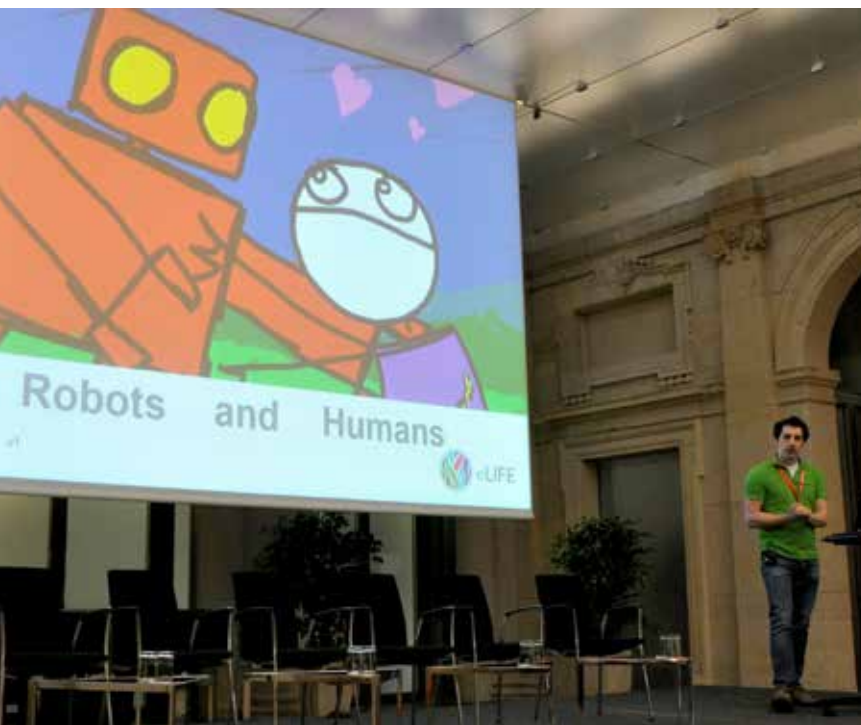# „If you ask for the libraries future, the answer is data."

Ian Mulvany, Head of Technology at eLife talking to Rafael Ball, editor-in-chief of b.i.t.online

Ian Mulvany bei einem Vortrag auf der APE Konferenz 2013 in Berlin

❱ „Kein Wort zu Inhalten, zu Content-Lizensierung?". „Gegenfrage: Bedeutet Content nicht Daten?" Dann folgt eine Antwort, die man als Bibliothekar erst einmal verdauen muss: „Wenn Sie Inhalte in Form von Subskriptionen und Subskriptions-Management meinen - das ist ein Thema, über das nachzudenken ich wenig Zeit verschwende. Ich sehe Open Access als sehr wichtigen Trend und ich denke, dass die Fragen der Lizensierung und die Rolle der Bibliotheken in diesem Rahmen belanglos geworden sind ... also, es gibt in Sachen Content-Lizensierung nur noch ganz, ganz wenig Spielraum und Ihr Bibliothekare seid seit 30 Jahren an der Diskussion beteiligt ... Aber wenn Sie mich nach Fortschritt fragen, nach den Möglichkeiten für die Bibliothek als Serviceeinrichtung, die eine voll-

kommen neue Rolle für sich kreieren muss, dann ist die Antwort: Daten! Wir befinden uns in einer Übergangsphase und sie ist eine wirklich kritische Zeit für Bibliotheken, die sich und ihre Arbeit völlig neu erfinden müssen".

Ian Mulvany brennt für Webtechnologien und deren Potenzial, um die wissenschaftliche Kommunikation neu zu formen. Die Statements, die der Astrophysiker im Interview mit b.i.t.online-Chefredakteur Rafael Ball postuliert, nein, man muss es anders ausdrücken, die Einschätzungen und Bewertungen der Zukunft des wissenschaftlichen Publikations- und Informationswesens, mit denen er den Leiter der Universitätsbibliothek Regensburg als Vertreter der Bibliotheken konfrontierte, sind an mancher Stelle ziemlich schwer verdaulich.

Mulvany ist zutiefst unzufrieden damit, welche Grenzen die heute angebotenen Werkzeuge dem wissenschaftliche Arbeiten aufzwingen und wie sie das Vorankommen im Frühstadium der Forschung behindern; nämlich dann, wenn seiner Meinung nach das Bekanntwerden und die Diskussion neuer Ansätze und früher Erkenntnisse die Wissenschaft schneller voranbringen würden, die Aufsätze aber noch nicht zur Publikation angenommen werden, die Versatzstücke aus der Forschungsarbeit noch nicht publikationsreif im herkömmlichen Sinne sind oder der Wissenschaftler einfach noch zu unbekannt ist. Angesichts der heute verfügbaren weltumspannenden Informationstechnik mit Social-Media-Kommunikationsfunktionen hält er diese Beschränkungen für völlig überholt.

Als Technischer Leiter von eLife[1], einem erweiterten, von der Wissenschaft selbst betriebenen Open Access eJournal, arbeitet Mulvany aktiv an der Entwicklung alternativer Methoden und Werkzeuge zur Unterstützung der wissenschaftlichen Information und Kommu-

---

1 https://www.elifesciences.org/

nikation. eLife wurde 2011 von den drei Forschungsförderorganisationen Wellcome Trust, Howard Hughes Medical Institute (HHMI) und der Max Planck Gesellschaft gegründet. Es ist nach eigener Positionierung „mehr als ein eJournal". Seine Erfinder bezeichnen die Wissenschaftsplattform als „einzigartige Kollaboration von Forschungsförderern und praktisch Forschenden, um Entdeckungen und Erkenntnisse der biowissenschaftlichen Forschung (life and biomedical sciences) zu diskutieren".

Für seine Arbeit bringt Mulvany außergewöhnliche Qualifikation mit. Er hat Erfahrung mit redaktionellen Arbeitsabläufen bei Verlagen, versteht deren Seite und Geschäftsmodelle, und verfügt gleichzeitig über großes Wissen zu Technik und Organisation internetbasierter kollaborativer Plattformen. Er kennt das wissenschaftliche Publikationswesen und die Entwicklungen in der letzten Dekade sowohl als Wissenschaftler, der selbst publiziert, als auch aus der Perspektive von Verlagen und Wissenschaftsjournalen. Bevor er 2012 zu eLife kam, arbeitete er mehrere Jahre als Redakteur bei Springer in Heidelberg. 2007 ging er zu Nature, wo er mit dem Connotea[2]-Team arbeitete und als Produktmanager das mittlerweile eingestellte Connotea-System für das Nature Network vorbereitete. 2010 wurde er von Mendeley[3] angeworben. Dort kümmerte er sich als Vice President Product Delivery um die Bereitstellung und den Betrieb der neuartigen Plattform für Literaturverwaltung, die gleichzeitig ein soziales Netzwerk für Wissenschaftlerinnen und Wissenschaftler ist. Als sich ihm 2012 die Möglichkeit bot, eLife von Grund auf mit aufzubauen, griff er sofort zu. Für ihn ist die Plattform seine große Chance, „intensiv am vielleicht aufregendsten Produkt im Cyberspace mitarbeiten zu können".

Die gegenwärtigen und zukünftigen Aufgaben in Bezug auf die Verwaltung, Organisation, Bewahrung und Bereitstellung der Daten der Wissenschaft teilt Mulvany in drei große Themen ein. Alle drei betreffen Wissenschaft und Bibliotheken. (1) Big-Data, die riesigen Datenmengen wie z.B. das CERN sie regelmäßig erhebt. Diese erfordern richtig große, leistungsfähige Institutionen, sie zu erarbeiten. Das andere Extrem sind die sogenannten (2) Longtail-Data, also Daten, die klein sind, die auf jedes Notebook passen, die jeder Wissenschaftler sozusagen persönlich hat, seine eigenen Forschungsergebnisse in Form von Daten. Hier sieht Ian Mulvany das große Problem, dass diese Daten eigentlich verloren sind für die Forschung und für die Community, wenn der Wissenschaftler die Forschungseinrichtung wechselt oder wenn er kein Interesse mehr an seinem bisherigen Forschungsgebiet hat. An dieser Stelle, so Mulvany, bestünde die Notwendigkeit und die Chance, dass Bibliotheken diese Daten aufbereiten, archivieren und nachhaltig verfügbar machen. Diesen großen Aufgabenbereich könnten Bibliotheken übernehmen. Der dritte Bereich sind (3) mittelgroße Daten, die einerseits zu klein sind für einen einzelnen Rechner, gleichzeitig zu klein für richtig große, auch kommerzielle Verlagshäuser, um sich damit zu befassen. Auch hier sieht der Datenkommunikationsforscher die Bibliotheken und ihre Repositorien in der Pflicht, entsprechende Geschäftsfelder aufzubauen und Services anzubieten. Longtail-Data (2) und Middle-Data (3) sind also die beiden Bereiche, die Mulvany für die Zukunft der Bibliotheken sieht.

Das Interview, das wir im Folgenden in englischer Originalsprache wiedergeben, liefert jede Menge Stoff zum Debattieren und zum Weiterdenken.

---

2   http://en.wikipedia.org/wiki/Connotea
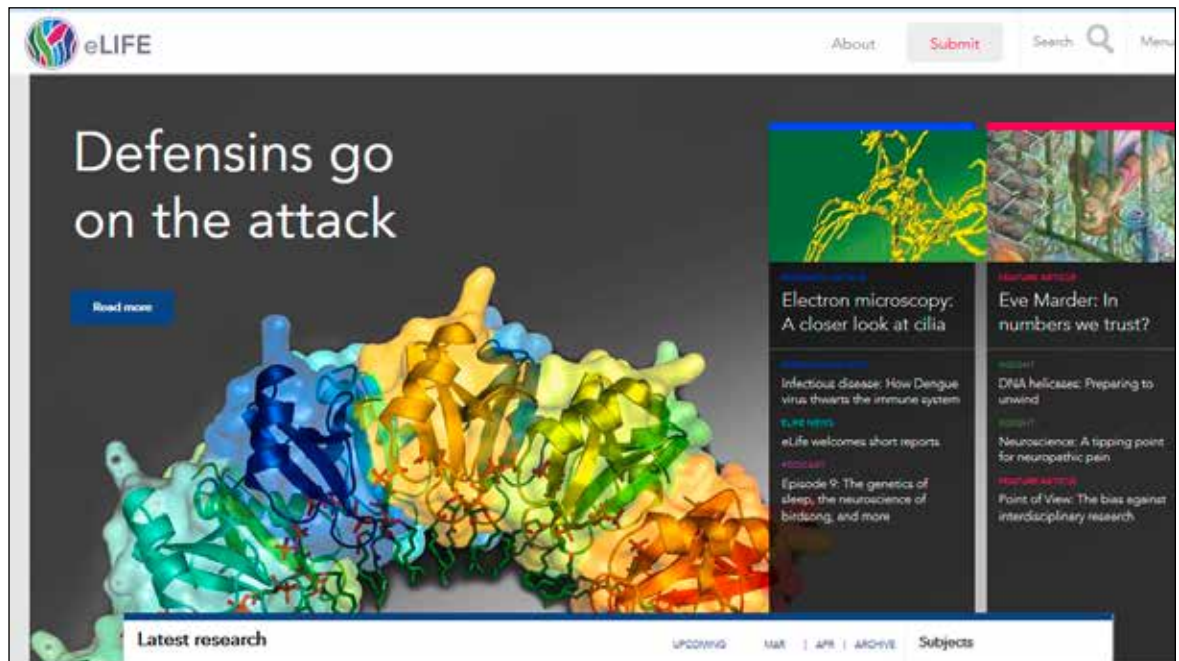3   http://www.mendeley.com/

Ian, thank you for coming. We are pleased to have you here to share with us some of your ideas on the future of scientific publishing – a topic closely connected with the future role of academic libraries.

❭ **Mᴜʟᴠᴀɴʏ** ❰ I think it is a tiding time, a really critical time for libraries in reinventing themselves in their work and their services. But before we start going into details I would like to make one basic statement: The quintessence of everything I have to say here is that building tools that work for people is very difficult. And building services that work for people and that people would use is very difficult. We have lots of conceptions. But we have to become very crucially aware of the limitations of the opinions that anyone presently has in this respect. There are so many moving pieces.

When you talk about the difficulty of building services, the question before this question is: Which services do scientists really need? Do we – as librarians – know which services scientists need? In Germany we do have a hype called „Virtual research environment". But what is a VRE? It is a handful of tools – of various electronic tools to support the research process starting by the idea building going up to publication. Or is it providing additional scientific literature? Or application support and license management and other administrative issues. What do you think?

❭ **Mᴜʟᴠᴀɴʏ** ❰ There is a large number of potential universal approaches on how we could imagine that information would go in the future. But people who talk about the future are very rarely looking at what people are actually doing. And when you are actually looking at what people are doing you very quickly despair. People don't do what you think they do. And you of-

ten very quickly discover that the problems they have are not part of the problems you thought they have. So I think everything has to be grounded in practice and has to be grounded in testing with real people. We force people to use very elaborate work-arounds to get something out of the tool – to use the tool in a way that meet their needs. But what they are doing is wasting a lot of time. The best example is the process of submitting an article to a publisher through those various web interfaces. So if you wanted to fix one big area of pain you would just put resources into creating a unified submission system and then mandate that all the journals have to use that submission system – that would create a huge efficiency. For sure no one is going to do that because it does not address any of these questions about the future of our research landscape. But this is an example of how we leave a lot of prompts on the table because we have decided it is just a little bit too difficult to solve it right now or they don't fall exactly within our domain …

Every journal has its particular system. This is the problem. But I guess no one will invest in one unified system which is commonly used by all scientists world wide and perfect for all editors.

❭ **Mᴜʟᴠᴀɴʏ** ❰ The reason for there being so many unique systems often comes from a too much feature creak in the processes of the creation of these journals; strictly meant the creation and capture of metadata. So if we had a system which allowed us to automatically capture the metadata from tools we use to create the document a lot of the pain would go away.
I think we have to look at unifying and before we are thinking of building entirely new systems at first we

should understand how to solve the existing problems or at least have an understanding of a systemic way to make sure that we don't re-create those problems in the new systems. It would be an ideal to throw away the current infrastructure – and maybe too much to ask for. The point I am trying to make is that there are plenty of problems with the current systems that could do with resolving and improving.

Let me come back to libraries. What do you think is the future role of libraries? Is there any at all? Or do you think a lot of libraries won't survive?

❱ **Mulvany** ❰ I think data standards, archiving, helping with curation of data, helping researchers get up to speed quickly with tools that can increase their efficiency are areas libraries can have a big impact.

And what about content? You did not say a word to that. That's very interesting. What about licensing content ...?

❱ **Mulvany** ❰ (laughing) Is content not data? If you mean content in form of subscriptions and subscription management that is a topic that I do not spend much time thinking about. I see Open Access as being a very important trend and I think that the question about licensing and content licensing and the role of librarians within that the framework is not relevant any more. There is now probably only room for gradual evolution. You guys have been involved in this conversations for 30 years.

But if you want to ask for progress and opportunities for libraries and the library as an institution – as a facility to create an entirely new role for itself – than the answer is data.

Everything depends on the question how scientists will communicate in the future. If they use only Open Access systems, if they will not have fixed formats like journals, papers, contributions, books but dynamic or fluid documents, the role of the library will completely change. What do you think: is the classical format of paper based contribution to a journal, an issue, published six issues per year, libraries licensing this journals in printed or in electronic form. Is it a sustainable model or will the self-made-scientists content sharing be the future of scientific information?

❱ **Mulvany** ❰ There are a couple of different ways to answer this question. First: Where is the future of the journal? You can take the very radical view and say that the journal is already dead. Journals don't matter anymore. When you talk about them in context of exemplar issues per year, exemplar articles per issue journals are dead, because the way people come to the information is through large aggregated search engines. Search engines are ignorant of bundling issues. But the only reason that bundling should have any role in the current system is because they remain a wearer for pricing. But pricing is completely irrelevant to the end user.

At the same time you ought to say that the future of the journals is very strong, because there is no other mechanism which can provide such good filtering as a journal. And that is because journals are productized manifestations of communities. People within their communities, for example in their research community, strongly identify with the journals they publish in, strongly identify with the journals they review for and as a result the journal cannot go away because this would be like saying that scientific communities would have to go away.

So I am giving you two completely different answers. The truth is somewhere in the middle and has to be understood in the context of how people are using the information - the auto fax information. The natural future of the journal will be unchained from some of the jobs that currently go on in the journals. Journals can't provide services to help organize peer-review, but they can or may provide branding. But their role as bundlers of content should disappear.

Filtering function and branding function are also benefits of the past. For filtering we now have search engines, powerful search engines and algorithms.

❯ **Mulvany** ❰ Coming back to libraries and their future role. It is definitely the case that librarians train librarian subjects, shift librarians to do a better job of search and a better job of driving search engines than scientists can do. But you guys seem to have lost the ability to teach researchers. I talked to some people who run the library of the Max Planck Society and they said that the researchers will tend not to go to the librarian as a first resort. However there are cases for the researchers to go the librarian and ask questions about managing data. That has been reported in North America.

This for sure is a topic that is and will have to be discussed furthermore. But going back to your work – we would be interested in eLife, the journal that wants to be more than a journal. What was the idea behind the founding?

❯ **Mulvany** ❰ The main purpose of founding eLife was to improve the career prospects of early stage researchers and make their ideas and findings public. Second we aimed at creating an alliance of scientists in the field of life and biomedical sciences. You see: Getting a paper published in Nature is almost about luck and about the intrinsic quality of the research. Of course the science is good. The point is that there is a lot of good science that is not getting in there.

Getting a publication with these journals is understood as being viable for the career. Thus people are willing to go through significant delays, significantly more work on experiments that might not actually be relevant to the topic they are studying. So the review processes will become extremely bogged. One may spend an extra year, an extra two years doing more experiments. And in the end scientists may have no extra guarantee of getting their work in a publication. Early stage career researchers felt that this is untransparent and potentially damaging and can be a waste of time.

eLife was brought into existence to try an experiment with a scholarly journal to see if it is possible to address these issues. We hope and aim to publish exceptionally high quality work, where we have no artificial limits on how many papers we can publish. For experimenting with the very format of a research article online we introduced a very nice and very transparent procedure which has had extremely positive feedback from people who had the experience of publishing and reviewing.

Is the business model of eLife golden Open Access?

❯ **Mulvany** ❰ At the moment it is entirely funded and supported by the three founders. There are no fees associated with publishing. We aspire to be self-sustaining at some point. The original business plan for the initiative is to introduce article processing charges, but we are completely open. Yet we don't have a clear picture on when we will introduce it nor do we know what level that will be. But what I can say is: We are pretty certain if we introduce charges, they will be lower than the amount that Nature put it in 2004 in response to an enquiry by the House of Commons Committee. Nature said that the cost of creating an article would be 5.000 pounds. We won't be that expensive. I think it is beautiful to think about the publication charges as being equivalent to the charge that you might have for library loan.

Do you think Open Access is an appropriate way for scientific communication in the future? For working in natural sciences as well as in the art and humanities sphere?

❯ **Mulvany** ❰ I can see that there are significant challenges in applying the same model to social sciences. There are quantitative differences. I think it is impossible to get to the prime of your question. It is such an incredibly diverse field. When the research is a piece of art or music, or a piece of actual art or a piece of criticism, it is incredibly difficult to try to figure out how to make a comparison between that what people are doing in their research. We need to have some kind of a multipath system. I mean why do we do research? We want to understand the world in a better way, we want to sort out our position as humans in relation to that world and in relation to each other and towards ourselves.

I think that the digital world, the online world is creating incredibly exciting new options for humanity that did not exist before. ❙