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Communicating intelligence research: Media misrepresentation, the Gould Effect, and unexpected forces☆

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Intelligence research has a long history of controversy. Unlike most academics, scientists in this field often find themselves in the court of public opinion merely for carrying out their work, largely or entirely because their findings have a tendency to collide with certain deeply held moral and political beliefs (see, e.g., Nyborg, 2003). Arthur Jensen, Charles Murray, Thomas Bouchard Jr., Sandra Scarr and Linda Gottfredson, to name a few, have all experienced hostile media coverage and politicized misrepresentation of their research. In August of 1997, 92-year-old Raymond B. Cattell, one of the most eminent psychometricians of the 20th century (Haggbloom et al., 2002), travelled from Hawaii to Chicago to receive the American Psychological Foundation Gold Medal Award for Life Achievement in Psychological Science. Two days before the Medal was supposed to be bestowed, the American Psychological Foundation announced that they were postponing the award ceremony over concerns about the connection between some of Cattell's research and non-scientific beliefs (Tucker, 2009). They did this under pressure from political activists, one of whom threatened to disrupt the proceedings if Cattell was given the award. Cattell ultimately declined the award, possibly so as to spare himself and his colleagues further embarrassment.

These individuals by no means constitute all intelligence researchers who have been criticized for arriving at particular scientific findings (for a detailed review of certain such cases, see Nyborg, 2003). They do however reveal a clear pattern whereby innovative intelligence research on controversial topics is often subjected to biased and sensationalized media reporting, including (in some cases) personal attacks against the researchers involved. This process has wider ramifications for these researchers, as such attacks are sometimes coupled with withdrawal of both social support from colleagues and institutional resources, which may leave researchers isolated within their own faculties. In some instances (such as where employment safeguards, e.g. tenure, are either less absolute or are absent), defamed scientists are even dismissed. Worse still, a subset of these cases involved threats of violence from political activists (Gottfredson, 2010; Nyborg, 2003; Scarr, 1987). This is in addition to the longer-term problems that many of these researchers face as they try to publish their work, or obtain grants, only to encounter unfair and emotionally driven peer review, through which articles and proposals are rejected based on manifestly fallacious criticisms (including the conflation of 'facts' and 'values'; see Cofnas, 2016).

The *controversialization*[2] of the field of intelligence research started in the 1960s, targeting Jensen's (1969) work on population (specifically racial) differences in IQ and the implications of potentially recalcitrant group differences in general intelligence, in particular, for educational programs aimed at eliminating these differences. Jensen's scholarship met with allegations that IQ research is ideologically motivated by a desire to justify racial and other inequalities (e.g. Gould, 1981, 1996). The controversialization of intelligence research, especially in relation to the issue of population differences, has likely had a negative effect on efforts to communicate findings as they pertain to other areas of the field (such as behaviour genetics, individual differences and neuropsychology), leading universities to refuse to offer courses on intelligence research for fear of causing offence (the journal *Intelligence* even devoted the contents of an entire special issue to this matter). More generally, controversialization may have had negative effects on efforts to discuss less controversial issues as they pertain to IQ in the wider media as well (e.g. trade books).

To explore this possibility further, we used Google Ngram Viewer (Michel et al., 2011) to estimate the frequencies of sentences[3] containing i) either "intelligence" or "IQ" and either "racism" or "racist" and ii) those containing either "intelligence" or "IQ" and either "heritability" or "heritable". The issue of IQ heritability is less controversial than that of race differences in IQ; therefore, if the hypothesis is valid, there should be negative temporal correlations between the frequencies of these types of sentences for at least some of the time period examined, indicating that authors become *more* reluctant to discuss less controversial issues (such as IQ heritability) as intelligence research becomes increasingly controversialized (e.g. via discussion of racism and IQ).

☆ *Note*: An email was sent out to all individuals who: i) had presented at one of the four LCI meetings, ii) held a PhD or equivalent degree, and iii) were not a *subject* of this piece. 20 suitable individuals were identified and contacted via email. Five declined to participate (a return of 75%). The final wording of the piece was collaboratively achieved – all authors participated in developing and approved the final wording.

[2] Journalist Robert Parry (2006) coined the term controversialization to describe the political tactic of utilizing positions of social influence (such as media) to make an opposing position seem more controversial than it actually is in order to marginalize it. A common strategy for achieving this end involves appeals to the potential for the position at issue to cause some purported social harm (e.g. emboldening the "far right," etc.; see Cofnas, 2016 for a detailed history of this approach to controversialization as it pertains to the study of race differences in particular).

[3] The search was conducted using the "= > " function to examine dependency, that is, the usage of terms in conjunction in the same sentence, irrespective of which was used first and whether or not other words within the sentence separated them. Case sensitivity was not used for this search.

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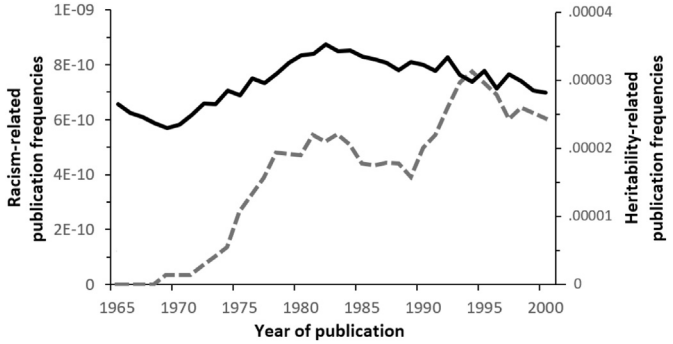

Fig. 1. Google Ngram publication frequencies of instances in texts in which either "intelligence" or "IQ" and either "racism" or "racist" are used in the same sentence (grey dashed line), and instances in texts in which either "intelligence" or "IQ" and either "heritability" or "heritable" are used in the same sentence (black solid line). Trends span the years 1965 to 2000. Ngram viewer automatically adjusts these trends so as to take into account the increase in numbers of texts over time.

As shown in Fig. 1, the frequency of sentences involving 'racism'/'racist' and 'IQ'/'intelligence' has been increasing over time (between 1965 and 2000), which is consistent with the expectation that intelligence research is becoming increasingly controversialized (in particular in relation to research on population differences) in terms of textual representation. Sentences linking 'heritable'/'heritability' with 'IQ'/'intelligence' increase in frequency until 1984, and then *decrease* thereafter. Interestingly, this negative inflection point occurs three years after the publication of the first edition of Gould's (1981) very popular *The Mismeasure of Man*, in which a case is made for dismissing intelligence research on the grounds of the field's alleged racism and elitism. In the period 1965 to 1984, there is a positive correlation ($r = 0.995$, $p < .05$, $N = 19$ years) between the two trends; however, between 1984 and 2000, the trends become negatively correlated ($r = -0.601$, $p < .05$, $N = 16$ years), which suggests, consistent with expectations, that the controversialization process may be having a 'chilling effect' on the willingness of writers to tackle less controversial issues related to intelligence research, such as those connected to behaviour genetics. We term this process the *Gould Effect*, as no other intellectual has done more to polarize public opinion on a body of scientific findings through systematic misrepresentation and dishonest presentation of data (see e.g. Alcock, 1998; Lewis et al., 2011).

It is important to keep in mind that, while the technical literature is included in the Ngram Viewer database, many of the sentences come from trade books and fiction. Therefore, these trends represent the within-sentence frequencies of these words sampled from a large array of textual outputs (adjusted for the year-on-year increase in numbers of texts), some of which (e.g. trade books) have the potential to substantially influence and (mis)inform public opinion.

This brings us to the latest example of the Gould Effect in action. It began with Toby Young, a UK journalist who gave the Constance Holden Memorial Address at the 18th annual International Society for Intelligence Research (ISIR) conference held in 2017 at the Montreal Neurological Institute. This address discussed media and academic bias against and hostility toward intelligence research. A transcript of the talk was subsequently published as an opinion piece in *Intelligence* (Young, 2018). Young was subsequently appointed to the newly created Office for Students, a government board tasked with protecting free speech at UK universities, among other things. Before the board had its first meeting, Young's appointment created a media firestorm in the UK largely because of negative reactions from political opponents to his generally conservative political views (for the first instance of this, see Anonymous, 2018). The opposition to his appointment became so aggressive that he resigned in short order. One of the most scurrilous attacks referred to his attending a 'secret' meeting of 'eugenicists' and 'white supremacists', which had been held for four years (2014–2017) – three times at University College London (UCL) – and organized by honorary senior lecturer James Thompson (these meetings were instances of the *London Conference on Intelligence*; LCI) (Anonymous, 2018; see also van der Merwe's [2018] 'exposé'). *The Guardian*, *Telegraph*, and *Daily Mail* newspapers, *The Scientist*, *Russia Today*, and numerous other news outlets repeated these charges against the conference – making no apparent effort to determine the basis in fact of any of the allegations. Young did in fact attend the 2017 LCI meeting for a few hours in his capacity as a journalist, so as to gather information that might help him prepare his ISIR address.

Contrary to allegations, the annual LCI conference was not secret but invitation only (like many small conferences). The attendees had a range of theoretical orientations and research interests, and their attendance does not imply agreement with the views of all of the other attendees, be they political, moral or scientific. The conference program covered many topics related to the fields of intelligence and personality research[4] and there was no exclusive focus on 'eugenics' or IQ differences among populations (although both issues were discussed). Scientometric analysis of the abstract lists from all four years of LCI confirm this claim, revealing that a modest minority (38.7%, or 29) of the 75 talks given over four years dealt with population (racial, ethnic and national) IQ differences. Only 2.7% of talks (two) discussed the practicability and desirability of what could loosely be termed 'eugenic' reproductive genetic intervention.[5] Talks about any kind of policy issue were rare (numbering three in total). The overwhelming preponderance of talks dealt exclusively with data or substantive theory. Moreover 48% of talks were associated with (either based on or in most cases yielding) 'mainstream' publications[6] over four years. Thus, LCI's productivity is comparable to that of conferences in biomedical science — a field in which, according to one meta-analysis, 44.5% of conference presentations yield publications (Scherer, Langenberg, & von Elm,

[4] 23 distinct academic topics were covered. These included (in no particular order) *animal cognition*, *Flynn effect research*, *evolutionary demography*, *ethnography*, *population differences*, *demography*, *life history theory*, *recent human microevolution*, *sociology of science*, *sex differences*, *political science*, *neurotoxicology*, *developmental psychology*, *psychometric testing*, *research on questionable research practices*, *cognitive psychology*, *personality psychology*, *mutation accumulation theory*, *regional IQ differences*, *cognitive anthropology*, *cognitive genetics and human evolution*, *cognitive aging*, and *neuropsychology*.

[5] The term eugenics applies loosely to any attempt at changing the gene frequencies of human populations so as to favor 'socially desired' traits (such as higher intelligence, 'good' character, and health). Techniques range from forced sterilization and marriage licensing at one extreme to the relatively uncontroversial use of therapeutic abortion and pre-implantation genetic diagnosis at the other. Also included are presently bioethically contentious techniques like germ-line gene therapy and embryo selection (for an overview of the history of the first and second wave eugenics movements, see Woodley of Menie, 2018).

[6] The 'mainstream' journals in which articles have appeared include (in no particular order) *Intelligence*, *Personality and Individual Differences*, *Learning and Individual Differences*, *Frontiers in Psychology*, *Frontiers in Human Neuroscience*, *Journal of Experimental Psychology: General*, *Evolutionary Psychological Science*, *Twins Research and Human Genetics*, *Cortex*, and *Evolutionary Behavioral Sciences*. Academic monographs that either formed the basis of presentations or incorporated results presented at LCI have been published with Cambridge University Press, Palgrave Macmillan, and as part of the *Journal of Social, Political, and Economic Studies* occasional monograph series.