WHITE PAPER

PRESSURE TO PUBLISH

How Globalization and Technology are Increasing Misconduct in Scholarly Research

1.0 *A World Smaller and Larger*

This white paper explores how globalization and technology are changing scholarly research and how these changes impact researchers, institutions and publications around the world. The new world of scholarly research is both smaller and larger. It's smaller because researchers can easily log onto a computer and gain instant access to data, collaboration and funding sources. They are no longer limited to the finite resources of their institutions, and now have global access and influence. Scholarly research is larger because there are more participants in the field, increasing the level of competition. Submissions to publications, as well as rejections and retractions, are at an all-time high. As global and technological influences alter the world of academic research, the means and incentives for scholarly misconduct are increasing. This report examines the opportunities and challenges stakeholders face and provides a guide to how scholars can navigate this changing world.

2.0 *Incentives and Pressures to Publish*

The pressure to publish is one of the biggest challenges in the world of scholarly research. It impacts almost every aspect of the research and publishing process, and is growing in importance. Dr. Elizabeth Wager, the Chair of the Committee Publication Ethics (COPE), an international forum that aids thousands of editors and publishers in responding to ethical concerns, has seen the pressures firsthand:

> *"I would say the biggest trend that editors have seen is the enormous pressure to publish. In some countries there are big financial incentives for authors to publish, as well as a lot of emphasis on publishing in high impact journals, even sometimes with financial incentives attached."*

Although publication has always been one of the driving forces of scholarly research, it has now reached a new level of importance. The potential negative impact of not getting published on a regular basis is pushing some researchers to cut corners in order to increase their chances of acceptance into distinguished journals. Essentially, the positives of getting published outweigh the negatives of potential research misconduct.

> *…there is always a concern that if the pressure is too high it will create an atmosphere in which the temptation to commit research or publication misconduct is increased.*

Says Wager:
"Promotion, appointments, and academic careers are really relying on publication and while that is in some ways good for the publishers and opens up some opportunities, I think there is always a concern that if the pressure is too high it will create an atmosphere in which the temptation to commit research or publication misconduct is increased."

What are the main drivers intensifying these pressures and how can the scholarly research community respond?

3.0 *Technology as a Great Leveler*

Underlying the increased pressure to publish is the technological infrastructure of research that has rapidly evolved over the past two decades. Technology has advanced many fields of research by enabling

researchers to have unprecedented access to information from colleagues around the world.

Dr. David Everett, a food science researcher from New Zealand, has firsthand experience on how technology has molded the research sphere. Researchers from isolated countries like New Zealand used to be handicapped by something Dr. Everett calls 'the tyranny of distance.' Essentially, scholars who were not located in North America or Europe faced difficulties collaborating, establishing funding connections and accessing information in general.

Today, communication technology has removed these obstacles. Volumes of research from around the world can now be cross-referenced from an office computer in New Zealand. Dr. Everett also noted that it is now commonplace for researchers to track down and contact funding agencies online that match an area of expertise or a field of research.

Dr. Everett has seen a downside to the evolution of technology as well. As an editor at the International Dairy Journal, Dr. Everett has seen new online publication markets grow based primarily on rejected pieces of research.

> *The increasing rejection rate has led to a market to establish new journals online, and in my opinion there are far too many of them.*

Says Everett:
"Of the 450 articles submitted to the journal, we publish approximately 150. So 300 of them go into the great wash, and we occasionally see them ending up in online journals - some of lesser quality. The increasing rejection rate has led to a market to establish new journals online, and in my opinion there are far too many of them."

Inseparable from technology change, the influence of globalization is introducing a new set of participants and powerful influencers into the field of scholarly research.

4.0 *Research Goes Global*

Technology has also made the university research system more competitive globally. Universities in countries around the world all want their institutions to be considered 'top-tier' because leading universities attract highly-touted professors, receive more funding for research facilities and have high student enrollment. In addition, many universities are being pressured themselves to elevate their status by governments with nationalistic agendas.

One primary pathway to becoming a top-tier university is retaining researchers that are regularly getting published in high impact journals. Not many people have a more informed view of the international publication and peer review processes than Dr. Benson Honig, a professor at McMaster University's Degroote School of Business, as well as an editor at the Journal of Entrepreneurship Theory and Practice.

Based on his work as an editor for a journal that regularly receives submissions from around the world, Dr. Honig has a unique perspective on how globalization has pushed the boundaries of academic publishing:

> *The result has been a huge pressure on the system, huge demand for higher quality and with editors having a harder time obtaining quality reviewers...*

"In my field, the demands have increased, so if you are in Taiwan or China and you want to get tenure, you must publish in a North American or a top Financial Times (FT-45) journal. The universities in many of these countries are now requiring the same standards as someone at a good state school in the US. The result has been a huge pressure on the system, huge demand for higher quality and with editors having a harder time obtaining quality reviewers because the number of reviewers hasn't increased commensurate with the number of submissions."

Dr. Honig highlighted the increase in domestic and international submissions to top-tier journals. In some cases, journals are receiving 10 times the submission volume, while publishing only around 3-5 percent of those entries. Twenty years ago, there were far less submissions and the rate of publication was considerably higher. In most cases, publication was controlled entirely by editors – a person or group who would decide whether a piece of research was worth publishing.

5.0 *Research Misconduct by the Numbers*

Why would individuals risk committing research misconduct? Similar to Dr. Wager's observations, Dr. Honig confirmed that the incentive for misconduct might outweigh the potential costs for these individuals:

> *"There's a lot of incentive for people to cut corners, to try and get something published. Their job, their career and their reputations could be on the line. Everything they may do for the next 30 years may be contingent on them getting one particular article into one particular journal. In order to do that, things take place that are not ethically sound."*

The Wall Street Journal and Thomson Reuters Web of Science recently compiled data from 11,500 peer-reviewed scholarly journals in relation to incoming submission and publication data since 2001. They found that the number of papers published had risen by 44 percent. Even more surprising was the increase in retracted papers within the dataset of peer-reviewed publications – an unsettling 15-fold increase since 2001.

Today, peer review has become a necessity due to the increased global demand on distinguished journals. Although in some cases the standard peer review process can prevent research misconduct prior to publication, there are often cracks in those systems. These cracks are one cause for the staggering rate of retraction.

The rising rate of retraction isn't the only place to look to in regard to a rise in research misconduct. Multiple studies by government and non-profit organizations over the past decade have pointed to a sharp increase in direct cases of misconduct. The Office of Research Integrity (ORI) oversees the assessment of research integrity within various agencies, including the National Institutes of Health and the Centers for Disease Control and Prevention. In a 2008 ORI survey, it was found that research misconduct had risen to 67 percent in closed cases from "a historical average of 33 percent."

{ *From the sample of accepted papers he found that between 13-15 percent demonstrated 'significant plagiarism.'* }

Dr. Honig recently led a study that examined a selection of submitted papers to the primary academic conference in his field, The Academy of Management, which has about a 50 percent acceptance rate. From the sample of accepted papers he found that between 13-15 percent demonstrated 'significant plagiarism.' Dr. Honig described significant plagiarism as "at the minimum one full paragraph, uncited and unquoted, with no reference to where it came from."

Problems like plagiarism and other forms of research misconduct cannot be overlooked. Although individual researchers may decide to take a risk for the sake of their career – institutions, publications and the research community as a whole cannot take this risk. Misconduct not only undermines the overarching value in research integrity, it also damages the reputation of an institution while costing an organization time and money.

6.0 *A Path Forward*

So how can researchers, organizations and publications navigate this drastically changing landscape to avoid problems? As the chair of the Committee on Publication Ethics, Dr. Wager has helped publications that are asking these same questions.

Dr. Wager suggests some general resources from COPE that can help those in need of guidance:

> *"For several years we have had a flowchart on what to do if you suspect duplicate publication and what to do if you suspect plagiarism in a document. For example, our plagiarism flowchart explains minor and major plagiarism, and how to properly react to each type, depending on the situation."*

Dr. Wager also acknowledges that the evolving global landscape of research prevents having a stock answer to many questions on misconduct because different organizations have varying amounts of resources and different perspectives on publication.

"We work with journals all around the world, some with very limited resources. For that reason, we can't mandate what they should do. However we do provide them with a number of best practices and guidelines. For example, one best practice is to access tools such as CrossCheck."

CrossCheck is an initiative between CrossRef and iThenticate, a plagiarism detection service used by leading publishers, organizations and researchers, that enables writers and editors to scan and analyze submitted data from a consortium of publishers. One goal of the tool is to discover duplicate content and prevent instances of plagiarism prior to publication. Preventing research misconduct from 'going live' and avoiding the potential repercussions is beneficial to both research publications and researchers.

As far as best practices go, Dr. Benson Honig also agrees standards around intellectual property will be an important part of a solution:

I don't think any article should be accepted...until the author has voluntarily put it through a plagiarism checking system…

> *"First and foremost, I don't think any article should be accepted, whether at a conference or for consideration at a journal, until the author has voluntarily put it through a plagiarism checking system and verified that it's clean. If you sell a car you have to verify the titles, or if you sell your house you have to go through a title company. I think we need to verify that the intellectual property is truly owned before we try and sell it."*

7.0 *Navigating a New World*

The changes occurring in the field of scholarly research deliver many benefits to research and learning globally. With a far greater pool of talent and sharing, research innovations and breakthroughs in scholarship are likely to increase. Yet the demand of this changing system will take their toll on professionals and institutions competing for publication as the quantity of submitted works continues to increase. Institutions need to have a clear policy on scholarly misconduct that ensures that intellectual property is protected in a world where the pressure to publish seems to be only increasing.

References

Gatum, Naik. "Mistakes in Scientific Studies Surge." The Wall Street Journal. August 10th 2011. http://online.wsj.com/article/SB10001424052702303627104576411850666582080.html

The Office of Research Integrity (2008). The 2008 Annual Report. The Department of Health and Human Services. http://ori.hhs.gov/documents/annual_reports/ori_annual_report_2008.pdf