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Quantitative Description of Digital Media: A Modest Proposal to Disrupt Academic Publishing

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We introduce the rationale for a new peer-reviewed scholarly journal, the *Journal of Quantitative Description: Digital Media*. The journal is intended to create a new venue for research on digital media and address several deficiencies in the current social science publishing landscape. First, descriptive research is undersupplied and undervalued. Second, research questions too often only reflect dominant theories and received wisdom. Third, journals are constrained by unnecessary boundaries defined by discipline, geography, and length. Fourth, peer review is inefficient and unnecessarily burdensome for both referees and authors. We outline the journal's scope and structure, which is open access, fee-free and relies on a Letter of Inquiry (LOI) model. Quantitative description can appeal to social scientists of all stripes and is a crucial methodology for understanding the continuing evolution of digital media and its relationship to important questions of interest to social scientists.

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A recent survey of the academic publishing landscape estimates that there are more than 33,000 active peer-reviewed, English-language journals (Johnson et al., 2018). This number has risen more or less linearly since the middle of the 18th century, with an average yearly growth rate of more than three percent. As with many academic trends, however, this increase has accelerated in recent years: the rate for the last decade has been closer to 5-6 percent.

One might then reasonably wonder why we have chosen to launch yet another journal — one more data point for meta-scientists charting academics' frantic attempts to keep up with runaway demand for scholarly manuscripts and the research they contain. Surely a new venue for peer-reviewed research would create additional strain on finite reviewer resources, publish works unlikely to be read in an unforgiving attention economy, and contribute to an already-fragmented journal ecosystem.

Yet here we are. We would not be undertaking this endeavor if we thought our journal would simply add to the accumulating stock of existing scholarly venues, mirroring its structure and pathologies through some inescapable process of institutional isomorphism. On the contrary, our hope is that this intervention into the social science journal publishing space pushes the boundaries of the feasible along multiple dimensions — methodological, disciplinary, and financial.

We are here to address some of the failures in the existing structure of publishing outlets, particularly those that cater to quantitative social science researchers. Such failures are many:

1. *Trending away from "mere" description.* There are macro trends in social science that affect all journals. Many of these trends are good; we applaud the growing attention to causality, for example, and to concerns about generalizability that drive attention to sample composition. But as we describe below, these trends come at a

cost to quantitative work that can provide a descriptive foundation for research agendas.

2. *Lack of clear standards for substantive importance.* The topics that are deemed important too often reflect path dependence, the biases of established scholars and institutions, approved theoretical frameworks from the dominant canon, and the focus of media interest. The whiplash of the past few years of digital media research, the attention paid first to "echo chambers," then to "fake news," now to "radicalization," is inimical to the accumulation of knowledge. All of these topics are worth studying, but we need a more stable metric for "topical importance" than media attention.
3. *Adherence to disciplinary and geographic boundaries.* Most peer journals are explicitly connected to a single discipline, and all of them are overly concerned with the United States and Western Europe. The topic of digital media is of obvious importance to the entire world.
4. *Artificial constraints.* Most journals have strict requirements for the length and format of what they publish, making it difficult to find outlets for important contributions of modest scope or idiosyncratic topic. (How many of us have written 8,000-word papers around one interesting finding, or have shelved neat findings because we did not feel like writing an 8,000-word paper around them?)
5. *Inefficiencies of peer review.* Most will agree that the current mode of journal reviewing is suboptimal. Too many authors wait months only to be told that their submission has been desk rejected; at the same time, too many scholars receive an endless stream of reviewing requests.

We are starting the *Journal of Quantitative Description: Digital Media* to address all five of these points.

First and foremost, we respond to an *undersupply of quantitative descriptive research* in social science. Causal research that asks the question *why* has largely taken the place of descriptive research that asks the question *what*. Gerring (2012) diagnosed a

general tendency to dismiss "Mere Description" as a "mundane task … of little intrinsic scientific value," advocating instead that it be taken seriously as part of the general social-scientific method. We firmly agree. However, critique alone does not change the material conditions and incentives of practicing academics; we see this journal as a practical step towards raising the status of description as a method.

We narrow our scope to *quantitative* description because of the proliferation of such data and the means to analyze them (Lazer & Radford, 2017; Lazer et al., 2020). Quantitative description as a mode of social-scientific inquiry can be applied to any substantive domain: Is the number of democracies rising or falling? How correlated are citizens' views on economic policy with social policy? Which biblical passages are cited most often by different Popes? What is the most popular cultural event in each Swiss canton?

Second, rather than define our new venue in terms of existing disciplinary boundaries, we instead embrace a topical focus on *digital media*, broadly construed. We argue that the centrality and dynamism of digital media — information and communication technologies, including social media, that increasingly structure the way people interact with the world — necessitates increased scholarly energy devoted to sustained, continuous, quantitative description. The institutions for studying media are suffering a hangover from the broadcast era. Strict limits on supply meant that it was straightforward, almost trivial to be aware of at least the contours of the media on offer and who might be consuming it; there was thus limited scholarly effort devoted to actively describing broadcast media. Today, there are more hours of video uploaded to YouTube every day than were broadcast in the 1950s U.S. in a year. The daily content of Twitter is different (and different in unpredictable ways) than it was the day before.

Third, we embrace *disciplinary and geographic diversity* not merely as ideals but structurally, in the composition of our boards and in the papers we publish. Of the 18 articles we are publishing as part of our launch, 83% are authored or co-authored by

women. Women also make up 59% of our Editorial Board and 26% of our Advisory Board. And while institutions in North America and Western Europe continue to dominate the boards and article contributors, we are working to diversify further geographically as well. Substantively, 44% of articles include non-U.S. data, 28% non-U.S./non-European.

Fourth, we have *no predetermined expectations of how long manuscripts should be*. We are interested in the substance of the papers and their methods, not how much space it takes authors to convey them. In some cases, this will mean relatively short articles; in others, it may mean numerous pages of figures and tables. We also have a Visualizations track, which is for pieces whose focus is the visual representation of data. We welcome all of the above approaches and will continue to innovate in the form of academic publication.

Fifth, we are introducing a new step into the submission process: a *mandatory Letter of Inquiry (LOI)*. The goal is to reduce referee burden and author wait time by letting authors know early in the process whether the paper is a match for the journal. Given that the papers of interest to *JQD:DM* may have a hard time finding other homes, this will save authors from writing papers that ultimately will not fit.

Accordingly, submission begins with a brief LOI to the editors that must address specific questions we pose to authors, available on the journal website. We anticipate a higher-than-average "desk reject" rate at this stage given *JQD:DM*'s circumscribed methodological and substantive purview. Sometimes, evaluating the LOI will be an iterative process as both the submitting authors and editors work through what an appropriate submission would look like given the proposed research questions and data. By design, many high-quality ideas will not ultimately meet our criteria for submitting a full manuscript for review.

This means that an unusually *high* percentage of papers that we send out for review will be accepted for publication. Today, so-called "top" journals retain their prestige by conspicuously consuming the time and energy of both authors and reviewers, using their

market power to create artificial scarcity through plummeting acceptance rates. This practice is blatantly unscientific and potentially unethical. When we send an article out for review, we affirm that it is within the scope of *JQD:DM* and that it passes our baseline requirements for scientific validity. The task of the reviewers is thus constrained to evaluating the quality of the methodological implementation and the theoretical contribution. To be sure, there is no guarantee of publication just because an LOI is accepted, but it does guarantee that the paper will not be rejected due to "lack of fit."

In sum, we hope this means a more streamlined process for both authors and referees.

JQD:DM is committed to publishing quality peer-reviewed research. That core function aside, we approach the journal with a pragmatic attitude, unrestricted by arbitrary convention. For the reader, this means no print copy, no artificial bundling into issues, no unnecessary space constraints, an enthusiastic endorsement of color graphics, and a commitment of open access for all articles. The articles themselves, for the most part, will be somewhat shorter than the norm in social science and have (much) less emphasis on novel theory.

Unlike many open-access journals, *JQD:DM* is currently free of fees — and we hope to keep it that way. We're able to maintain a free journal with no fees thanks to the generous support of the University of Zurich (UZH) through its *Hauptbibliothek Open Publishing Environment* maintained by the Main Library of the University using the open-source software Open Journal Systems. We are fortunate that the University of Zurich, and the Swiss academic environment more generally, is backing up its commitment to open science with tangible resources to support it becoming a reality. There remain staffing needs beyond the back-end, however, and we are thus actively seeking additional means of financial support for which we welcome creative ideas.

No-fee publication is possible in part because the project is hands-on for the editors who are donating their time to the journal. The editors are playing an active role at every step of the process; we will avoid the "tally up reviewer comments" approach to editing manuscripts that is sometimes unavoidable at larger outlets. Also, we ask the authors to help us with the final tasks of typesetting and copy-editing. We think this is a small price to pay for full editorial control, complete open access, and zero Article Processing Charges, and we hope enough people will agree that these efforts can be sustainable.

Quantitative Description for Everyone

Institutionalizing quantitative description remains a daunting challenge, but one which we believe will be valuable for every breed of social scientist. We've put together a handy guide below with arguments tailored to each:

- **Causality enthusiasts:** Researchers who prize causal knowledge need to establish the generalizability/transportability/external validity of that knowledge. In order to apply local knowledge to a novel context, researchers need descriptive knowledge about that context (Egami and Hartman, 2020). At the current margin, the best way to increase our capacity to predict a given causal effect is not to create more causal knowledge but rather to increase the dimensions along which we can adjust the causal knowledge we already have. Furthermore, institutionalizing and elevating the status of quantitative descriptive research will sharpen the distinction with causal research, allowing the former to be appreciated on its own terms rather than trying to pass as causal. That is, given the sometimes-hegemonic status of causal claims, scholars who have valuable descriptive data are left contorting their findings into a causal framework. If quantitative description is valued on its face, such contortion will no longer be necessary.

- **Causality skeptics:** The protean nature of digital media renders some of the natural-science-inflected *ceteris paribus* assumptions that underlie social practice

flatly implausible (Karpf, 2012). As time passes, the world of digital media changes rapidly and comprehensively, sometimes due to the actions of powerful, opaque corporations. Big data approaches based on found data cannot solve this problem. Boutique casual knowledge generated by clever one-off experiments is useful but ultimately insufficient (Munger, 2019). However, *social scientists can decide what social science is*, and we should make that decision in full epistemic humility. For topics low in "temporal validity," like digital media, we can accept that there are sharp limits to our capacity to produce robust, generalizable causal knowledge and instead embrace rigorous quantitative description as an end in itself (Hofman, Sharma and Watts, 2017).

- **Theory skeptics:** The standard social science journal article sets out to provide evidence for or against a given theory. However, the role of theories in contemporary social science is fraught: there are in some sense *too many* theories, leading sometimes to the general "incoherency problem" where multiple, often irreconcilable theories exist to explain the same phenomena (Watts, 2017). In a related vein, many theories have become too nuanced, limiting their utility (Healy, 2017). Worse, these theories can never fully be disproven; or, more accurately, new theories can never be definitely shown to have more explanatory power than old theories. To motivate empirical study, scholars of digital media are forced to engage with musty theories that were designed to explain something about pre-digital media; Bennett and Iyengar (2008) argue, to paraphrase slightly, that the major theories of the broadcast era are "suffering from success." Settle (2018) notes that "political scientists have tested hypotheses about the antecedents and consequences of political engagement on social media within the framework used to study traditional political behaviors" (p. 14). This has resulted in a serious misallocation of energy to satisfy editors and reviewers who remain invested in these antiquated frameworks. Digital media is straightforwardly important, and we believe it should be studied on its own terms. Consider the impact on politics, society, and science of papers like Grinberg et al. (2019), Allen et al. (2020), Guess et al. (2020), Watts,

Rothschild and Mobius (2021): these empirical exercises were worth doing, whether they provide evidence for a particular theory or not. We don't mean to suggest that researchers can avoid having to engage with theory by collecting big enough data (Anderson 2008); all research depends on assumptions, whether acknowledged or not. But we hope that a renewed focus on quantitative description will allow researchers to be more explicit about these assumptions, what we learn and cannot learn from a given dataset and methodological approach.

- **Theory enthusiasts:** At the same time, quantitative description can be an invaluable tool for those interested in developing new theories tailored to the technological and social context of the present. The empirical work required to build the foundations of a research agenda is too often minimized as "theory building." But in a sense, taking the incoherency critique seriously requires even more theory building: taking descriptive stock of a phenomenon and the context in which it occurs, noting the conditions under which it seems to happen or not, and identifying patterns (see, e.g., Munger, 2020). Encouraging such exploratory descriptive research could help bridge existing theoretical chasms, create new theoretical frameworks and, yes, abandon theories that have outlived their usefulness. Without incorporating quantitative description into the research life cycle in this way, social scientists run the risk of building entire edifices of scholarship unmoored from a basic foundation of shared, verifiable fact.

Though it encompasses a variety of methodological approaches — survey methods, network analysis, text as data, machine learning — quantitative description is a common language that we hope can bring together scholars from multiple disciplines. The scope of digital media's impact is massive and must be described from a variety of perspectives. This journal is to some extent a bet that digital media will continue to grow in importance.

Research on digital media is already well-represented in several disciplines, and descriptive research on digital media can certainly be published in existing journals. But

this is too often the exception; as we note above, quantitative description of phenomena of immediate public concern can be published in prominent, interdisciplinary outlets (e.g., articles about "fake news" grace the pages of *Science*- and *Nature*-affiliated publications). The question is where such research goes when it does not track media-driven narratives or public fads. In addition to the reasons outlined above, we hope that *JQD:DM* can be a home for quality descriptive research that does *not* speak to the loudest debates or the biggest controversies. It is hard to know what will be seen as important descriptive knowledge after the fact, and it is doubtful that contemporaneous perceptions are ever the best indicators of importance. We rely instead on researchers' intuitions about the relevance of trends and descriptive facts. One of our hopes in creating this venue is that it will allow scholars to make the case for this importance plainly rather than feeling obligated to appeal to received theories and vague stylized facts.

We hope we have begun to make our case for why quantitative description is important and why it should be valued by social scientists of *all* stripes. Moreover, given the incentives and preoccupations of dominant institutions in social science, it is necessary to create new ones that can promote and disseminate quantitative descriptive research. *JQD:DM* has a particular substantive focus — digital media — that requires descriptive efforts to help us understand its ever-evolving role in society and the associated mountains of data. But this is by no means the only topic in need of more quantitative description. In the future, new iterations of *JQD* could specialize in other substantive areas.

Finally, though we have sketched an idea of what quantitative description is, we have not fully developed what it can be. *JQD:DM* will be a place for doing that collectively. JOIN US!

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