Research publication PART I

TRANSCRIPT

Research Ethics Online Course

1. To start with, pause for a moment and think as many reasons as you possibly can to answer the question - why do we publish?

2. You probably came across reasons that relate to sharing research results, collaborating with others, having publications to support your career progression and having publications to help you to get funding. It is really hard to imagine the research world without sharing results. It does not make sense to do research and tell no one. How would scientific thinking progress, how would results have meaning if we did not share them with each other.

3. The way we share research results has a long history and no one has designed it to be this particular way. Hardly anyone in the research world would be immune to the suggestion that you either publish or perish. And the subsequent thought of winner takes it all as there seems to be no second places in research - you either got there first or you did not. We all know publishing is the key to our academic existence, so what does the publishing scene look like?

4. So what does the publishing scene look like. It is increasingly more accessible and international thanks to the internet. There are more and more players in the publishing game. There are now estimated 28k scientific journals and over 2million articles published every year. The growth of scientific output is estimated to double every 9 years! And the industry is estimated to be currently worth more than 9 billion US dollars. We are talking about a very big game!

5. Considering the importance of publishing to an individual researcher and the magnitude of the industry, a number of ethical challenges appear. In this short lecture, we will briefly explore the most prominent challenges and provide a list of resources for you to further develop your understanding of them. The topics include

6. Finding the balance between quality vs quantity of research publishing. Ethics and options for peer review. Open access. This lecture will look at the quality vs quantity issue and the second part of the lecture below will explore the issues of peer review and open access in more detail.

7. Like with all of these ethical issues, we can adopt two perspective to look at the balance between quality and quantity. Let's start with the local level and the decisions individuals and research group face regarding this issue. The basic idea is that we

publish the whole story in one publication meaning the publication can be understood in itself. When a coherent research story is artificially divided into more publications, we talk about divided publications or salami-slicing, referring to slicing something very thinly. Alternatively the research story can be duplicated by publishing the same story multiple times while pretending it is original every time. This could be publishing it as journal papers, book chapters, or conference papers. These are considered redundant publications. Both divided and redundant publications are considered against responsible research practice.

8. As publications are a key to careers, funding and opportunities, divided and redundant publications would create an unfairness in dividing different goods in the research community.

9. But how do we know when the we have a story to publish? In larger research groups and in long projects, that is not an easy question to answer. It may be possible to know when things are done really artificially by dividing or repeating the same story, but to determine when a story is ready and worth publishing, is a considerably harder question to answer and requires a lot of contextual knowledge and understanding. On one hand there are pressures to publish promptly (for example see Singapore guidelines point 5) in order to share knowledge and advance science in general. On the other hand, most of the time there would be more to add and do in any given research project to add to its explanatory or predictive value. This decision-making can be further complicated by private funding, where other motivations for the timing of results may be included. Inescapably how we make this decisions reflects our values and understanding of the research process.

10. From the global perspective the quality quantity balancing takes a different shape. Considering the approximated 2million articles a year, it is now suggested that more and more articles are never referenced by anyone leaving us in doubt of their value to the research community. Also it is suggested that papers are forgotten quicker and quicker if measured by the timeframe within which they are cited. There are also suggestions that increased publication race increases the risk of misconduct in relation to plagiarism, fabrication, falsification and misappropriation. The volume of publications also places a strain in the research community when conducting peer review and shifting through the volumes of publications in search of meaningful results. The growth of the publication industry appears to be threatening its own meaningfulness and the research community is looking for ways to navigate through the required changes.

11. The decision where to publish can be very complicated. One of the first decisions within a group or supervision relationship is to make a decision who decided where to publish. There are multiple different decision making criteria to consider and different members of the group might have interests to support different decision-making options. One way to navigate through the growing options between journals is to consider different measures to rank and rate publications that are now available. Most

of you would have heard of SJR or SNIPP and there are links below to learn more about these measures. These are then used to both make decisions on where to publish as well as evaluate the meaning of publications when dividing research benefits in terms of careers, funding and other opportunities. The research community engages in an ongoing debate about the way the rankings should be done and how to best use them. This debate has both technical and value based components. Balancing the rankings for example with other needs like time bring out number of different values different people bring to the decision-making. A PhD student may have different priorities to the supervisor. Balancing the needs is an ethical negotiation around whose needs should have priority. In addition, everyone in the group works within the needs and boundaries set by the institution. In larger collaborations the individual needs may be contrasted by different institutions setting boundaries that are not easy to amalgamate. The key as always, is to open the discussions on these issues as early as possible. Communication is the key.

Research publication PART II

TRANSCRIPT

Research Ethics Online Course

1. Welcome to part II of the ethics and publishing research results lecture. We explored questions around quantity and quality in part I.

2. Welcome to part II of the ethics and publishing research results lecture. We explored questions around quantity and quality in part I.

3. Let's start with peer review. Peer review is the gatekeeper of research integrity. It is the measure of validity of research methodologies and results. It is to guarantee that what is published is contributing to the increase of research knowledge and the work has been completed according to best standards in the field. However, the peer review system is not perfect and the research community is constantly engaging in a discussion whether changes need to be made to the peer review system and what those changes would be. Let's first look at peer review standards and then explore further some of the commonly discussed challenges to peer review.

4. The peer review process was typically in one of two ways: Double-blind meaning the reviewers and the authors remain anonymous to each other. This is often referred to as the golden standard of peer review as it is designed to remove prejudice from peer review and allow the research to be judged on its merits alone. Single-blind peer review typically allows the reviewers to know the authors, but the authors will remain unaware of who has reviewed their paper. This does not guarantee the same protection against prejudice but allows the reviewer to be honest without a fear of a negative response from the authors.

5. The peer review process, whether it is single or double blind, is often criticised for the following reasons: the reviewers are incompetent, biased, required unnecessary references to boost the reviewer or made personal attacks in their reviews.

6. In addition to the issues in the actual peer review, the process is currently also highly invisible, the academics do this with without recognition or pay in addition to their other duties. These have been suggested to contribute to both the quality of the peer reviews as well as being contradictory to the basic research principles of openness and transparency.

7. As one way to address these challenges to existing peer review methods, an open review process has been suggested. An open review shares the details of both

reviewers and authors with each other. This is often also accompanied by publishing the review alongside with the article and thus making the reviewers work public. This is adopted to acknowledge the work and contribution done by the reviewers, to increase transparency in the review process and to increase quality of the reviews given. The open review is considered to be challenged by potential for bias and inability of junior academics to criticise papers of senior scientists in their field. So you can see all of the peer-review options carry a set of values to support their use as the peer review format. Which of these values is most convincing reflects how the decision-maker views the research process and the individuals in it.

8. As part of the openness and transparency of science, the publishing side has got its own open access momentum. One aspect is open access to journal articles i.e. without the reader having to pay for them. Considering the significant size of the industry and the volume of papers, this approach would propose a significant shake up in the way research is published. Complete open access would mean that the all papers are made available free of charge as soon as they are published. A delayed system would allow free access for example a year after the article was originally published and the hybrid approach would either provide some articles free of charge or set up systems for the authors to choose open access via payment upfront for their article.

9. Open access is supported by arguments around increase of transparency in research work, quicker transfer of knowledge from academic to the rest of the society and to increase fairness particularly between institutions and academics in different continents and countries to allow everyone equal access to latest research findings.

10. Open access journals also carry their own sets of challenges and issues. One of them is the increased number of online journals offering open access, which have been considered to be of questionable quality. This issues does not relate to just Open Access journals, but to the overall growth of the publishing scene and the apparent differences in the way peer reviews and editorial decisions are made in different journals. Some criticism has also been directed towards particularly author pay open access journals where there are doubts that this approach will increase bias and further reduce quality as journals are happy to publish as long as they are paid independent of the quality of the paper. Lastly, there are concerns around the sustainability of many of the new open access journals and as such of the ability to preserve the papers published in them for future use.

11. Individuals and research teams are now faced with even more decisions regarding where to publish. Increasingly funding sources are mandating publishing in open access journals. In addition members of a research team have their personal preferences and sometimes the options available are limited if for example no good open access journals exist in the field of study. Making a decision regarding the choice of journals reflects our values and is deeply embedded in our research context.