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Issue XII

Quantitative/ Qualitative

Challenging The Binary

Edited by Dr Rachael Kiddey

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TABLE OF CONTENTS

Editorial 5

Aristotelian Political Science and the Qualitative-Quantitative Divide 8

Beyond Technique to Accuracy and Agency 13

A 'NICE' View of the Limits of the Quantitative/Qualitative Distinction 19

How to Do Things With Binaries 25

EDITORIAL

Dr. Rachael Kiddey

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Welcome to the twelfth edition of the ISRF *Bulletin*. The theme for this issue arose from the recognition that often (but not always) social researchers define themselves by whether or not they use broadly *quantitative* or *qualitative* analytical approaches. It seems strange that this is so since who can really claim that they *never* rely on the clarity and fixity of numbers during some stage of their work? Equally, how can those who depend on complicated mathematical models to explain the world (but rarely venture out to look at what exists) suggest that *none* of what they do may be characterised as qualitative? Surely, the binary is nonsense! This is the premise upon which contributors to this issue were asked to prepare their articles.

Most things go in trends and the use of quantitative and qualitative approaches to social research is no exception. Indeed, as Patrick Overeem points out in his article, it was Aristotle who first suggested that the attractiveness of 'precision' that quantitative analysis seems to offer is useful only to a point. Of course, it is easier to come to a mutual understanding of things that can be quantified – 'there are five beans in the pot' is easier to agree upon than, 'the beans in the pot are delicious' – but the fact that the beans are delicious (or not) is the point at which debate and discussion, the bread and butter of academia, begin in earnest. Great value may be derived from the discussions that follow disagreement. That said, numbers are, as Sherrill Stroschein indicates, reassuring and unchallenging. Numerical models enable researchers to speak across disciplines, to traverse language barriers and interrogate data gathered in times and places wildly different from their own; they are, however, less able to cope with 'the *story* of the empirics', to borrow Stroschein's neat phrase.

In the interests of plurality (a theme dear to the heart of the ISRF), Gabriele Badano and Trenholme Junghans provide here a pair of papers in which they individually reflect on findings from the ISRF-funded strand of the *Limits of the Numerical* project, based at CRASSH (Cambridge), where they are both postdoctoral researchers. In a nutshell, *Limits of the Numerical* comprises three teams of researchers (of which the Cambridge-based team is one) considering the limits of quantification: on climate change, rankings in higher education, and healthcare. The Cambridge team is focused on healthcare and the (British) National Institute for Health and Care Excellence (NICE) specifically. As Badano points out, NICE represents an excellent vantage point from which to critique the binary distinction between quantitative and qualitative approaches because it essentially involves managing a budget according to the best interests of everyone that NICE serves, patients and tax-payers. NICE is constantly in the headlines accused of callously deciding not to provide (or ceasing to provide) particular drugs (for example, for Alzheimer's or cancer treatment), on the basis that it is not cost-effective based on a £-per-unit-of-gain ratio. Reading Badano's article, it was a surprise for me to learn that, contra the opinions of various political philosophers (and many journalists) who express concern at over-reliance on numbers in such situations, sticking to mainly *quantitative* tools may actually be the only way to constrain the otherwise profit hungry pharmaceutical industry in its dealings with the public agency. Considering the implications that 'binary q' has on the real life contexts that NICE affects, Junghans suggests that the quantitative versus qualitative debate has implied a cultural divide between two different *moral* economies that, again, perhaps even Aristotle and his peers might recognise.

I would argue that contributors to this edition of the *Bulletin* variously agree that *we need both* approaches – quantitative and qualitative – if we are to undertake empirically robust social research that is also mindful of human (and some non-human) agency. However sophisticated our numerical explanations for things, they are constantly in a state of change. Perhaps our greatest task therefore is to recognise that whether we rely more on quantitative or qualitative methods is in many ways irrelevant; what

matters is our common goals as social scientists. To reach these, we must continue to pursue ways in which to come together, using interdisciplinary and inter-methodological approaches.

ARISTOTELIAN POLITICAL SCIENCE AND THE QUALITATIVE-QUANTITATIVE DIVIDE

Dr. Patrick Overeem

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Few social sciences seem to have a more pronounced divide between qualitative and quantitative work than political science. Clearly, the emphasis on either of them varies strongly per subfield. Some are clearly and consciously mixed (comparative politics comes to mind). Others are sharply contrasted: electoral studies are quantitative; political theory is qualitative; the study of International Relations is still mainly qualitative; the study of national and local politics (be it American, or German, or any other) is becoming increasingly quantitative. Even more pronounced than the divide between subfields, however, is that between individual researchers and research groups and consequently that between the outlets they choose (journals, conferences). Counterexamples are of course easy to find, but there is no denying that, unfortunately, in political science C.P. Snow's schism between 'two cultures' has become a reality.

Much of this has to do with the fact that, over the course of its century long formal existence, political science has developed increasingly sophisticated methods, particularly for quantitative research. And it seems fair to say that these methods have gained the upper hand, if not in terms of volume, then at least in terms of academic standing. Things have not always been like this. For ages, the study of politics amounted to the study of political ideas and political institutions (particularly constitutions). The

approach was philosophical and almost exclusively qualitative. 'Statistics' has been practiced since the eighteenth century, but it was understood as the clerkish activity of administrating and accounting the state's possessions, rather than as a technique for analysing data. Academically, it ranked decidedly below the normative and qualitative study of politics. This lasted until the Second World War, but since then, everything has changed: political theory has become regarded as the 'softest' of the field's sub-disciplines (if not relegated to philosophy altogether) and the study of constitutional arrangements has been dismissed as 'classical institutionalism' and largely handed over to lawyers. By contrast, empirical political research, particularly that which uses quantitative data and statistical methods, has become the dominant model – so much so, that it serves as a benchmark even for many in the more qualitative subfields.

There has, however, also been a backlash. In 2000, an anonymous e-mail sparked the so-called *Perestroika*-movement, which was an uprising by a variety of concerned political scientists against what they regarded as the over-sophistication and inaccessibility of much political science research and the dominance of quantitative methods.[1] The resulting debate was, as usual, about much more than just qualitative and quantitative methods; it was a clash of epistemologies and of views on the proper role of social science. *Perestroika* was for some time effective in opening up the debate but after a while it led to a hardening of positions rather than reconciliation. The *Methodenstreit* between 'quants and quals', or more broadly between positivists and anti-positivists, may not be as fierce today as it was back then, but underneath a Cold War still seems to go on, characterized by mutual incomprehension, avoidance, and occasional eruptions of tension.

In this constellation, every self-conscious political scientist is forced to take a position, even if a moderate or mixed one. Professionally and pragmatically, if not for better reasons, one has to take a stance. Indeed, in one's choices of topics, methods, and outlets,

1. Monroe, K.R. (Ed.) (2005). *Perestroika! The Raucous Rebellion in Political Science*. New Haven, CT: Yale University Press.

one unavoidably declares oneself. Hence, in this respect, as in several others, I would like to propose an Aristotelian political science. As everyone knows, Aristotle was an empiricist who, in contrast to Plato, started from the concrete variety of observable phenomena. Of course, his methods of data gathering and data analysis were far less advanced than ours, but I would argue his writings suggest some very sound intuitions on how the 'quantitative' and 'qualitative' should be combined. Let me illustrate this with two examples, relating to two concepts at the core of his (and my own) understanding of the study of politics, namely *politeia* and *politikos*.

Politeia, first, is commonly translated as 'constitution' or regime, but has a broader meaning as well; it refers to the entire 'way of life' of a particular type of political society. Now, in his study of constitutions, as in many other things, Aristotle was decidedly empirical. He collected no fewer than 158 constitutions – a set of cases that would make for an impressive comparative study today – and described, compared, and categorized them. His analysis in the *Politics* (particularly book III)[2] is methodologically simple, but still penetrating. He develops a typology of regimes that is based, first and foremost, on a numerical criterion: polities are ruled by one, by few, or by many. How few or how many rulers exactly are needed to distinguish one regime from another is not clearly specified. In fact, it turns out that Aristotle's typology is not purely quantitative for he adds a second, strongly qualitative dimension, saying that a regime can be ruled well, in the interest of the community, or badly, in the interest of the rulers themselves. Moreover, in the course of his discussion it turns out that what first seemed to be a purely numerical way of distinguishing regimes, is actually much more than that: since the few, if they rule, are typically rich and the many poor, the division of regimes turns out to be based on a division between classes. The mixture of quantitative and qualitative is explicit: "... every city is composed of quality and quantity. By quality I mean freedom, wealth, education,

2. Aristotle (1988). *The Politics* (S. Everson, Ed.). Cambridge, UK: Cambridge University Press.

good birth, and by quantity, superiority of numbers".[3] And both have to be accounted for.

The second key concept is *politikos*. Perhaps this notion refers simply to what we would now call a 'politician' or even to a politically active citizen. In Aristotle's ideal polity, after all, citizens rule and are ruled in turn. So perhaps a *politikos* is just someone who takes his responsibility of exercising a political role. If that is true, *politikoi* are far from uncommon and there can be many of them. At the same time, however, Aristotle's concept of *politikos* (like that of *politeia*) seems to carry strong normative overtones. Hence it is has traditionally been translated as 'statesman', which is a term of praise, referring to a great leader with extraordinary political virtue. And virtue, as Aristotle states in his *Nicomachean Ethic*, is a mean between the extremes of excess and deficiency.[4] This notion of a mean again suggests a quantitative approach, in this case towards moral excellence, but as Aristotle makes clear, there is a qualitative difference between virtue and its 'surrounding' vices as well. Virtue is an excellence that transcends the spectrum of excess and deficiency. The same goes for statesmen in comparison to 'ordinary' leaders and citizens. Statesmen are, by definition, rare and extraordinary (not everyone can count as one). Studying statesmanship is therefore also an inherently qualitative exercise. Quantitative studies of statesmanship would make little sense, not only because there are not enough cases, but also because the uniqueness of each statesman and the meaning of his moral character can only be grasped by detailed qualitative study. So we see in the case of Aristotle's concept of *politikos* (and virtue, too), as in that of *politeia,* how he starts with numerical considerations but soon moves on to the more pertinent moral differences. The quantitative serves as a starting point, but the qualitative quickly takes over and is clearly the most important.

Aristotle famously says "it is the mark of an educated man to look for precision in each class of things just so far as the nature of the

3. Ibid., 1296^{b} 17-19
4. Aristotle (1980). *The Nicomachean Ethics* (D. Ross, Trans.). Book II, Chapter 6. Oxford, UK: Oxford University Press,

subject admits".[5] This implies a scepticism towards sophisticated, usually quantitative methodologies in political science that I tend to share. MacIntyre, perhaps the best-known neo-Aristotelian of recent times, points out that the social sciences have miserably yet understandably failed in their self-imposed mission to find universal laws of human behaviour: "...the salient fact about those sciences is the absence of the discovery of any law-like generalization whatsoever".[6] And Flyvbjerg, following in the footsteps of Aristotle as well, argues that the social sciences can only become relevant again if they give up on emulating the natural sciences and opt instead for a 'phronetic' approach informed by practical experience and accounting for the distinct nature of social reality.[7] For these thinkers, quantitative analyses can be informative, to be sure, but they will always remain secondary to and supportive of the qualitative and ultimately moral understanding of social reality. Without embracing all the criticisms and recommendations they provide, I am inclined to think they have pointed in the right direction.

5. Ibid., 1094^{b} 24-25
6. MacIntyre, A. (1984). *After Virtue: A Study in Moral Theory* (2nd ed.). p. 88. Notre Dame, IN: University of Notre Dame Press.
7. Flyvbjerg, B. (2001). *Making Social Science Matter: Why Social Inquiry Fails and How it Can Succeed Again* (S. Sampson, Trans.). Cambridge, UK: Cambridge University Press.

BEYOND TECHNIQUE TO ACCURACY AND AGENCY

Dr. Sherrill Stroschein

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Numbers are clear, reassuring ingredients with which to start a research project. For my current work on ethnic parties and local politics, an early task was to look up the distribution of seats on local municipal councils. It seemed that to understand local party dynamics, a reasonable first step would be to trace how party seat distributions on local councils changed with each election. A substantial amount of information is available first from the internet, through local newspaper reports of the elections and local council websites listing the seat distributions by party. I began sifting through websites for local councils in Romania, Slovakia, and Serbia with enthusiasm.

The task was not as easy as it seemed. I kept finding inconsistencies, especially in my examination of Hungarian town council websites in Slovakia. Seat distributions that I had noted from an old paper seemed different than listed, but were for the same council during the same period. They never varied more than a few seats, but I didn't want them to vary at all. With the aim of finding a more definitive source of information, I asked a colleague who both researches and works on local elections in Slovakia.

He was bemused by my question. "It's simple," he said. "It is because some of the council members switched parties between elections."

Since that time I have found this local party-switching to also have taken place in Serbia, where another colleague described how

several members of a town council had simultaneously switched their party loyalties. I have now accepted these switches as one of many unexpected aspects of my project on local politics. But I remain disturbed by the fact that something I had assumed could be easily tracked using numbers was inconveniently more elaborate. My attempt to use a number as a simple way to compare party strength was foiled by someone's conscious decision to change parties: foiled by human agency.

The notion that one might observe and explain political processes in a scientific manner, objectively and from the outside, is a philosophical project. Hypothesis design and testing has been put forth by many as the standard of pursuit in social science. In this "deductive-nomological" approach[1], empirical information or data can be accepted in different forms. Numbers have been seen as especially favourable for this type of enterprise because they can be more easily analysed using hyper-objective statistical techniques. The broad application of the logic of statistics has become so prevalent for many in the field of Political Science that its methods of establishing variables and testing hypotheses are also advocated for assessing qualitative data.[2] There is much to be gained from this type of research when addressing the appropriate questions, especially with regard to the logic of categories and their relationships.

There is also much to be lost when this recipe is advocated in research of all social phenomena. Several philosophical objections have been raised in response to efforts to push the deductive-nomological approach as standard for the field.[3] Elsewhere, I have also made objections to this type of evangelism in favour of inductive research that prioritises the story in the empirics or data.[4] This piece will focus on one objection: the related problems that

1. Jackson, Patrick Thaddeus (2010). *The Conduct of Inquiry in International Relations*. p.65. New York: Routledge.
2. King, Gary, Robert Keohane, and Sidney Verba (1994). *Designing Social Inquiry: Scientific Inference in Qualitative Research*. Princeton: Princeton University Press.
3. Jackson *op. cit.*
4. Stroschein, Sherrill (2012). *Ethnic Struggle, Coexistence, and Democratization in Eastern Europe*. New York: Cambridge.

agency and change pose for a current numbers fetish in methods used in my field.

One individual choosing to switch parties and thus to mess up my numerical research data is an individual exercising agency – a kind of agency to switch between the categories I am using for analysis (parties). Within social science, rational choice theory provides an individualist view on how such change might take place via agency. Change might also take place through relations or relational mechanisms that relate to interactions. For example, an increase in tension between ethnic groups can be described as an increase in the salience of the boundary between them.[5,6] Increased boundary maintenance or policing is a set of practices engaged in by individuals in interaction. A violent incident between ethnic groups can increase such practices, producing more boundary salience and perhaps a process of ethnic polarization. Change results from the accumulated practices of those engaged in the interaction – and is endogenous, or has feedback effects, among the interactions. Conversely, a process of reconciliation would involve practices that weaken the boundary between groups.

A study that prioritises research methods based on the techniques of statistical testing would approach this topic in a very different way – the examination of variable correlations. One might hypothesize that a decline in GDP might produce an increase in conflict. This statement implies GDP as an independent variable (IV) and conflict as a dependent variable (DV). To test whether the statement can be broadly applicable, a dataset could be amassed on a large number of countries, given the availability of numerical data on GDP and numerical data on conflict. The Correlates of War (COW) project and the Minorities at Risk (MAR) project are solid data sets that my students frequently use to engage in just such correlation examinations.

5. Barth, Fredrik (1969). "Introduction." In Barth, ed., *Ethnic Groups and Boundaries: The Social Organization of Cultural Difference*. Long Grove, IL: Waveland Press, pp. 9-38.
6. Tilly, Charles (2005). *Identities, Boundaries, and Social Ties*. Boulder: Paradigm.

Numerical data for each variable (of GDP and conflict) is available for several decades, with a few caveats. First, data is recorded for specific increments in time, rather than as a continuous process. GDP thus might be listed by year – useful for a 40-year study, less useful if one wants to know what happened last year in great detail, or whether the shifts took place out of sync with year increments. Second are definitional issues – a project that requires a certain number of deaths as a threshold to count as a conflict (say 1,000), will define smaller incidents out of the analysis. These potential problems are well-known and acknowledged by practitioners of this type of research.

Less considered is the following problem: there are no people in these correlations, and no reflection of human agency. The statement "lowered GDP leads to increased conflict" may be robust in terms of the large breadth to which it seems to apply. But it is phrased as a physical law, without agency or a potential for change. Scientific, yes. But its accuracy could be temporary. The potential for change has its own implications. A database might include a large set of numerical codes for ethnic or religious identity over a period of 40 years. This collection of data is impressive, but might also be misleading. Were these identities really uniformly meaningful across all of the 40 years? Was the boundary salience really static for 40 years? Our analysis would miss potential changes in boundary maintenance by treating the identity code for each year as equivalent. The project might then misrepresent a situation where identity salience in fact may have varied across time. This possibility is not simply abstract, as the examples of Yugoslavia and Iraq and Syria demonstrate.

The facts of change and human agency are often in tension with these data correlation projects to code, assess, and predict. People learn, and make decisions from this learning. If my students who have produced this research find themselves in a situation of lowered GDP, knowing its potential they might take steps to avoid potential identity conflict. They might also try to disseminate their research, in the effort to warn others from making decisions that

might facilitate conflict. This possibility is not just a social science version of the film *Back to the Future* - it involves the fact that it is human agency that separates the social from the physical sciences. Almond and Genco noted that humans are unlike objects that obey the laws of physics consistently over time. Instead, humans might change their behaviour with each iteration because they have agency.[7]

This influence of past learning on decisions was a topic that frequently emerged in fieldwork for my previous book. I was especially interested in uncovering the details of an ethnic riot between Romanians and Hungarians in Romania in 1990.[8] The riot was particularly notable because the violence ended after a few days, and did not expand into sustained ethnic conflict. Its limited nature seemed to counter a view in the literature on ethnic conflict, that one riot might spiral into further violence. Years after the riot, during fieldwork I asked locals why the riot had thus simply ended. A typical response was this: the riot had shown the bad ends to which tensions could lead, and they had decided they did not want to go there. Some also indicated that over time, the example of unfolding violence in neighbouring Yugoslavia confirmed that they did not want to re-open the possibility of violence in their town. In short, the answer was: "We decided not to go that route." Agency at work.

If we are to be accurate in our research of social phenomena, we must allow for the possibility that an effort to emulate the science of the physical sciences can make us blind to the role of agency and decision in social phenomena – including how they might change their nature. Our models might be accurate depictions of phenomena at one point, but they might then change as a result of individual agency or relational interactions.

This piece does not advocate that those engaged in hypothesis

7. lmond, Gabriel, and Stephen Genco (1989). "Clouds, Clocks, and the Study of Politics." In Almond, ed., *A Discipline Divided: Schools and Sects in Political Science*. New York: Sage, pp. 32-65.
8. Stroschein *op. cit.,* Chapter 4

testing and large data correlations should stop this work. Of course it is informative for us to think systematically about how these variables might correlate. But there has been an unfortunate tendency for several engaged in such hypothesis-testing to deny the potential contributions of other types of research. Such methods have a blind spot with regard to agency, and thus can simply miss a large share of activity in the social world. This tension is not one of numbers or non-numbers, but rather a variant on the age-old problem of structure versus agency. It is very inconvenient for my research design that some city council members switch parties. But by embracing these instances of agency in my study, I get closer to an explanation of what actually happened. Surely our first priority should be to get the story right.

A 'NICE' VIEW OF THE LIMITS OF THE QUANTITATIVE/ QUALITATIVE DISTINCTION

Dr. Gabriele Badano

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Much of my work falls at the intersection between political philosophy and public policy or, more specifically, health policy. I often look at issues of value in the allocation of healthcare budgets, and it is hard to imagine anyone working in this area who does not pay obsessive attention the British National Institute for Health and Care Excellence (NICE). NICE is constantly in the public eye for its recommendations to NHS commissioners, telling them whether or not a new drug should be covered. A widely-popularised story about NICE has it that the Institute simply calculates how much it would cost the NHS to produce a unit of health gain through the provision of the drug under scrutiny; all drugs whose £-per-unit-of-gain ratio falls below NICE's cut-off point of £20000 per unit of benefit are then rigorously recommended against. An important element of this story is NICE's measure of unit of gain. By integrating in a single numerical measure increases in life expectancy and gains in various dimensions of quality of life, the quality-adjusted life year (QALY) reduces to a single scale a huge variety of benefits, such as those produced by life-extending cancer drugs, pharmaceuticals that slow down the progression of Alzheimer's, and palliative treatments – in the words of a journalist from the ever-critical *Telegraph*, we seem to be talking about 'an accountant's measure' of gains in longevity and well-being.[1]

1. Paul Easthman, 'Does NICE have to be cruel to be kind?' *The Telegraph*, October 30, 2006, available at http://www.telegraph.co.uk/news/health/3344366/Does-Nice-have-to-be-cruel-to-be-kind.html.

NICE provides an excellent vantage point to criticise the binary distinction between the quantitative and the qualitative in public policy, at a number of levels. For example, one could use NICE to question such distinction at an ontological level, in the sense of casting doubts over the possibility of neatly categorising policy-making processes into essentially quantitative and essentially qualitative processes. The widely-popularised story about NICE that I have just mentioned, which contributes to the popular image of the Institute as the archetype of rigidly (and, of course, mercilessly) quantitative health technology appraisal processes, is to a good extent fictitious. In actuality, NICE's threshold is a *soft* threshold, ranging from £20000 to £30000 per QALY. This means that above £20000 per QALY, NICE can (and often does) recommend drugs for use in the NHS, as long as its decision-makers find that support for them is offered by one or more of a list of additional considerations that NICE has never made any real effort to quantify – severity of disease, extra weight placed on benefits accruing to the members of disadvantaged groups, special attention paid to children and many others. NICE even recommends drugs falling above the £30,000-per-QALY mark, as long as those qualitative considerations offer exceptionally strong support to the drug in question.[2]

The ontology of the quantitative and the qualitative, however, is not going to be my main focus here. As a political philosopher, I am more interested in the evaluative level of how we should judge, if at all, the choice of more quantitative over more qualitative tools in policy-making. It seems to me that, to the extent that mainstream political philosophers have paid any attention to the use of numerical indicators to make decisions, the loudest voice has by far been that of those who warn against too great a use of numbers. These authors, who are exemplified by some prominent theorists of the so-called 'capability approach', explain that to be humane, decision-making about laws and policies must confine quantitative reasoning within well-guarded limits.

2. Michael Rawlins, David Barnett, and Andrew Stevens, 'Pharmacoeconomics: NICE's approach to decision-making', *The British Journal of Clinical Pharmacology* 70 (2009): 346-349.

For instance, Martha Nussbaum points out that political issues are extremely complex, and builds on the Aristotelian motto that we should only be as precise as our subject matter permits, which is in tension with the often artificial precision of numbers. Drawing on a classic theme of the capability approach, which stresses that well-being is made up of a plurality of irreducible dimensions, she also warns against the tendency to use numbers to commensurate qualitatively different values along a single metric.[3] Of course, many of these commensuration efforts trade off different values along an economic metric, as with GDP (and, at least in part, with NICE's £/QALY ratios). Authors like Nussbaum and Amartya Sen are particularly fierce opponents of commensuration along GDP and other economic metrics, giving the strong impression that *to resist quantitative tools is to resist the attempt by market forces to conquer society*.

I do not mean to deny that these points have force. Still, there is at least another side to the story of quantitative tools in policy-making, and of the alliance between numbers and market forces. In what follows, I will show that NICE can help us tell it. Together with Trenholme Junghans and Stephen John, who are, respectively, the other post-doc and one of the principal investigators on the ISRF-funded project I work on in Cambridge, I have recently worked on a paper focusing on the process through which NICE originally determined the £20000-£30000/QALY figure. Surprisingly, we suggest that given NICE's lack of necessary evidence about the cost and effectiveness of currently-funded NHS treatments, its choice of the £20000-£30000/QALY figure in 2001 made little sense from the perspective of the *health-economic* justification that NICE provides for it.

However, and even more surprisingly, we also argue that things can be said in favour of NICE's choice to pin down an explicit number if we broaden our view so as to include a *political-philosophical* perspective on the issue. The choice of the £20000-£30000/QALY figure for an explicit threshold that would then be placed

3. Martha Nussbaum, 'Human functioning and social justice: In defense of Aristotelian essentialism', *Political Theory* 20 (1992): 202-246.

at the centre of NICE's decision-making process increased the transparency of such process. Moreover, it has served as a catalyst for a broad democratic debate in civil society over the rationing of healthcare - a debate whose size is probably unparalleled across the world. Also, it contributed to standardise the process through which NICE's five different health technology appraisal committees make decisions, reducing the risk of a seemingly unfair 'committee lottery', or, in other words, the risk that patients will be denied access to a drug simply because it has been appraised by a committee and not another.[4]

Another more recent chapter in NICE's history is especially relevant to the alleged alliance between numbers and market forces. Here I am thinking about NICE taking over the Cancer Drugs Fund (CDF) in 2016. One of the reforms brought by the CDF is that if NICE decision-makers find that considerable uncertainty still surrounds the cost or the effectiveness of a cancer drug, they will now be able to nonetheless recommend it for usage under the NHS, but within special arrangements. These arrangements require that over the following two years, the pharmaceutical company producing the drug will have to collect evidence aimed at reducing the existing uncertainty. At the end of the two years, NICE's appraisal committee will reconvene to decide, based on such additional evidence, whether the Institute can then confidently think that the £/QALY ratio of the cancer drug is favourable and, therefore, whether or not the NHS should discontinue coverage of the drug.

Now, let us zoom in on NICE's agreement with pharma regarding data collection arrangements. Breaking with the rest of its methodology for technology appraisals, NICE here abandons its preference for the use of randomised controlled trials (RCTs) to calculate the QALYs produced by cancer drugs. RCTs, the cornerstone of the evidence-based medicine paradigm, measure statistical associations and, therefore, constitute a highly

4. Gabriele Badano, Stephen John, and Trenholme Junghans, 'NICE's cost-effectiveness threshold, or: How we learned to stop worrying and (almost) love the £20,000-£30,000/QALY figure', in *Measurement in Medicine: Philosophical Essays on Assessment and Evaluation*, ed. L. McClimans (Lanham: Rowman & Littlefield, forthcoming).

quantitative method for producing evidence of effectiveness. Given the short two-year time frame, however, NICE states that 'careful consideration' must be given to any plan to start new RCTs.[5] Therefore, the analysis of oncological patient data routinely collected in NHS registries and other observational studies can well be the only source of the evidence taken by pharmaceutical companies to NICE at the end of the two years.

This addition to NICE's methodology is inspired by an emerging model for the evaluation of clinical evidence – a model that criticises the primacy of overly-constraining RCTs, favouring instead flexible 'adaptive pathways' to evidence appraisal, and drawing heavily on observational 'real-world' studies. Still, some commentators point out that precisely because they are not as rigidly constrained as RCTs, the real-world observational studies that NICE's CDF embraces are exceptionally prone to manipulation by those who collect and analyse the data – in this case, by pharma.[6] Discussing this emerging model of evidence in general, others note that among other things, observational studies are much worse than RCTs at screening out ineffective or harmful treatments that seemed promising on the basis of preliminary studies – which is exactly the task that the CDF's two-year data collection activities are supposed to perform.[7]

Needless to say, the supporters of real-world adaptive pathways would not agree with these critiques,[8] and this is not the place to arbitrate this controversy. Still, *to the extent* that such critiques have force, they provide a striking counterpoint to the impression left by the political philosophers who warn against too great a use

5. NICE, Specification for Cancer Drugs Fund data collection arrangements (London: NICE, 2016), available at https://www.nice.org.uk/Media/Default/About/what-we-do/NICE-guidance/NICE-technology-appraisal-guidance/cancer-drugs-fund/data-collection-specification.pdf.
6. Richard Grieve, Keith Abrams, Karl Claxton, et al., 'Cancer Drugs Fund requires further reform', *BMJ* 354 (2016): i5090.
7. Courtney Davis, Joel Lexchin, Tom Jefferson, et al., '"Adaptive pathways" to drug authorisation: Adapting to industry?' *BMJ* 354 (2016): i4437.
8. For example, see the letter written by Guido Rasi and Hans-Georg Eichler in response to a critical assessment of adaptive pathways, available at http://www.ema.europa.eu/docs/en_GB/document_library/Other/2016/06/WC500208968.pdf.

of numbers. According to some, endorsing adaptive pathways amounts to 'adapting to industry'.[9] At least in certain contexts, it seems that to stick to mainly quantitative and fairly rigid decision-making tools, which will at most capture a simplified version of well-being or of the other values they are supposed to serve, is the only way to constrain industry in its dealings with public agencies, and to try to make sure that industry does not systematically have it its way. In other words, it seems that if we really care about pushing back against market forces, we should keep well in mind the merits of the quantitative, not just those of the qualitative.

9. Davis et al., *op. cit.*

HOW TO DO THINGS WITH BINARIES

Thinking with and against the quantitative/qualitative split

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If structuralism suggests that binaries are "good to think with", it often seems that they are even better – or at least more fun – to think against. Academics might be especially partial to them, because they are so much fun to dismantle and can be so easily and satisfyingly argued against. Who doesn't enjoy deconstructing a binary, or scoring points by claiming that an interlocutor's argument is based on a "false dichotomy"? To identify a dichotomy underpinning another's argument often counts as a rhetorically advantageous move, as if any appeal to a binary was an indisputable sign of conceptual or analytic weakness.

It might go without saying that the same binary-bashing and dichotomy dismantling that makes for good rhetorical agonistics can make for poor social analysis. It is one thing for me to point out that another social scientist is basing her analysis on an unnecessarily limiting binary; it is quite another to ignore or overlook the ways that same binary might operate "in the wild" – informing everyday common sense and action; enabling and supporting particular infrastructures, devices, and practices; and lending coherence to systems of classification, structures of feeling, and moral and aesthetic intuitions and judgments. In short, and as demonstrated so well by many a structural anthropologist,[1]

1. For a deft overview of structuralism in anthropology, see Stasch, Rupert. (2006). *Structuralism in Anthropology. The Encyclopedia of Language and Linguistics*, 2nd edition, vol. 12, pp. 167-170. Oxford: Elsevier.

attention to the work done by binaries in social life can be immensely productive precisely because binaries themselves are so highly generative.

These contrasting impulses – to steer clear of easy binaries in the interests of analytic rigour on one hand, and to recognise their importance as social phenomena on the other – are in productive tension within the ISRF funded project on which I currently work, "Limits of the Numerical". This three-year initiative involves three teams considering the workings – and limits – of quantification in three different domains: healthcare, climate change, and rankings in higher education.[2] As indicated by the project's somewhat rhetorical name, the project is animated in part by the idea that some things might be best left unquantified, and that the potentially negative, corrosive effects of ever-expanding regimes of quantification and measurement demand critical scrutiny.[3] In this way the "Limits of the Numerical" project engages and derives momentum from the very quantitative/qualitative binary that we as researchers and analysts might wish to avoid or move beyond. This minor irony indexes another important consideration when it comes to doing things with binaries: it might be naïve at best to think that one can easily or thoroughly divest oneself of the cultural categories with which one has been raised. And the quantitative/qualitative opposition – I'll call it "binary q" for simplicity – is nothing if not deeply sedimented in Western cognitive repertoires.[4]

My own tack for working with these tensions involves mapping

2. Based at the University of Cambridge, the ISRF sponsored team is considering the uses of quantification in healthcare. Our counterpart teams at the University of Chicago and the University of California Santa Barbara are considering the uses of quantification in relation to climate change (Chicago) and rankings in higher education (UCSB).

3. In this respect "Limits of the Numerical" is in dialog with a growing body of research dealing with the sociology of quantification. Cf. Rottenburg, et. al. (Eds.). (2015). *The world of indicators: The making of governmental knowledge through quantification*. Cambridge: Cambridge University Press; Shore, C., and S. Wright. (2015). Audit culture revisited: Rankings, ratings, and the reassembling of society. *Current Anthropology*, 56(3), 421-444.

4. Jane Guyer suggests that the conceptual division between quantity and quality is particular to Western thought. Guyer, J. I. (2004). *Marginal gains: monetary transactions in Atlantic Africa* (Vol. 1997). Chicago: University of Chicago Press.

some of the manifold associations and resonances historically linked with and regimented by binary q, and ethnographically documenting how the binary operates in actual contexts of use. I am particularly interested in understanding how this binary figures into debates around one highly influential regime of quantification in healthcare, the randomised controlled trial (RCT). RCTs are increasingly under challenge as ill-suited to capture the benefits and value of many new medicinal therapies, and as unsustainably costly in terms of both time and money. As discussed a bit more fully below, I take these debates as a situated, empirically observable instance wherein the limits of quantification are being asserted and its uses challenged. This approach is meant to respond to the circumstance that binary q is a "social fact" in the sense captured by Durkheim. This implies that the limits and affordances of quantification – and of binary q – are best understood in contexts of actual use, rather than in the abstract.

This is not to say that binary q is not richly invested with powerful affective and normative associations; it is and has been since at least classical antiquity. Mapping these linkages and attending to how they inflect debates about the use and value of RCTs comprise an important aspect of my research. One way to think about both the immense power of quantification and its capacity to engender a certain discomfort relates to its close connection with processes of abstraction, i.e. the decontextualisation and disattention to the qualitative richness and nuance of an entity or phenomenon required for purposes of both measurement and classification. According to Aristotle, for example, in order for the mathematician to measure dimensions, he "strips off all sensible qualities" that are extraneous to that which is being measured, for example weight, hardness, smell, or colour.[5] In the process the latter qualitative attributes fade from focus in a simplification that can be as conceptually and socio-technically powerful as it can be disconcerting or unsettling. Thus from at least Aristotle forward, in the Western conceptual repertoire the quantitative has been treated as the opposite of the qualitative, and Aristotle himself

5. Crosby, A. W. (1997). *The measure of reality: Quantification in Western Europe, 1250-1600*. Cambridge: Cambridge University Press, p. 13.

regarded description and analysis in qualitative terms as preferable to quantitative methods.[6]

According to historian Ted Porter, the power of quantification relates to its capacity to enable communication and coordination of knowledge and practice across spatial, temporal, and linguistic divides, and to aid the production of objectivity and the development of public trust.[7] As anticipated by the Aristotelian preference for qualitative forms of analysis, suspicion of or distaste for quantification can be linked to its association with processes of abstraction and standardisation, of commodification and alienation.

One influential strand of critique of quantification and these allied operations has been theoretically and empirically elaborated in relation to the advent of market economies and the use of money. According to anthropologist Webb Keane, thinkers as varied as Marx, Mauss, Polanyi, and Weber have contributed to this strand of critique, which portrays

> "...the historical effects of money, or of markets regulated by money, as registered in their corrosive effects on social bonds. Before, the exchange of goods was inseparable from concrete relations of particular members of statuses in actual communities, and the values and moralities that bind them. Afterwards is the market, anonymity and the reduction of incommensurable qualities to measures of quantity."[8]

This strand of critique also animates binary q, informing some of its affective and normative resonances. Moreover, on account of the causal schema that this line of analysis projects, and upon which it sometimes seems to confer a status akin to a law of history, binary q can also be linked to temporal and historical registers, and thereby be inflected with still more associations and resonances.

6. Crosby, *ibid*., p. 13.
7. Porter, T. M. (1996). *Trust in numbers: The pursuit of objectivity in science and public life*. Princeton: Princeton University Press.
8. Keane, W. (2008). Market, materiality and moral metalanguage. *Anthropological Theory*, 8(1), 27-42, p. 28.

The fact that binary q is so heavily freighted with affective, normative, and causal associations makes it tempting to think of the tension between quantitative and qualitative methodologies in terms of different *moral economies* in the sense intended by historian of science Lorraine Daston. By moral economy Daston means "a web of affect-saturated values that stand and function in well-defined relationship to one another", where "'moral' "carries its full complement of eighteenth and nineteenth century resonances: it refers at once to the psychological and to the normative".[9]

So how is binary q – especially as implicated in and inflected by these richly elaborated cognitive, affective, causal and temporal schema – at play in debates about the status of RCTs as a form evidence? And what do such debates tell us about how binary q works in actual contexts of use?

As a starting point, challenges to RCTs sometimes turn on the abstracting operations upon which quantification is based, and these challenges often project a moralised sense that such abstraction violates the irreducible singularity of the individual case. In the same way that Aristotle identified the stripping down required for measurement, RCTs screen out the singularity of the individual patient in order to derive a robust statistical result. One controversial alternative to the RCT is the charismatically named "Real World Evidence", which admits greater scope for evidence based on the lived experience of patients and their carers in assessing the value and efficacy of medicines. RWE is being promoted in some quarters in tandem with what are known as "Adaptive Pathways" (APs), envisioned as more flexible and iterative trajectories for the development, approval, and use of pharmaceutical products. In addition to qualifying the authority of quantification as enshrined in the RCT, RWE and APs revalorise the power of the qualitative. In doing so they also potentially index the work involved in "making things the same" required for the purposes of measurement, and expose them to active questioning and contestation.

9. Daston, L. (1995). *The moral economy of science*. Osiris, 10, 2-24, p. 4.

Moving forward in my research with "Limits of the Numerical", I plan to empirically investigate this dynamic field through the lens of recent work in anthropology that problematises various modalities of "same-making", including commensuration and translation.[10] This work underscores the fact that "sameness" (or "the adequation of objects taken in the first instance as distinct in nature"[11]) is an achievement requiring serious investments of cultural and semiotic labour, and that such achievements are contingent, open to challenge, and always vulnerable to failure. Following from this, we might ask how and why the operations of abstraction and same-making that underwrite the RCT might be losing some of their authority and aura of taken-for-grantedness at this particular moment. Going a step further, what might such shifts augur for the way we think of evidence more generally, and the ways in which public knowledge is produced? How might changes in the temporal frameworks in which evidence is "made to count" (as is proposed with APs) alter – and possibly compromise – established structures of accountability in the regulation and use of pharmaceutical products?

In short, while some might wish to move beyond binaries in general (and binary q in particular) on the grounds that they obfuscate "reality" by artificially parsing it, we shouldn't lose sight of the ways in which that parsing actively figures into how "reality is done".[12]

10. Gal, S. (2015). Politics of translation. *Annual Review of Anthropology*, 44, 225-240; Hankins, J., & Yeh, R. (2016). To bind and to bound: Commensuration across boundaries. *Anthropological Quarterly*, 89(1): 5-30.
11. Hankins and Yeh, *op. cit.*, p. 7.
12. Mol, A. (1999). Ontological politics. A word and some questions. *The Sociological Review*, 47(S1), 74-89.

ISRF Workshop: Today's Future

21-22 June 2017 - Het Scheepvaartmuseum, Amsterdam

Today's Future: Challenges and Opportunities Across the Social Sciences

To our historic peers, the Future was a progressive place, a period to which everyone looked forward in anticipation of, for example, better medicine, improved social and economic prosperity, enhanced human rights – a fairer, more predictable world. But the Future does not look so bright from the first part of the twenty-first century. Trapped between narratives of the past in which Western hegemonies triumph and experiences of upheaval caused by heightened political instability, a global refugee crisis, increased poverty, war and extinction – Today's Future collapses back upon us, threatening to be worse. So what is social science doing to prepare?

Social science is often considered to be too slow, too unwieldy and not robust enough to compete with 'hard' sciences, maths and economics. But the fact that social science is many things is precisely what makes it so adaptable, flexible and creative. Through cross-disciplinary critique - anthropology, psychology, sociology, political science, geography, archaeology - social science helps us to understand contemporary issues from the perspective of multiple temporalities. How does globalisation look from the hyper-temporality of climate change? How successful has the project of decolonisation been when we see imperialism re-emerging in Russia, China and the Middle East? What is there to celebrate about neo-liberal capitalism from the perspective of those who must compete for basic resources such as food, water and clean air? What are we doing to tackle issues associated with unrest and over-crowding in our towns and cities? Through better understanding the ways in which people find meaning and value in the world, social

science perspectives improve our chances of surviving the coming storms to live peacefully and sustainably on the small planet that we all call home.

At this, the fifth, annual ISRF workshop our theme asks: what are the practical ways in which the work we variously do as social scientists may be considered to take on the major challenges facing us in the twenty-first century? We invite participants to present their work whilst considering the ways in which it functions as a catalyst for or advocate of change. How does social science expose the fissures of power relations manifest in the world today? How do we assess different paradigms of value when there is increased competition for resources? How can we better apply the work we do to hold governments, politicians, corporations and other powerful elite, to account? What can we look forward to? How may Today's Future be characterised?

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The 2018 ISRF Essay Competition
Economic Thought

The Independent Social Research Foundation (ISRF) and the Cambridge Journal of Economics (CJE) intend to award a prize of €7,000 for the best essay on the topic *'What is the place of Digital Information Technology in the Economy?'* This is a topic, not a title. Accordingly, authors are free to choose an essay title within this field.

The impact of digital information technologies throughout society, and in particular the economy, is one of the most critical issues of our time. They are rapidly transforming practices of capitalist production and provision of services everywhere. But the impact is uneven and uncertain. Jobs are being lost while profits for many are increasing. And while technology advances rapidly, with anticipated exponential changes in areas like artificial intelligence and robotics especially, existing organisations are often able to adjust only slowly, whilst the acquisition of relevant skills can take time. What are the dominant trends? What really is going on? Some say that ongoing developments herald a workless society. Others maintain that they undermine markets and herald the end of capitalism. Are these mere speculations? What can we discern from informed investigation and analysis? Essays are welcome that address these or a related theme.

The winning essay, and any close runners-up, will be accepted for publication in the Journal; authors may be asked to make some corrections before publication. Other applicants may receive encouragement to revise and then re-submit their essays to the CJE.

Submission Deadline: 28th February 2018

More Information: http://www.isrf.org/2018EssayPrize

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