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IST 618- Information Policy

Essay 1: Access

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# Positive Impact of Open Access Scientific Reporting

A great disparity that we can see in the scientific community isn’t in innovation, but in resources. There isn’t a genomic / geographic monopoly on innovation. Nor is there a divine right of kings within the scientific community. There is not a predestined truth that only one, or a handful of countries, is allowed to innovate. Neither is there a rule the precludes certain communities from engaging in scientific research. The grim reality of the world, however, is suggestive of just such polarities. China and the US remained neck and neck in the publication of scientific research until in 2018 China overtook the US (Tollefson, 2018). The UK remains a strong contender, as does Japan. India remains a promising font of scientific knowledge. The most cited publications in science came from Sweden and Switzerland, in 2018. But there is a distinct lack of press concerning achievement that arises from the global South. In the past 5 years scientists in developing countries were credited with groundbreaking work on HIV, Burkitt lymphoma, and the first sequencing of the Omicron variant of Covid. Primarily we are witnessing the superiority of G8 nations, the EU, and strong NATO partners. A unilateral survey of journal articles, therefore, might make one believe that these, the majority-output nations, might be the only ones that are engaging in real science. This cultural arrogance stems from the lack of resources for poorer countries to commit study to publication.

The scientific knowledge that burgeons in other countries isn’t non-existent. It is just forced into silence. It is prevented from being as loud as its associates in innovation. This practice of leaving scientific communities of the Global South to silence, due to resourcing, is the equivalency of leaving your money on the table. Innovation can, has, and does flow from many sources. And likely, in the case of the Global South, they may become resident experts in any number of fields, far surpassing more funded partners. Open Access of scientific reporting brings their information to availability for the larger tranche of the scientific community in an environment that might otherwise prevent their reason from being used. Anyone who is in fact a champion of scientific method should be a champion of this cause.

## Need Develops Invention

The reality of science is far different from the distorted outlook of, only developed countries fuel innovation. Innovation happens at the pointy end of the stick, where communities are faced with desperate problems; their brightest minds are responsible for solving them. The entire planet is in the grip of the realities of climate change. So then where would you look for the brightest innovations? Would you stop looking merely at countries who, through a wealth of resources, might find alternative sources of delaying the impact of those very changes? Or would you instead look at Sub-Saharan nations that have no other recourse but to live in the world as it is exists? Their very desperation drives the need for innovation, and the strength of the human spirit allows for those innovations. The future of climate science must bridge what has been called the “usability gap” (Declan Conway, 2021). This being a gap in the ability to gain knowledge, and make it actionable in innovation or policy. Theorists may attempt to confirm or deny the impacts of climate studies. But in sub-Saharan Africa the impacts of climate change mandate reform to water storage, waste disposal, crop rotation and agricultural commitment. These are innovations that the rest of the world lags on because the rest of the world does not have the fuel born by the need to eat. The most useful innovations for climate change, and in many other cases, are born in the Global South. So then why are they not cited in literally every single study that exists on the subject?

The resources allowed researchers within the Global South do not even compare to that of developed countries. Burkina Faso reported a GDP of $19.4 BN in 2023. Last reported, their expenditure on Research and Development (RnD) was about .22 percent, coming to about 42.6 million dollars. This is a strong turnout for Burkina Faso, but pales in comparison to the US expenditure of $500 BN. This equates to .008% of the relational expenditure of the US. And in this endeavor, the US can afford for scientists to fail. Burkina Faso cannot. This precludes the scientific curiosity that allows one to be wrong about an assumption. This stimies the scientific process. Imagine if every experiment had to yield a result of being right, and actionable, instead of being forward moving? There is a substantial gap in the ability of countries within the Global South to innovate, due to resourcing. However, one of the bigger losses is in the information that is gleaned through their progress. An article in scientific journals requires thousands of dollars in publication, vetting, and distribution. This ignores the cost of advertisement, press, and printing. Even if ideas can arise from the information, from not having all the pieces to the puzzle, it will exist in a vacuum unless it is published. No one will be able to action lessons learned. This is counter-progress.

There are numerous barriers to the development of scientific ideas within the Global South. Climate Change is a pivotal topic because of how immediately the impacts are being felt by those communities. Joint work, with scientific communities in the Global South, is hampered by perceptions. Whether it is a perceived lack of credibility, or expectations that are being pushed on researchers within the Global South to comply with more developed countries burden of study. Especially when the burden of proof is improbable, or impossible, given the resources at hand. There are further barriers formed using different terminology within the variant communities, as well as potentially non conducive organizational cultures, such as those that need to be holden to stockholders instead of communities (Declan Conway, 2021). But honest, and open articles, able to be researched, are the keys to a wealth of information that is being conducted at the forefront of the impact area. This is researching a car crash being conducted at the scene of the crash instead of talking about the theory of how people crash their cars.

## Rise of Open Access

There is a reported rise in the number of Open Access journals that are available across the globe. In 2009 there were about 4800 open access journals that had active user traffic. By 2019 there were over 12k. The use, and citation, of open access journals, and open access articles for that matter, have steadily risen over time. And what we have seen is that, due to the lack of publishing capital / resources, these statistics tend to have more weight for the Global South. Countries that actively deal in every day problems of climate change, disease, famine, instability, and rapid societal change are the ones that benefit the most out of the rise in usage / funding of these databases.

The information in question is not being published and then subsequently ignored. This is information that is actively being increasingly sought after because of the diversity of topics that become available due to the rise of Open Access publishing. As of 2023 there is a traceable rise in litigation and policy decisions that utilize Open Access Journals. This means that the very intent of those sources is being met; by providing the poorest of authors with the largest possible audience. This creates a mechanism for positive social change (Zong, Huang, & Huang, 2023). The Zong, Huang, & Huang study actually forcasts the causal influence of availability of OA Journals to the influence of information in policy decisions. Open access becomes the venue for disenfranchised countries, removed from global process, to still register opinion, science, and protest.

## Holistic Involvement of the Global South

One of the most infuriating solutions that is commonly presented by Western governance is to see a problem, and throw money at it. This policy brought about failure to understand, and overcome, Afghan problems in the Global War on Terror. Government institutions would throw money at villages with the expectation that villages would take the money and use it to solve their problems, and within that framework would find stability. This stratagem has never worked.

Within the Global South there is a cultural propensity towards loss, doing without, and resilience. Such in a manner that would stymie more developed countries. The reshoring of work, away from the Global South, reaffirms this. Where developed countries previously took advantage of younger, and more willing workforces within the Global South, not once did they seem to question the cultural unavailability of an aged workforce. Within these areas, commonly the workforce seems to be younger because there is a cultural imperative towards providing old age security within communities. This is because those very communities lack the robust social security services that are taken for granted in more developed countries. Workers in those countries seem to be younger, remain younger, and those are the prime years of innovation. This isn’t something that cannot be fueled artificially, but instead is a developed cultural imperative that services the needs of a community as akin to the needs of an individual. It is this greater cultural importance on community that, in many cases, fuels their educators and academicians to publish. Information that is not shared, especially that which can help others, isn’t knowledge. It’s a secret.

## Shared Problems

The provision and empowerment of OA resources to institutions, that otherwise would not be able to share information, is a mechanism by which other countries can form mutually beneficial relationships with scientific partners within the Global South. If for no other reason, than in some endeavors, they are the experts. Just as developing countries may not have access to the latest equipment or computational power, some organizations within developed nations may not have the ability to conduct diverse field work. The world’s largest problems require nothing short of world involvement to solve them. Open Access allows the cross leveling of knowledge and resources from and to places that would otherwise not have the ability to communicate and receive ideas. That publication of information will encourage the formation of research partnerships that will benefit all stakeholders. Open Access journals are becoming more influential within policymakers and leadership. Organizations of the Global South publish information at the front lines of where the world’s problems are having the heaviest impact. The support of Open Access is the support of the pipeline to their valuable information.

# References

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