Defend the Treasure of Academic Freedom in the Digital Revolution

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Introduction

There was a debate called “Whether Academic Freedom Should Be Redefined” during the 2015 American Association of Colleges of Pharmacy Interim Meeting. The center of argument lies in the fundamental definition of academic freedom as it was written in the American Association of University Professors’ (AAUP) 1940 Statement of Principles on Academic Freedom and Tenure. The opposition party earned the most support from the audience at the end of the debate. They emphasized the need to clearly articulate the meaning of academic freedom through education instead of redefinition.

The AAUP 1940 Statement outlines 3 fundamental principles of academic freedom which is regarded as treasure of higher education: teachers and professors from colleges and universities have entitlement of freedom in research and in the publication of the results, the freedom in the classroom in discussing their subject, and should be free from institutional censorship or discipline when speaking or writing as private citizen.1

It has been 80 years since the birth of the AAUP 1940 Statement. When we enter the second decade of 21 century, the treasure of academic freedom has withstood the test of time. Nearly 100 countries deem academic freedom as a constitutional right and the UNESCO “Recommendation Concerning the Status of Higher-Education Teaching Personnel” of 1997 declares it a universal right.2 With the rapid development of technology, we are stepping into the digital age consciously, or unconsciously. To a certain degree, nowadays the digital revolution challenges academic freedom, which is still heart and soul of higher education. As beneficiary of higher education and seeker of truth, I strongly defend the treasure of academic freedom in the digital revolution.

Challenges

The efficiency focused revolution speeds up the decline of tenure system

Tenure provides teachers and professors with the security to persist in truth without any pressure from ambient forces. For sake of sustainable development of teaching and research in the long run, teachers and professors shall be entitled to the freedom of expressing what goes against the mainstream ideology. Otherwise, there would be no one for
pursuit of advancement of truth. The firestorm
around the first professors to teach evolution is
a good example of how this conflict has played
out and how the professorate has survived in
spite of the odds.\(^3\)

The digital revolution attaches great
importance to efficiency in economic envi-
ronment, which results in the erosion of tenure
system. According to the data provided over 10
years ago, faculty members who teach in a
contingent manner, such as part-time
instructors, nontenure faculty members, and
adjunct volunteer faculty members comprise at
least 70% of the university professoriate
population.\(^4\) Until today, the percentage is
increasingly becoming larger. As the AAUP's
2009 Report on the Economic Status of the
Profession points out, “faculty members rep-
resent only a cost, rather than the institution’s
primary resource.”\(^5\) Under the cir-
mumstances, they are being counted as costs rather than
assets, as well as being regards as numbers
instead of human beings. If we run into an
extreme scenario that tenure no longer exists in
higher education, faculty members who lose
protection are probably away from in-
dependence of teaching and research.
Seriously, the foundation of academic freedom
would be sentenced to death when there are
merely dishonesty and inconsistence, even
silence in the end.

**The data driven revolution overturns the
tradition of teaching**

When it comes to the freedom of teaching and
expressing self-ideas in the classroom, professors used to be isolated from their
colleagues and dominated the “chalk and talk”.
In classroom teaching, the relationship
between professor and students is stable, on
the one hand. On the other, every teaching is
hard to be evaluated then improved for the
good of both parties.

The digital revolution brings a new pattern of
teaching. Thanks to advanced technology,
traditional classroom is being transformed into
online classroom or physical classroom armed
with cameras. As a consequence, all behaviors
of professors and students are recorded, then
they are put into digital analysis in forms of data.
Accordingly, there are additional data group
who are third party in the classroom. The danger
is that as we measure and map teaching and
learning we also curtail professor's freedom to
interpret, rethink or question the assumptions
of their disciplines.\(^6\)

Supervision is somewhat essential for checking
professor's accountability and his following
institutional policy. For instance, In Edwards v
California University at Pennsylvania\(^7\), a federal
court ruled against a professor who was
pushing his religious beliefs on students during
lectures. The ruling held that the university
could control course content, concluding that
the First Amendment does not give a public
university professor the right to use curricula or
teaching techniques that conflict with
institutional requirements.\(^8\) Whereas, all digital
mechanisms still not affect the essence of
academic freedom itself. The ability of
measurement by means of data cannot be
mistaken for the knowledge and the truth from
brilliant minds.

**Propositions**

**Employ blockchain technology in a brand-
new protection mechanism**

If we think over concerns of contract faculty
members, the insecurity origins from
uncertainty. There are possibilities that the
faculty members are censored, demoted or
dismissed during contract period because of
insisting on academic freedom. Faced with
struggles of tenure problems, we may jump out
of the box. I would like to come up with a bold
proposition which substitutes blockchain
contract mechanism for tenure system.

A blockchain is essentially a record of digital
events. However, it is not “just a record,” since
it can also contain so-called smart contracts,
which are programs stored on the blockchain
that run as implemented without any risk of
downtime, censorship, or fraud.\(^9\) At the digital
age, the blockchain contract mechanism is a
win-win solution. Based on a reliable, trustworthy distributed record system, the blockchain contract mechanism stipulates rights and responsibility to a very real extent, protecting contract faculty members in any circumstances of academic freedom. On the other side, the burden of human costs from institutional perspective is released when professors forwardly choose to seek balance of security and flexibility. If the brand-new mechanism is tested and applied in digital times, the smart contract under full protection would exceed the influence of tenure system.

**Leverage the advantage of data to seize back the initiative of teaching**

There is no doubt that academic freedom guides what teachers and professors can do. The key point here is to address how they do it in data environment. In other words, the focus is how to make academic freedom independent of technological or pedagogical changes. In this regard, I propose to establish the data sandbox mechanism to seize back the initiative of teaching in classroom.

In the field of computer security, sandbox is a security mechanism, which provides an isolation environment for running programs. In likewise, all date collected from classroom are locked in the sandbox. Ideally, no one is able to have accessibility analyzing the original data. With low degree of freedom concerning the access to the data, the treasure of academic freedom is guaranteed.

Some may argue that with the data sandbox, the advanced technology would be meaningless. On the contrary, the data-driven technology is going to play an important role through automatic learning and teaching adjustment. First, the sandbox is technically designed to output relevant data analysis results, which concentrate on students learning process and serve as assistant of teaching. Second, the red alarm is built upon mathematical model. It would be triggered from the sandbox when negligence of duty or failure to follow institutional policy occur (refer to cases Hetrick v Martin and Urofsky v Gilmore). In the issue, the data sandbox mechanism realizes the purpose of technology-enhanced classroom: to improve the quality of learning and to avoid professor’s irresponsibility.

**Establish the global academic network in forms of digital innovation**

Before digital age, the expressions of teaching and research are restrained to the physical world: official publication, traditional classroom, and other offline occasions. Sadly, we are currently not ready for protection of academic freedom in digital revolution where professors are still in danger of being misunderstood and blocked by digital forces like social media.

Academic freedom rests on collective efforts through the global academic network. Academic networks cannot exist in isolation; if they are to be successful, communication both within the network and to those outside the network in general society is essential. Thus I would like to put forth a solution with the borderless digital platform for communication and protection of academic freedom.

The proposition is on the premise that the borderless digital platform is of the professors, by the professors and for the professors. The platform is established beyond the country-level governance and free from censorship regimes. With autonomy in digital world, every registered member has one digital vote on issues whether specific digital behavior violates the spirits of academic freedom. The platform ultimately creates a new space for free scientific exchange and truth exploration.

**Conclusion**

Academic freedom is core value of higher education and strong pillar of modern science. As Michael Polanyi argues in The Contempt of Freedom: The Russian Experiment and Afterwards and The Logic of Liberty, only through free and open academic speech, debate and exchange can science be advanced.
The digital revolution has been continuously changing the world in all aspects, we shall keep pace with the times facing the challenges. To break through traditional cognition, I propose new solutions in consistence with digital revolution: blockchain contract mechanism, the data sandbox mechanism, and the borderless digital platform. All the propositions direct to the treasure of academic freedom we would like to cherish and preserve.

It is high time that we should take action to defend the treasure of academic freedom in the digital revolution. Time and tide wait for no man.

Remarks

15. M. Polanyi, Logic of Liberty, Routledge Publisher, New York, 1951
References

6. “How We Can Rebuild Trust in Science—And Why We Must”: K. Boele-Woelki, J.