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Measures for Fighting Linguistic Injustice: Epistemic Equity and Mitigation

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A) General Philosophy of Science

Measures for Fighting Linguistic Injustice: Epistemic Equity and Mitigation

Keywords: linguistic injustice, science, equity measures, mitigating agents

In recent years, there has been a lot of discussion regarding *lingua franca* in scientific research. While having English as a shared language within the scientific community contributes to more efficient communication and peer reviews, it also puts non-native speakers in a disadvantaged position. They have to invest a lot of time and sometimes money into perfecting English, while native speakers have the privilege of not having to put in extra effort and, therefore, have more time for their research. Moreover, we argue that some concepts are inherently untranslatable and, thus, the pluralism of languages can prevent the loss of unique concepts. We use Quine's famous thesis on the indeterminacy of translation to demonstrate the way the knowledge of marginalized scientists gets lost. We analyze the consequences of linguistic injustice in science and propose two measures for overcoming it: practicing epistemic equity and introducing mitigating agents.

Following the initial dismissal of Nobel prize winner Harald zur Hausen's discovery that cervical cancer is caused by the HPV virus (Cornwall 2013), we explore several types of epistemic injustice. We argue that zur Hausen's team suffered linguistic testimonial injustice due to the language barrier which resulted in their findings being disregarded. Moreover, they also experienced hermeneutical injustice since one of the reasons for the initial disbelief was that their findings were unexpected.

The correlation between hermeneutical and testimonial injustice has been previously explored in philosophical research, as well as potential solutions. For instance, Anderson (2012) proposes that integration and equality should be considered central epistemic virtues of the scientific community. We would like to strengthen her thesis and advocate for the scientific policy based on the principle of equity. While this principle has been widely represented in the context of education, it has yet to be implemented in the context of scientific research.

It should be recognized that most scientific journals are published in English and, therefore, are much more accessible to native speakers. To achieve equality, certain steps need to be taken to compensate for the disadvantages of non-native speakers. These may include free proofreading in English, accessible translation services, acceptance of the papers that are not written in *lingua franca*, etc. The principle of equity should also be extended to the other types of epistemic injustice since they are intertwined. Finally, linguistic diversity should be recognized as beneficial both to individual researchers and to the scientific community as a whole. Through the inclusion of the concepts that are unique to languages other than *lingua franca*, the whole corpus of scientific knowledge is enriched.

Moreover, mitigating agents are helpful for overcoming linguistic injustice in science. The main role of mitigating agents is the promotion and translation of scientific notions from various cultural and linguistic backgrounds. The task of mitigation can be taken by any scholar that is proficient in *lingua franca* and familiar with the topics of research. This process should create a bridge between marginalized researchers and the scientific community and needs to be done on several levels. From the global perspective, the research material needs to be available in as many languages as possible and the *lingua franca* spoken at the conferences should be adapted and simplified so that non-native speakers can understand it as well. On the individual level, scientists should practice epistemic openness to unusual concepts and the imperfect use of English.

References

- Allison, P. D. (1980). "Inequality and scientific productivity". *Social Studies of Science* 10(2): 163-179.
- Anderson, E. (2012). "Epistemic Justice as a Virtue of Social Institutions", *Social Epistemology*, Volume 26, 2012 - Issue 2: Epistemic Injustice: 163-173.
- Beach, M.C., Saha, S., Park J., Taylor, J., Drew, P., Plank E., Cooper, L.A., Chee, B. (2021). "Testimonial Injustice: Linguistic Bias in the Medical Records of Black Patients and Women". *J Gen Intern Med*. 2021 Jun;36(6):1708-1714.
- Buden, B., Nowotny, S., Simon, S., Bery A. & Cronin M. (2009). "Cultural translation: An introduction to the problem, and Responses". *Translation Studies*. Vol. 2, No. 2, 2009, 196-219
- Butler J. (1996). "Universality in culture". In M.Nussbaum (Ed.) *For love of country? Debating the limits of patriotism*. Beacon Press: 45 – 52
- Cornwall, C. (2013). *Catching cancer: the quest for its viral and bacterial causes*, Rowman & Littlefield.
- Dotson, K. (2011). "Tracking epistemic violence, tracking practices of silencing". *Hypatia*, 26(2): 236-257.
- Fricker, M. (2007). *Epistemic injustice: Power and the ethics of knowing*. Oxford University Press.
- Grabe, W. (1988). "English, information management, and technology transfer: A rationale for English as an international language". *World Englishes*, 7: 63-72.
- Huang, Junming, Alexander J. Gates, Roberta Sinatra, and Albert-László Barabási. 2020. "Historical Comparison of Gender Inequality in Scientific Careers across Countries and

- Disciplines.” *Proceedings of the National Academy of Sciences of the United States of America* 117 (9): 4609–16.
- Hyland, K. (2016). “Academic publishing and the myth of linguistic injustice”. *Journal of Second Language Writing* 31 (2016): 58-69
- Jakobson, R. (1971). “On linguistic aspects of translation”. *Word and language*. Vol. 2 of Selected writings. Mouton: 260-266.
- Kitcher, P. (1990). “The division of cognitive labor”. *The journal of philosophy*, 87(1), 5-22.
- Koskinen, I., & Rolin, K. (2021). “Structural epistemic (in) justice in global contexts”. In D.Ludwig, I.Koskinen, Z.Mncube, L.Poliseli & L.Reyes-Galidno (Eds.) *Global Epistemologies and Philosophies of Science*. Routledge: 115-125.
- Leefman, J. (2021). “Social Exclusion, Epistemic Injustice, and Intellectual Self-Trust”. *Social Epistemology*: 1-11.
- Lefevere M. & Schliesser E. (2014). “Private Epistemic Virtue, Public Vices: Moral Responsibility in the Policy Sciences”. In book: *Experts and Consensus in Social Science*: 275-295
- Lillis, T. , Hewings, A. , Vladimirov, D. & Curry, M. J. (2010). “The geolinguistics of English as an academic lingua franca: citation practices across English-medium national and English-medium international journals.” *International Journal of Applied Linguistics*, 20: 111-135.
- Longino, H. (2001). *The fate of knowledge*. Princeton: Princeton University Press.
- McGinnity, F., Nelson, J., Lunn, P. & Quinn, E. (2009). *Discrimination in Recruitment: Evidence from a Field Experiment*, Dublin: The Equality Authority.
- Medgyes P. & Kaplan R.B. (1992). “Discourse in a foreign language: the example of Hungarian scholars”. *International Journal of the Sociology of Language*. Vol. 1992 (Issue 98): 67-100.
- Miller, B. (forthcoming). “Epistemic Equality”. available at [Epistemic Equality](#) (Last Accessed: January 22nd 2022).
- Mitova, V. (2020). Decolonising Knowledge Here and Now. *Philosophical Papers*, 49(2), 191-212.
- Muresan L.-M. & Pérez-Llantada C. (2014). “English for research publication and dissemination in bi-/multiliterate environments: The case of Romanian academics”, *Journal of English for Academic Purposes*. Vol. 13: 53-64.
- Parkin, D. M. & Bray, F. (2006). “The burden of HPV-related cancers”. *Vaccine*, 24, S11-S25.
- Patten A. (2009). “Survey Article: The Justification of Minority Language Rights”. *The Journal of Political Philosophy*: Volume 17, Number 1, 2009: 102–128

- Pennycook, A. (2012). "Lingua Francas as Language Ideologies". In *English as an International Language in Asia: Implications for Language Education*. eds. Kirkpatrick & Sussex: 137-156. Springer
- Penuel W.R., Watkins D.A. (2019), "Assessment to Promote Equity and Epistemic Justice: A Use-Case of a Research-Practice Partnership in Science Education", *AAPSS*: 201-216.
- Postma, D. (2016). "Open Access and Epistemic Equality". *Education as Change*. Vol 20: 1-10.
- Pronskikh, V. (2018). "Linguistic Privilege and Justice: What Can We Learn from STEM?". *Philosophical Papers*. Volume 47, 2018 - Issue 1: Linguistic Justice and Analytic Philosophy: 71-92.
- Quine, W.V.O. (1960, 2013). *Word and Object*. The MIT Press.
- Rawls J. (1971, 1999). *A Theory of Justice*. Belknap Press
- Salager-Meyer, F. (2014), "Writing and publishing in peripheral scholarly journals: How to enhance the global influence of multilingual scholars?" *Journal of English for Academic Purposes* 13: 78-82.
- Samarin W.J. (1968), "Lingua francas of the world". In *Readings in the sociology of language*. ed. J. A. Fishman: 660-672. The Hague: Mouton and Co.
- Schliesser E. (2018). "On Philosophical Translator-Advocates and Linguistic Injustice", *Philosophical Papers*, Vol. 47, No. 1: 93-121.
- Sikimić V., (2022). How to Improve Research Funding in Academia? Lessons From the COVID-19 Crisis. *Frontiers in Research Metrics and Analytics*. 7:777781.
- Sikimić, V., Nikitović, T., Vasić, M., & Subotić V. (2021). "Do Political Attitudes Matter for Epistemic Decisions of Scientists?" *Review of Philosophy and Psychology*. 12: 775-801.
- Skutnabb-Kangas, T. (1988). "Multilingualism and the education of minority children". In T. Skutnabb-Kangas & J. Cummins (Eds.), *Minority education: From shame to struggle* (pp.9-44). Clevedon, UK: Multilingual Matters.
- Smart, J.J.C. (1968). "Quine's Philosophy of Science". *Synthese*. Vol. 19, No. 1/2 (Dec., 1968): 3-13.
- Straßer, C., Šešelja D., and J.W. Wieland. (2015). "Withstanding tensions: Scientific disagreement and epistemic tolerance". In *Heuristic reasoning. Studies in Applied Philosophy, Epistemology and Rational Ethics*. ed. E. Ippoliti, vol. 16: 113-146. Cham: Springer.
- Tardy, C. (2004). "The role of English in scientific communication: lingua franca or Tyrannosaurus rex?", *Journal of English for Academic Purposes*, Vol. 3: 247-269.
- Van Parijs, P. (2002). "Linguistic justice". *Politics, Philosophy & Economics* 1.1: 59-74

Van Parijs, P. (2007). "Linguistic diversity as curse and as by-product" in *Respecting Linguistic Diversity in the European Union*. ed. Xabier Arzoz: 17-46 John Benjamins Publishing Company. Amsterdam.

Van Parijs, P. (2011). *Linguistic Justice for Europe and for the World*. Oxford University Press.

Visle, L. (2003). "From Integration to Inclusion: Focusing Global Trends and Changes in the Western European Societies". *European Journal of Special Needs Education* 18 (1): 17–35.

Wang F. (2008). "Nationalism without Linguism? Reevaluating the Chinese orthography in the context of language revitalization". 25-49.

Wickström, B. A., Templin, T., & Gazzola, M. (2018). An economics approach to language policy and linguistic justice. In *Language policy and linguistic justice* (pp. 3-64). Springer, Cham.

Yamada, S., Cappadocia, M. C., & Pepler, D. (2014). Workplace bullying in Canadian graduate psychology programs: Student perspectives of student-supervisor relationships. *Training and Education in Professional Psychology*, 8(1), 58.

Zollman, K. J. (2007). "The communication structure of epistemic communities". *Philosophy of science*. 74(5), 574-587.

Zollman, K. J. (2010). "The epistemic benefit of transient diversity". *Erkenntnis*. 72(1), 17.

Short abstract:

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