REJOINDER

Divining, testing, and the problem of accountability

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With the rise of "evidence-based policy," practices of experimenting, testing, and measuring have broken free from the laboratory. Ubiquitous testing has entered our everyday lives and homes: our bodies are regularly medically tested; air, water, and food quality are continually tested for pollutants; toys are tested for chemicals; schools and teacher performance are tested; and even banks are tested in scenario simulations. Tests have the power to make the familiar strange, and the strange familiar: they give names to a vague sense of sickness in our body or render normal-tasting water toxic. Tests also introduce a temporal dimension to knowledge about our world. As most tests need to be performed at regular intervals, they highlight the temporality of their findings: tests track the flourishing of microbial organisms, the decay of materials, the shifting relations between algorithm and reality. Testing has become a critical practice to know unknowns, identify risks, and orient actions at a time when often interpretations of the evidence base rather than the political imaginary of a better world generate legitimacy for policy decisions. Sometimes, however, experimenting, testing, and measuring produce disorienting results that do nothing to resolve a situation.

Inspired by Susan Whyte and colleagues' article "Technologies of inquiry: HIV tests and divination," we want to provoke thinking about testing, divining, and forecasting in this meditation. As a form of knowledge production, biomedical tests, like HIV tests, translate uncertainty to a few options. As such, they can indeed be seen as devices to make the world more predictable (cf. Calkins 2016). However, testing also does work that is usually backgrounded: as a technique of knowing, it limits itself to comparing a current situation to a standard that was established in advance. This standard unavoidably implies a particular ontology. However, in order to be universally acceptable, the standard needs to hide its particular ontological assumption, that is, it has to deontologize its operation. We call such a standard a metacode (Rottenburg [2002] 2009, 2014). Tests are designed to allow a systematic reading of data to indicate whether something is below or above the standard to trigger an appropriate intervention. This implies that everything unrelated to the standard is not captured. The result is that many tests only notice those findings that reaffirm their ontological assumptions and seal themselves off from potential corrections, possibly leading to epistemic lock-in.

Divination is a mode of knowing that usually only few experts command. A diviner's privileged insight into the misfortune of a particular client is based on a

unique access to a supernatural source of hidden knowledge, usually a spirit, and the ability to mediate between the client and spirit. While divination derives its authority from this secretive, singular, and inscrutable access to a spirit source, scientific knowledge—at least in principle—should be open to public scrutiny of its methodology and be replicable. Divination does not lend itself to falsification, but that does not make it immune to correction by clients who question it and might consult different diviners. Divination is predicated on the ontological commitment that higher entities exist and that diviners have extraordinary capacities to communicate with those knowing entities. Unlike scientific testing, divinatory knowledge is open to surprising insights as long as they cohere with its own ontological assumptions.

The article by Whyte and colleagues that we have the pleasure to comment on compares how people deal with prognoses received through biomedical testing for HIV and divination in Uganda. By treating biomedical testing and divination symmetrically, the authors challenge the conviction that the two technologies of inquiry are radically different operations. Both types of forecasting are similar and depend on particular ontological commitments; both allow no doubts that they are rooted in reality. Still the authors establish an important difference between these two types of forecasting: whereas the outcome of divination depends on co-opting the inquirer to speak and respond to questions about possible causes of affliction, the outcomes of biomedical blood tests do not depend on patients truthfully providing information about their sexual past. The article agnostically credits neither HIV testing nor divination in advance with the ability to make correct prognoses. In phenomenological tradition it focuses on patients' and clients' everyday lifeworlds and ways of assessing futures. Just as people do not necessarily accept the verdicts produced by diviners, they may not always accept their biomedically determined HIV status but may continue to inquire; searching out other testing centers, repeating tests, doubting and refuting them. Whyte and colleagues argue that reading both forms of forecasting alongside each other enables the insight that in both contexts knowledge has to be made meaningful for people's lives. Only by embedding whatever verdicts these two different technologies of inquiry produce in everyday lives, by reading them against experiences and plans of action, can they matter. Both can become true only in hindsight but by different means: the biomedical test is verified by further tests, whereas divination is veri-

fied by further divinations. Yet there is an important difference.

Reading biomedical testing and divination together, as these authors have convincingly done, reminds us that science, while often powerful in its truth claims, is still inevitably intertwined with the cultural settings in which it operates. With good reason, for decades now, ethnographers have thus taken the institutional contexts of medicine and science as seriously as in the study of witchcraft and divination. While we agree with symmetrically treating divination and HIV testing, the bracketed ontological question still haunts us: How to deal with the difference in ontological commitments between a diviner affirming a spirit as cause of affliction and a biomedical device affirming the existence of the HIV in a patient's blood? And how to deal with it in the face of the overwhelmingly reliable prognostic power of the latter? In order to approach this question, we argue that it is necessary to take the difference between the implied ontological commitments seriously. Our meditation thus seeks to supplement and extend our colleagues' article by reflecting on the particular ontological politics (Mol 1999) of scientific testing vis-à-vis divination.

Testing presupposes a stock of knowledge that was often acquired through open-ended experimenting. However, unlike scientific experimentation, testing does not aim to produce new knowledge but is rather a form of probing and validating what is already known or suspected. Yet everyday language does not distinguish clearly between them. The *Oxford Dictionary* defines "trial, experiment, pilot-study, try-out" as synonyms for "test." Scholars have long doubted the possibility of telling testing and experimenting clearly apart and stressed the need for a more encompassing "sociology of testing" (Pinch 1993) that explores what testing assembles beyond the laboratory experiment, in topics as diverse as nuclear testing, field trials, road safety, toxic exposures, or disaster rehearsals.

Philosophy and the history and social studies of science gradually stabilized the idea that scientifically objective statements are situated in theoretical and methodological assumptions. These assumptions are ultimately underdetermined by the reality they are meant to capture. Facts are facts only in the light of the procedures that generated them. This irresolvable underdetermination is often glossed over when evidence is produced with a specific goal in mind. This glossing over situates the practice of science and its apparatuses of evidence making outside of socioeconomic and cultural inflec-

tions, as well as politics. While finding ways to distinguish between true and false claims has been and remains an important human endeavor, the "possibilities for truth, and hence of what can be found out, and of methods of verification, are themselves molded in time" (Hacking 2002: 4). The crux of this are the ontological commitments that unavoidably shape the design of the test and what the test takes to be un/thinkable. This does not necessarily invalidate the practice of science, but it does mean that results should be taken as only situationally valid and as preliminary, unable to dispel residual uncertainty since other ontological commitments could be made. It also means that experimenting and testing, with their implicit, yet hidden, ontological commitments, have no inbuilt mechanism to be receptive to other ontological assumptions or to test those on which they are grounded. Hence, the caution that testing might end in a self-affirming epistemic loop.

Given that forecasting—whether divination or biomedical testing—speculates on a certain outcome and is a particular method of verification that changes over time and space, its backgrounded ontological politics deserve much scrutiny. It is here that Whyte and colleagues insert themselves into the debate. They draw out the residual uncertainties and doubts that neither of the two forecasting practices is able to fully dispel if isolated from situated ways of making sense of lived realities and of devising ways forward. Formal testing procedures have become critical in producing knowledge and in justifying a broad array of melioristic interventions. This is related to an encompassing search for regularities and accountabilities in the sway of evidence-based policy.

In recent years, the double-blinded randomized controlled trial (RCT) has become the gold standard for producing evidence not only for biomedicine and epidemiology but also for several other fields of practice like social policy, development economics, or education (Timmermans and Berg 2003; Will 2007). The enormous popularity of the RCT was helped by the rise of global health programs. Those engendered a renewed emphasis on the pairing of therapeutic interventions and application-oriented research in the Global South, spreading evidence-making practices that claim universal validity across geographical and cultural settings (e.g., Lakoff 2010: 60; Adams et al. 2013). The current wave of testing that is carried out in so-called "resource-poor" settings can also be seen as part of a longer colonial trajectory of experimentation along the familiar division of centers and peripheries of knowledge production. Examining HIV/AIDS research in Uganda, Joanna Crane (2013) drew attention to the inequalities implicated in US global health institutions and laboratories setting the research agenda, providing funding, and analyzing and processing the Ugandan "raw data." The search for raw data and new "pristine" testing grounds in many cases also led to an offshoring of clinical and pharmaceutical trials to the Global South, where they had stark political effects in creating new forms of biological or therapeutic citizenship (Nguyen 2009; Petryna 2009; Rottenburg 2009).

Against this background, Whyte and colleagues' article brilliantly examines the moments of doubt, suspicion, and refusal when both kinds of forecasts fail to become aligned with lived experience. We are fully with Whyte and colleagues on this, and others have made a similar point (e.g., Beisel et al. 2016; Umlauf and Park 2017). But, we contend, there is a crucial caveat. Tests and divination, like most practices, background ontological assumptions. Divination is based on a shared commitment to the diviners' extraordinary capacities and the existence of knowing entities. Divinatory knowledge is open to surprising insights that cohere with its own ontological assumptions. Biomedical testing is geared toward falsification; results are only valid provisionally and are continually systematically corrected. Yet a HIV test offers a powerful prognosis—even if the translation of this prognostic capacity into the lifeworlds of patients in Uganda and countries with comparable health care systems is problematic (Park 2015). Moreover, biomedicine with universal claims is part of an apparatus that is held responsible and accountable by state and international institutions according to rigid metacodes. While this control mechanism and its procedures of evidence making cannot escape the problem of underdetermination, its own claim of universality—though ultimately unjustified—subjects itself to different correctives than those related to divination.

Giving these differences between the making of prognosis by divination and by biomedical testing more weight than Whyte and her coauthors did does not diminish their findings. They focus on people and their everyday sense making, how all forms of evidence have to be made meaningful in the context of lived experience in order to matter. Whyte and colleagues' findings do not hinge on seeing differences between biomedical testing and divination. Yet shifting the focus to those differences, as we have done in this short intervention,

problematizes something else. If both divinatory and scientific knowledge might ultimately get stuck in self-affirmation, and if both forms of knowledge not only are not mutually exclusive but even stabilize each other, then the question remains: Can they perhaps together avoid becoming locked in? With this question, we want to encourage anthropologists and others to unlearn the instinct to suspect that the way out must be somewhere underneath or sometime before the ruinations of modernity. A way out might be found right amidst these ruinations in broad daylight.

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