisciplinary, you know the combination of the whole of that.

KS: So do you see a difference between open science and open humanities?

CC: Yes, there are plenty of differences. I have a colleague of mine who is working in the digital humanities way more than me, and we have been discussing, because we have plenty of (…) colleagues who come from Germany and sometimes we identified that for instance in the digital humanities the understanding of many, not all, many Germans of digital humanities is just basically use of technologies in the processing of text, sort of moving from the old books to the digitisation or meta-data, something like that. In the British perspective, I would say that is more the use of technology as a method, as a subject and as a sort of landscape for dissemination of knowledge. But it is by no mean means that the English and the German ones are different, within those communities you can identify again these commonalities and differences.

KS: How did the internet change the way we work, the way academics work?

CC: Well plenty of them. Today I was addressing creation, processing and diffusion. But by no means those are the only ones.

KS: Can you just quickly say what you mean by creation, processing and diffusion? (…)

CC: So I guess, with **creation** it has to do with the way we combine and mix different sources, different data, and different contexts of knowledge. And then in that track the

licensing is really the key in order to be able to access to the information and reuse it. (…) And that is particularly relevant now in this context of open access, the possibility of not only combining the different sources but also encouraging the combination of different disciplines.
Processing - I guess the processing today has a lot to do with what we refer to as collaboration. So a lot of people working together in different space and time. And the processing also has to do with the context of open science with being able to access research information or data that has been produced by other people that you may not know but you can extract that data, they make some data mining and explore it, this has to do with big data, visualisation and other areas.
And **dissemination** has to do with the different technological approach and economical business models in order to make open access to scientific products available. And that means again a more complex approach than the traditional way of producing and disseminating science by using a plenty of / a new landscape of instrument and platform that could be relevant to access information. (…)

KS: Which online tools do you use?

CC: You know what, the other day I was in an e-science congress at the OII, it was a while ago, and it was amazing because all these guys, physicists, were referring to all the technologies that they might use for doing science and very expensive software supported by the European Commission, but at the end one of them was saying that at the end most of the work is done through Outlook, Skype, Google Scholar and you know, the very simple ones. Well I guess I'm working more and more, I depend more and more on the cloud, I would say. For me, nowadays for instance Dropbox is the bridge between many technologies and many apps that I use through / and I probably have more, on a daily basis, I have more meetings by Skype than face-to-face. I rarely work with British people, I work with people all around. Yes, and Google Drive and all these sort of standard things that I don't know if that produces value for your interview.

KS: Yes, definitely.

CC: Okay. So, I do some research in Latin America, so in that context all the exercise that we run are through Google Drive and it is interesting in that, in methodological perspective, because in Latin America there are people speaking Portuguese and Spanish, but we do not tend to translate the same things into these two languages, so we use either English or Spanish and (…) one of the things that we have been doing with this community, which is quite big, it is like sixty universities, we organise online focus groups, real-time in these two languages, with Italian people to make it even more exciting, so it is just a mess but it really works well if you send the questions in advance and you sort of moderate well, you really can have a very lively online conversation that could be academically relevant, it is not the proper traditional focus group but it is a kind of creating academic knowledge.

KS: Okay, great. Do you see any boundaries of openness?

CC: Too many. Yes, usually, at the first glimpse you may think that the main boundaries are the technological aspects, like people might not have access or are they do not have the skills, they do not have the proficiency, or they do not feel comfortable using these technologies, these tools, but at the end of the day, if you explore a bit more you identify that there are a lot of cultural but particularly institutional constraints to that, tenure track, as we were saying today, is still relying on very traditional ways of producing science, and those traditional ways, I am not saying that they discard the possibility of doing open science, but by no mean this is the mainstream. So people tend to go for other directions. (…) Now that the European Commission has released this new policy, there are a lot of concerns of what is going on, a lot of publishers are sort of aware of what are going to be the new business models and each one of their research centres will have to redefine the business models. We know now that if you go for the golden route you have to pay for that in advance and the costs of that will be between one and five thousand euros, which is quite a bit, it is not massive but on a big scale it means that universities are going to be paying for the readers to access these sort of things. So we see economic constraints, plenty of uncertainty, institutional barriers and sort of cultural resistance. Today, in the talk, it was very interesting to see that most of the attendees acknowledge that this is an issue, but next Monday they will all be submitting things in the other kind of journals. So this is the problem. So we have this sort of dichotomy or diversity in our mind that we work in a way and we say other things.

KS: So what do you think is needed for open science to work?

CC: Well plenty of things. I would love to see a sort of overnight transformation but I am afraid it is going to be a more organic process which might take / well it is an option of skills, this is a nice way of saying, the rude way of saying is a change of generation. So when the guys who take the decision today will be replaced by another generation who grew up in this landscape, who probably, most of the readings that they did for their PhD thesis was based on digital publications, they will not understand the world if it does not incorporate this kind of other landscape. So awareness, changing culture, and what else? When people get engaged in something that is a soft open science, like open educational resources movement, then you see an increasing interest in the internationalisation, when you release a sort of lesson or whatever and you start receiving feedback from all around the world, somehow I think that that could also benefit open science but in a medium-term.

KS: Great. And how open is your own research? Is there anything you do open and are there other parts of your research that you say: I am doing this closed, or not so open?

CC: Well, I am absolutely not a representative sample because I am fully open, going everywhere promoting that. So the first book that I wrote, the first day that we finished the book we decided to make it open. I mean, I co-wrote it with another guy. And that was plenty of years ago, like five years. And the book now it got one quarter million downloads, it is amazing, and we never, thought that. I mean not even pornographic books are that successful.

KS: Well congratulations, you must have made good illustrations in there. Nice pictures, good layout…

CC: Well, I don't know, but the thing is, I mean after that, I learned that even if the whole system goes in another direction I am not going to hesitate, so every time that I release / that I finish a publication I go this stakeholder web page, like which is SHERPA/RoMEO (…). The problem with all the journals is that some journals may allow you to have some part of the article or the whole of the article, not the very last version, but the previous version, or not the proof read version, or maybe not the edited version, the final version approved by the editor, but all this stuff is explained in a very complex language for lawyers. So this stakeholder that I am referring to now, it makes the things easier for you, you just copy and paste the name of the journal in this platform and it will tell you in basically two lines with sort of colour-based taxonomy, you cannot do it now, you can do it now, you can put the almost very last version, and this sort of things. I always go through that and I always publish myself. And what I did today for instance with the PowerPoint, which is only PowerPoint, but I think it is important for the people in order to take it and spread it and discuss it and whatever and criticise it as well. As I work and put the stuff online earlier and I show the URL I invite the people to download. So again, I do not think I am a sort of representative sample but I do believe that the open access is the key in order to foster because / and you know the other thing? Someone was saying today that a professor is someone who professes, but the problem of that is you always repeat what you say and if you have the accountability of the entire world and you release your stuff on a daily basis or as soon as you have to produce something, you cannot repeat yourself because you are putting your stuff on the internet and you cannot cheat and yourself, I mean, it does not make sense. So this is another exercise that I have. I am always tempted to say: oh gosh, I am arriving too late to this congress I would love to use the previous slides, but if you do that you stop learning, I guess. So this is more personal if you want, but it is also one of the reasons why I tend to do everything open access.

KS: So is there anything that you would not share with other people? Like work in progress, or how about work in progress? Or ideas that you are not quite sure about?

CC: Well I guess for work in progress, if you have the very first draft of something that I am not even sure that is useful, yes, I might hesitate. But not because I am worried that someone can steal me. I am only releasing things that I am reasonably comfortable with.

KS: So you are releasing things that you want to share with other people, basically.

CC: Yes, if the things are in a very early stage I may tend to pass the stuff on in a blog, so very early and immature idea, I am really happy to put it in a post but I would not call that a paper or something.

KS: Okay, great. (…) Anything that you want to say that I did not ask you about, anything that is missing in this conversation about open science where you think this is an important point?

CC: Well I guess / it does not really make sense how limited the discussion in terms of citations is. There is plenty of evidence, proof, that if you put the things online for free you will speed up the level of citation, which is a key indicator of the traditional way, the h-index. So if you analyse that from an academic perspective there is plenty of evidence, it does not make sense, because these guys, the academics are based on evidence, so we live with this monster that has two heads, one is the traditional way and the other way is how people would like to do the things. We need to build bridges in between and this is I guess what has to do with the awareness.

KS: That is a very nice picture and a very good analogy. Maybe one other aspect that I am quite interested in, what are your thoughts on collaborative writing? You said you wrote a book with another guy. How does that work when you write with another person?

CC: It is a nightmare.

KS: It is a nightmare? Can you elaborate please?

CC: Sure. The first one I co-wrote it with, another Spanish speaker, so it was kind of easier, the funny thing that in those days I was living in Mexico and he was living in Spain so he used to send me the stuff in the night so when I woke up in the morning I had all the criticism of my paper reviewed by him, but it was a super speed up process so we wrote the book in quite a few months, not very long. But it is difficult because collaboration is such a beautiful word. You know, collaborate something with another. But collaboration also means a lot of tolerance, means a lot of adaptability, means a lot of flexibility, and a lot of self-criticism, because if you only blame the other one the thing is not going to work. And that is why I guess I was trying to this article with the word digital skills, because there are a couple of skills that we really require in order to make collaboration happen. And -

KS: Which are?

CC: Well some of the things that I say: curation, adaptability, capability to select and filter information, deal with infoxication, as our Howard Rheingold called it: crap detection, info crap detection, well there is a bunch of them. I made a study in Oxford about e-competencies and there is media literacy, and e-awareness, info-literacy. (…) It is not one specific skill, it is just more a sort of set of meta-skillset, and it is an umbrella that requires a lot of things. And you may do that even if you do not go with open science. If you work with another guy you will struggle with the same problems. The second book was a bit more challenging because the guy was writing in English and I was writing in Spanish and we sort hired a translator to move the things from English into Spanish, so the process of collaboration was twice more painful because we also had the layer of translation, but at the end of the day it was really,

exciting, I would say.

KS: Okay, and do you have experience of writing with more than two people?

CC: I do have experience writing with more people, yes, well I was referring quickly, briefly, to the Internet science things, when we made to the submission of the stuff in late 2010, we started with a Google Drive thing. And of course, during the first ten participants it was fine, and the first ten pages were fine, but when the length of the document moved to one hundred pages where twenty-five guys were writing it, different bits and bites, Google Doc was simply un-useful.

KS: So what did you do?

CC: So when we had a sort of decent first rough version, we moved to the idea of the very simple track changes, so one person was doing the editing and was sending stuff. Probably wiki could be also a simple thing, but the problem with wiki and Google Docs as well, it is very poor in terms of format, it is very useful in terms of adding insights, but it is very poor if you have fonts, titles, subtitles, the formatting is more limited. And this other exercise that I told you, the project with Latin American universities, yes, sixty universities were co-writing, maybe not sixty, one third of that, but it is a painful process, it is long and difficult. We just published a companion with a Brazilian university, sort of extracting good practices of European universities and Latin American, and yes, I was the coordinator of the stuff with another Brazilian professor and it is really difficult, and it is not always, I mean the last version is not necessarily the one that you would love to have but if you want to publish something with another person, it is a negotiation process you have to deal with. Certainly many of the insights of the book were provided by them that were outstandingly better than I would be able to provide. So at the end, I guess, the sum is really positive but it is long and painful and sometimes you say, gosh it is difficult.

KS: Okay great. Thanks a lot. I have no further questions unless you want to add something.

CC: There is a dark side of the collaboration thing. Because we always put it in a sort of this is the way it works and it should work. (…)
So what I'm trying to say is: within collaboration there is no one-to-one relationship. Usually there is this preferential attachment, or these superheroes, that sometimes look like the very old-fashioned parameter of hierarchy. (…)
The other example, Nature Magazine, when there was all the bubble of the Web 2.0, they say gosh we need to move in this direction, so why do we not explore open peer review process. (…) So they asked the authors of the articles that they published, they said your article is going to be peer reviewed in the traditional way but we would like to ask you if you would like to also pass through the open peer review exercise, were the whole community, the whole universe has access, can provide feedback on your stuff. So the first thing that was really shocking is, the amount of guys who say yes to this invitation was ridiculously low, so dissemination and all that and Nature Magazine, no, people say I do not want to expose

myself to this kind of bunch of crazy guys, no. (…) And the second thing of this experiment is, the readers, they provide, this is what the case study released, very useless feedback, sort of not saying something that could make the article better, so the whole exercise of the Nature Magazine was shut down at the end, because not even the authors or the community were keen to collaborate. (…)
But at the end of the day, people are reluctant to this kind of experiment, that's why I used the Chesbrough phrase, when people are comfy in a sort of landscape they do not want it to be changed, so I guess with open science that is also happening. (…)
I mean it is ridiculous, we will look backwards later and it is going to be as ridiculous as this Galileo hiding his work with this thirty-six fonts, it does not make any sense, but I guess the stick or the carrot, I guess the system of incentive is moving another direction, it is still reluctant to acknowledge these kind of things. (…)
I think that case [Michael Wesch, The Machine is Us/ing US] is very representative of the kind of parallel tracks that we see today, so young people are exploring other channels, young people are keen to put things on you YouTube or SlideShare or Wikipedia or whatever, even acknowledging that this might not be translated into more score for the tenure track or other things.

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* This interview was conducted as part of my research at the Humboldt Institute for Internet and Society. The interview was recorded and transcribed. The transcription was carried out with the best intentions of accuracy but can nevertheless contain unintended mistakes. This version of the interview has been slightly edited for better readability without any substantial changes to the content.

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