

## Reflections on the Research Misconduct Cases in East Asia

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Research misconduct and research integrity have been increased concerns in East Asian academic societies in the past ten years. Deliberating on the notable research misconduct cases in East Asia and analyzing their similarities and differences as well as their social, cultural, and environmental factors may help us understand why they occurred and how to improve them.

In this issue Myungsim Kim, Jongyoung Kim, and Hee-Je Bak have explicated that Woo-Suk Hwang's event in 2004 was complicated and involved "political interests, hierarchy in disciplines, national research culture, and nationalism" in South Korea. Although it facilitated the development of the national mechanism in research ethics regulation and governance, the high social expectation for success in stem cell research and the disappointment resulting from the fraud have driven the South Korea government to increase support for stem cell research, publication, and commercialization. Yet, whether the research ethics culture and practice among scientists and the academic society has been substantially transformed remains a question.

Koichi Mikami in this issue investigates the STAP Cell case that occurred in 2014 in Japan by focusing on the socioinstitutional environment and why it developed rather than on deciding who should be responsible for the misconduct, and argues that the concept of "inferred doability" existing in the local culture of stem cell research might have contributed to the development of the scandal, which is not unique to the Japanese research community.

Junhui Han and Zhengfeng Li in this issue explore the cases of "postproduction misconduct" in China, which means commercial agencies fabricate peer review and reviewers to manipulate the review process. These cases led to more than two hundred journal papers by Chinese authors being retracted by BMC, Springer, Elsevier, and *Nature* in 2015 and 2017 combined. They indicated that this new type of research misconduct was facilitated by the "matric-based academic evaluation" and the pressure of "publish or perish," and argued that such a "title assessment system" needs to be reformed especially for the clinical researchers.

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As we examine these case studies from different East Asian countries, certain common features are identifiable. First, to be successful and prominent in scientific research and advancement has always been a common goal for all scientists. However, fierce competition in achieving excellence in research and publication as well as the “publish or perish” rule in the academic assessment system often bring tremendous pressure to researchers. Moreover, when ambitious researchers are eager to make their publication outstanding or prominent scholars are carrying the hope of success not only for themselves but also for their institution or nation, temptation of committing fraud and research misconduct may arise. Second, in some cases not only the institutional research integrity review and governance mechanisms were lacking or insufficient, but also the peer review system of journals was deficient or malfunctioning and could easily be manipulated or deceived leading to frauds and resulting in numerous retractions. The first constitutes the environment that generates the motivation of research misconduct; the second opens loopholes for the researchers or the agencies to manipulate and commit misconducts. These phenomena are certainly not unique in these East Asian countries. Research communities in Western countries have similar problems. [Retraction Watch \(2017a\)](#) indicates that the top ten retractions of 2017 are from China, the United States, Sweden, and Israel, and similar stories are heard from many other countries.

Taiwan shares many similar social and cultural background and academic environmental factors with its neighbor countries. Comparable cases of research misconduct also occurred and raised serious social concerns and impacts in recent years in Taiwan. In 2014, SAGE Publications broke apart a “peer review and citation ring” and retracted sixty papers from the *Journal of Vibration and Control* written by Chen, who fabricated more than a hundred fake e-mail accounts so that he could review his own papers ([Oransky 2014](#)). In 2016, [Neil B. Hampson and Lindell K. Weaver \(2016a\)](#) wrote a letter to the editor in the *Medicine* correspondence blog and pointed out that Kao, who was senior author to sixty different primary authors, published 151 papers in 2015 from the same database analysis, which was considered to be templating and not hypothesis driven. Furthermore, many primary authors’ departmental affiliation was irrelevant to the organ system discussed in the paper ([Hampson and Weaver 2016b](#)). This likely signifies these authorships were merely for fulfilling the so-called title assessment system.

The publicly noted cases from South Korea and Japan are relevant to “the drive to succeed” and even to “nationalism.” The main cases reported in Taiwan, however, have another special characteristic of “politicization,” which means research misconduct was often used as a sufficient and effective reason to make scholars carrying important political or academic positions to step down. In 2013, when Lee was newly appointed the Minister of National Defense of the Taiwanese government, he was soon accused of plagiarism in his 2006 paper leading to his immediate resignation from the new designation ([Apple Daily 2013](#)). In 2006, a chest physician submitted a paper to *Cancer* and was accused by a reviewer of improper citation, but the problem was soon corrected and the paper was accepted and published. However, this event was used to attack Chen, the candidate for vice president in the 2015 national election, because he was a coauthor of that paper ([NewTalk.tw 2015](#)). In the aforementioned 2014 SAGE case, Chiang, the minister of education, who was a coauthor of some of the retracted papers by Chen, was severely criticized and had to resign from his minister position

(Lin 2014). In 2016, another case of fabrication by duplicating images (McCook 2016b) also caused the president of National Taiwan University, who was a coauthor (though neither primary nor senior author) of the retracted papers, to discontinue his presidency. Research misconduct was used to attack and question the moral integrity of these political or academic leaders in news media but the nature and operation of political battle was also recognizable. All of a sudden and fashionably, searching for the research misconduct or academic flaw of one's opponents and charging them with lacking moral integrity has become an effective political battle strategy. However, research integrity and research ethics were ironically never sufficiently emphasized and implemented in higher education in Taiwan.

After these events, the Taiwanese Ministry of Education and Ministry of Science and Technology both tried to make remedial, educational, and regulatory improvements that included requiring academic institutes to establish a research integrity unit, regulation and disciplinary mechanisms, and make research ethics training credit a prerequisite for research grant application. Although the Ministry of Education has established a research ethics online program and resource center since 2014, the [Center for Taiwan Academic Research Ethics Education](#) website resource was finally adopted as a basic standard course by more than ninety universities in Taiwan after the new regulation was announced in 2017.

## Conclusion

Upon reviewing these significant research misconduct cases from Japan, South Korea, China, and Taiwan, we can understand that not only are individual researcher's research integrity and ethics at stake, but that the social, cultural, and environmental factors also play important roles in their development. The pressure coming from publishing and academic assessment systems; the drive to be successful and excellent for personal, institutional, and nationalistic reasons; and the malfunctioned peer-review systems at institutional and journal review levels all might have contributed to the formation of these research misconducts. Such scandalous events once discovered and disciplined, though they led to serious harm and impact to the individuals and institutions involved as well as the reputation of the countries, eventually brought forth remedial and educative actions. Some function to establish clearer standards and procedures for overseeing research integrity affairs; some provide pedagogical materials and methods so students and researchers can have more comprehensive understanding about research ethics. Although many have argued that such corrective and top-down regulatory imperatives can change little about the culture and intrinsic value of the research community, and compulsory programs and credit requirements are also neither ideal nor welcome tactics for research ethics education. However, I uphold that an externally driven strategy, if appropriately designed and implemented, may still enhance ethical awareness, facilitate good moral reflection, and foster ethical practice. Such efforts are urgently needed and legitimately enforceable when the morale of the research communities are devastated by such research misconduct chaos. The challenges lie conceivably in what pedagogical approaches can bring about substantial value reflection and positive attitude and practice transformation, and what regulatory framework reforms can improve the system and culture so that research integrity will

not be skewed or compromised by environmental factors. These will invite further reflection and exploration by bioethicists and STS scholars.

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