1. Introduction
Originally developed in the social sciences, qualitative research approaches are now gaining in prominence in the field of medicine. This has led to a range of medical scholarly literature, presenting qualitative research as a special kind of “in depth” human research which seeks a “deeper truth” by using interviews and observation. Moreover, in this literature qualitative research is also understood as opposing what is known as quantitative research; a distinction often directly drawn from the work of prominent education scholar, Yorba Lincoln 13,14.

Using philosophical analysis, 15 I assess the credibility of this distinction, along with claims concerning the appraisal of qualitative research and its apparent exploratory nature. I draw on Lincoln’s work with Norman Denzin, which provides the clearest account of what I call the qualitative-quantitative divide. 16

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2. Lincoln and Denzin’s Account
With the term qualitative research, Denzin and Lincoln aim to capture the work of observational ethnographers like Margaret Mead, 1 and sociological texts like howard becker et al’s “in the field” which described the experience of US students training to be doctors in the late 1950s. 18

With the term quantitative research, Denzin and Lincoln aim to capture study designs like randomised control trials (RCTs) 19,20, and complex statistical techniques. 21

To account for this, Denzin and Lincoln advance an epistemic criteria, outlined in Table 1, to establish a principled distinction between qualitative and quantitative research. 22 Such an account provides an epistemic distinction because it Table 1: Denzin and Lincoln’s criteria for distinguishing qualitative and quantitative research.

3. A Possible Methodological Distinction
Since Denzin and Lincoln state that “qualitative methods [do not] have a distinct set of methods,” they would not accept a distinction on methodological grounds. Nevertheless, such a position is not shared by some health researchers. 24 For such a strategy, all methodological techniques would need to be categorised as either being qualitative or quantitative. However, due to the vast range of scientific methods, we must also give some rationale for categorising particular methods to justify why we have grouped the methods in the way we have. We must provide a criteria. Not only does this return us to our original problem, but given the diverse variety of methods across the sciences, producing such a criteria would be challenging if not impossible.

4. The Cultural Distinction
However, this does not mean these terms are empty, or meaningless. In addition to philosophical investigation, the qualitative-quantitative divide may also be explored from a historical or social perspective. This point is countered by the fact that RCTs can produce large datasets (e.g. if they involve a large participant cohort) or diverse datasets (e.g. if they collect data on many different points of interest such as intervention outcomes, participant information, delivery, implementation, and economic factors).

Table 2: Clarification of Denzin and Lincoln’s criteria, and a detailed account of the problems it faces using counterexamples.

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Summary
Much critical attention has been paid to the use of qualitative research in the medical sciences, with proponents advancing discussions of what it is and how it may be appraised, and critics arguing that it is of exploratory use only. Using philosophical analysis, I argue that such discussions are flawed insofar as they endorse the idea that qualitative and quantitative research are epistemically distinct categories involving different types of knowledge. Rather, I claim that such approaches are actually culturally distinct involving different intellectual histories. Thus highlighting that qualitative research may not necessarily be exploratory, and that the qualitative-quantitative divide could be closed through the development of innovative social strategies. This makes possible not only shared standard setting practices, but also novel techniques which could optimise medical research to improve health care and save lives.

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Personal Profile
I am a philosopher of science and medicine, and course leader in Introductory Topics in the Philosophy of Medicine for the Brighton and Sussex Medical School (England).

My current work focuses on:
• Social dimensions of scientific knowledge
• Evaluative standards of evidence
• Non-epistemic values in disease, health and methodology
• Tacit knowledge and reasoning bias in medical decision-making

I am looking to build collaborations between Brighton and Sussex Medical School and the wider metascience community, come talk to me during the conference or email me to arrange a Skype.

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A Philosophical Analysis of Research in the Medical Sciences: The Qualitative-Quantitative Divide is Cultural rather than Epistemic

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References


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