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BRIGHTENING THE BULB: RESPONSE TO COMMENTARY

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We thank the several commentators for their careful reading of our manuscript (hereafter WJP) and, even more, for their insightful reactions to our work and ideas. The range of issues raised in these four commentaries is quite broad – from specific nitty-gritty details of software design and utilization to deep questions about epistemology, and so range our responses below. In our response, we remark on issues raised at several levels. In all cases our vantage point is with a look to the future. Even though questioned in our original title whether the bulb might be dim, we are also of the view that the bulb's luminosity will no-doubt increase in the years to come.

To put it most succinctly, we are very much of the view that Qualitative Data Analysis Software (hereafter QDAS) is of great value to a wide range of social scientists. We see QDAS as being of use to a spectrum of research investigative styles, from quantitative to qualitative. Applications should expand in conventional mainline social science disciplines, and also within applied and interstitial fields, such as education, and health, and public policy. (The commentaries also reflect upon the QNA paper, of which we are not a part and have not read as of this writing.) As background, readers may find it of value to know that ours is a mixed disciplinary team of authors (1 sociologist; 2 cultural anthropologists); furthermore, the overarching project from which WJP is drawn is a mixed methods research investigation that involved anthropologists, sociologists, and demographers. We would like to think that whatever strengths or weaknesses characterize WJP, they are not attributable simply to the wearing of disciplinary methodological or epistemological blinders. Our motivation for producing the WJP manuscript grew out of our project efforts and our attempts to understand very low fertility in Italy using both (now-conventional?) longitudinal survey data with multivariate methods (see, e.g. Kertzer et al., 2009), and the challenge of dealing with a qualitative arm of the project that drew on extensive in-depth interviews (along with some ethnography) mentioned in the WJP text.

We are gratified that commentators see value in our effort. At the same time, the commentaries clearly exhibit a range of opinions about the promise of such software and associated methods (and in our application of it!). We are encouraged that Gibbs agrees with us "... that there is scope for a lot more use of QDAS's functions...." Junker appears to be less sanguine, remarking that he is "not entirely convinced..." about these new tools. Franzosi's enlighteningly anecdotal comments seem to align with our own view both positively and negatively ("I share what the authors write about CAQDAS approaches" *et seq.*). Bazeley concurs that we demonstrate underutilization of the software, but argues that we are "dismissive of small scale qualitative studies...." In responding to these comments, we strive to separate the tool kit itself from the overall method. We remark first on the current state of use of the software tools. Then we offer some further thoughts (not

mentioned in WJP originally) about what else we learned in the investigation. We conclude with some general comments about paths to the future.

The toolkit

We argued in WJP that the present toolkit is underutilized. It seems that most of the commentators agree with our assessment. Junker calls for caution and for some healthy skepticism for how these tools are employed, and we would agree. We might not argue, however, that complexity *necessarily* means less transparency and more room for error – at least no worse than in other arenas of investigation. In a somewhat contrarian vein, we wonder whether drawing on these computer-aided features (assigning codes, relating codes to other codes, invoking queries) might not lead to more transparency, particularly as researchers grapple with how to communicate their findings. Might the development of these seemingly more approaches offer a means to help bridge disciplinary divides, by providing a concrete protocol to review and discuss? What is more, the various steps used by an investigative team could be catalogued and (with due attention to confidentiality) reviewed, used, or altered by other researchers. Perhaps a future colloquium worth having would examine whether any toolkit itself promotes or retards transparency. And we say all of this recognizing the some investigators strongly remonstrate that research of this sort (all research perhaps) remains interpretive.

Franzosi might be the most optimistic of the group when stating that “computer scientists will one day put us out of our misery of hand coding.” Maybe they have already, given the capabilities of technology today. Irrespective of one’s view of the present state of computerized technology, Franzosi’s argument that it is *imperative* (Franzosi’s emphasis) that software developers work to connect packages to one another and across platforms deserves more consideration. Some ground for optimism might reside in the view that with several software providers and with the rapid and broad-gauged adoption of mixed methods approaches (Small, 2011) there is likely to be a period of back-and-forth evaluation, exploration, and improvement of QDAS. A useful parallel might be to consider various specialized statistical programs – often originally produced by an individual researcher or team with stand-alone software – that eventually grow in popularity and subsequently find their way into more user-friendly packages. Presumably, applications workshops, corridor conversation, and conference presentations all serve to expand the user base and expedite the upgrade. Whether we are likely to see open source software (see Franzosi) is hard to predict, but we would endorse moves that make cross-platform work easier for all those concerned. To be sure, user groups (whose views may differ appreciably from those expressed in this symposium) will no doubt provide input for further software development.

The process of “coding” lies at the intersection of toolkit, software, development, and even research philosophy. Bazeley, Gibbs, and Junker all make reference to coding in their comments. Gibbs offers an extended comment on the coding we have done on our own transcripts, pointing out with helpful tabular interpretation of aspects of our multiple coding. After acknowledging what we termed “the denominator problem” in working with codes, Gibbs offers useful suggestions for working with the software. Gibbs goes on to address the issue of observations (women’s interviews; passages) that cannot be coded for either of the two concepts we employ. Although it was not part of our initial investigation, this is an important point, and we agree that it links nicely with the exploratory use of QDAS. If our own exploitation of the software falls short of what others would do, we would suggest that we have identified an area for investigator instruction and software improvement. Most notably in all of this – and a crucial feature of *and advantage* of text-based methods – is the ability to “code” a case as “null” (fits no category); uniquely assigned (fits one category only); or fits multiple categories. This last circumstance (multiple) is a promising QDAS

parallel to the multiple response approach in closed-ended surveys. Such a path might allow the investigator to discern adherence to multiple or no prevailing concepts. Note also the prevalence of multiple codes assigned to text will depend on the investigators' decisions re scale of text coded (from word to lengthy passage) and overlap, such as indicated by our original work and commented upon by Gibbs. Indeed this is part of our goal in WJP; we would suggest that in our research topic of low fertility, conventional statistical analysis of surveys appear to be somewhat disappointing or incomplete in providing an explanation. The richness of coding and the extent of processing ability of QDAS would allow research team to avoid the otherwise necessary constraints on respondent's views that occur with conventional surveys. In this way technology might help bring these approaches closer to one another in service of capturing an underlying social reality.

Junker's comments echo and reinforce several of Gibbs's, while acknowledging the increased complexity that coding can introduce, especially when one moves beyond "code and retrieve." Junker makes the important point that "Units of textual analysis are not very much like the units of survey research..." raising the role of context, and also the matter of length. While we would agree that at first pass the approaches are dissimilar, they have some overlap. After all context does matters also in conventional survey research, seen in attention given to question placement and in the iterative nature of pre-test work. More interpretation might emerge dynamically in the text-coding approach. We are reminded that we concur with Franzosi's comment that we study texts to ascertain the social reality beyond the text itself.

Bazeley appears to dispute our thoughts along these lines more strongly and directly. Perhaps WJP and Bazeley are talking past one another. We would not insist in all cases that standardization of coding be imposed, either in terms of length (of coded word or passage) or interpretation. For some projects, perhaps small scale ones as Bazeley suggests, and exploratory ones as Junker reminds us, this is not a concern. We do, however, see an opportunity for those who seek consistency, e.g. high degrees of inter-rater reliability, or have a particularly large amount of text, in these computer-aided approaches. It certainly was not our intent to generate a bristling response, and we would accept criticism that our exposition may have led some readers to think that only large scale quantitative (quantifiable) analyses are of value. Conversely, we would suggest, that for those investigative teams that wish to maintain an approach of random sampling, inter-rater reliability, and replicability (see Singer et al 1998 for an interesting perspective on some of these issues), this new technology represents a welcome advance. It offers the opportunity to get past the pigeonhole problem of conventional surveys (forcing a sharply delimited closed-ended choice on the respondent), while also pursuing the goal of representing the viewpoints, concept, and motivations of people through their own voices. For those at an exploratory phase with a large amount of material in digital form, the software may be particularly welcome. For many research teams the software carries the added advantage (seen also by Bazeley [2010: 463–4]) of potentially recording who coded what, facilitating subsequent discussion among the team regarding next steps.

What else did we learn?

The commentaries we receive encourage us to revisit our thinking about our own manuscript and consider some further aspects of where this is all heading. We found, for instance, in our review, that QDAS methodology seems to have made inroads more rapidly in some subfields (such as health research) than others. Perhaps other scholars could revisit this issue, fill in some of the lacunae left by our own analysis, and point the way to more rapid adoption. We suspect that terminology may represent an obstacle, especially where similar tasks or concepts are described differently. New inventions and approaches inevitably come

with their own terminology. This silo-reinforcing jargon can slow down progress in adoption and cross field communication (consider some of the variation in usage for advanced quantitative techniques used across sociology, econometrics, and biostatistics). While no fingers need to be pointed, we would suggest that the greater the communication, the more likely a common platform of knowledge will develop, and the broader the applicability of such methods will be. We hope our own contribution has moved the conversation in that direction. We also suspect that more attention to the issue of software utilization versus conversion design *per se* might merit discussion. While one use of such software is to go down the path of translating (initially) qualitative text into (conventionally) analyzable statistical segments – and we tried this, while also proceeding inductively in other parts of our project – we recognize that not all investigators would take this route.

Paths to Knowledge

All comments implicitly raise questions about epistemology and paths to knowledge. Gibbs most specifically speaks of the value of “exploratory” work; Bazeley emphasizes the value of the small-scale study; Junker calls for caution with the increased complexity of such tools; and Franzosi, while expressing ardent hope for better communication and software, raises the specter of separate paths traced by schools of practitioners. We cannot resolve the deep issues raised by these more broad observations, but we fervently hope that amidst the evolving smorgasbord of digital applications these conversations take place.

One of our key hopes in “Dim Bulb” was to spur a methodological discussion that could serve a variety of investigative approaches, from qualitative through mixed to quantitative. This symposium gives us optimism that the luminosity is increasing. We see a bright beacon for the future.

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