Maienschein et al.'s provocative essay tends to an often overlooked area within the ethics of medical research - the ethics of the epistemic. They discuss the potentially distorting epistemic shift that accompanies translational demands. Put succinctly, their concern is "that the widespread push to translation[al research] distorts science, sometimes in indeterminate ways, and also distorts bioethical discussion." (Maienschein et al. 3)

Evaluation of their concern is complicated by the authors’ undefined conceptions of translational research, science, and bioethical discussion. Although narrow and limited conceptions of each may support their concern, this would only indicate that a push to translational research directs science in ways that are at odds with specific conceptions of progress in both science and bioethics. By analyzing four background issues evident in their concern, this commentary with show how more precise conceptions of translational research as well as broader and more diverse conceptions of science and bioethical discussion are needed to gain perspective on the potential impact of translational research.
Four background issues: 1. There is a “push” to translational research that arises from elsewhere. Scientists and clinical researchers are not demanding to do translational research, but being required to do it by some other group. 2. A settled and robust definition of “science” and its goals is needed. Only armed with a settled conception of science could a charge of distortion be established. 3. According to Maienschein et al., translational research’s distorting effect on science arises in indeterminate ways. This makes identifying and addressing these effects difficult, if not impossible. 4. Some settled standards for appropriate “bioethical discussion” are also needed. Once again, only given a settled conception of bioethical discussion could a charge of distortion be established.

1. On The “Push”

The push to translational research comes from groups funding medical research, specifically from the NIH as well as the National Academies of Science, medical advocacy groups, and private foundations. As a public institution, the NIH may be a special case, but the other groups, as private institutions, are free to fund the research they desire. Even if they demand “results sooner rather than later and more specifically targeted for particular ends rather than for the general good,” (1) that is entirely up to them. The authors perhaps view their arguments as an attempt to convince these groups that this push is misguided. Such arguments, presumably, would also convince those governing the NIH that the magnitude of their push to translational research is misguided.

And yet, Maienschein et al. provide only hints about the negative effects of translational research. For example, they state that “only slowly has the research
community begun to see possible distortions in the integrity of the scientific process that this translational ethos brings with it.” (13) Later on, when discussing stem cells, they state, “some basic biologists fear that the pressures to ask particular kinds of questions . . . are undercutting their abilities to study other kinds of fundamental development processes.” (21) And yet, throughout, there is no clear articulation of the negative effects. Worries that translational demands will distort science without supporting evidence make it hard to imagine funding agencies abandoning their demands for results. On the contrary, it may well be that what translational demands inject into the research endeavor is not some pernicious influence, but an important guiding principle.

2. On The Science

A meaningful evaluation of the charge that translational research distorts science requires a settled conception of science. There is little doubt that translational demands affect the way scientific inquiries are organized, but lacking a standing conception of how they should be organized, these effects are as likely to be clarifying as they are to be distorting. For example, the philosopher of science’s ideal “disinterested scientific inquiry” may be incompatible with the specific interests associated with translational research. But the notion that good scientists have no interest in which research questions are asked and which outcomes are achieved has always been a fiction. Indeed, a mandate to bring useful technologies to patient care may be a far better clarifying force than traditional social forces that have less explicitly distorted scientists’ research interests over the past several decades.
Maienschein et al do not articulate nor defend any single conception of science, and this is neither surprising nor blameworthy. It is a long way from the bench to the bedside and discussions of various conceptions of science abound in the article. Common among these conceptions is (1) a belief that science, at its best, serves the general good (a position Maienschein et al explicitly endorse) and (2) a delineation between pure or basic and applied aspects of scientific work. Regarding the former, Maienschein et al list many reasons to worry that translational demands will undermine science's ability to serve the general good, but it is never clear how this will occur. Even in the area of stem cell research, which they spend significant time analyzing, their discussion is limited to worries. Regarding the latter, recognizing a distinction between these two areas of science implies that a claim that "translational demands distort science" is too strong. What evidence suggests that translational demands will affect distinct areas in the same way?

3. On the distorting effects of translational research on science

Though we share many of the concerns Maienschein et al express regarding potential effects of translational demands, the lack of examples of these negative effects is troubling. Understandably, one need not cite examples of the end of the world to hold appropriate concerns regarding the unchecked proliferation of nuclear arms. Nevertheless, Maienschein et al do not even describe what future problems are expected. In claiming that the distortion of science will occur in "indeterminate ways," they appear to be challenging the whole of a shifting paradigm for medical research because of generalized worries about what might happen. There is always the possibility that harms
will arise from unexpected sources and there is always a need to be cautious, but these prudential considerations do not support the claim that science is being distorted.

One reason that distortion may seem to arise from elusive sources is, again, the lumping together all of science and, subsequently, all translational demands. Instead, the contours of difference between basic and applied science should produce similar contours of difference between the translational demands for each. Specifically, the translational demands for bench science should be different from the translational demands for clinical research. Perhaps it would be helpful to think of the science of medical research in two broad categories: from bench to clinical trial and from clinical trial to bedside. Even these two categories are likely too broad, but they serve to illustrate that what may be distorting in one area may not be in another. For example, when translating a clinical trial into general practice, concerns about the complexity of a treatment regimen are significant. Yet, this same concern is marginal for translating bench science into a clinical trial.

4. On the distorting effects of translational research on bioethical discussion

Finally, Maienschein et al's claim that translational demands on research distort the bioethical discussion is fundamentally flawed. To summarize briefly, they discuss an intervention meant to resolve some of the moral controversy surrounding stem cell research. This intervention alters the human egg before conception so that it will not develop beyond the blastocyst stage. Worrying that this will be taken to define the beginning of life through technological intervention, Maienschein et al argue that this distorts the bioethical discussion. There are two problems with their concern.
First, this intervention was not motivated by demands for translational research. Rather it appears to have been in response to concerns over human subject protections. In any case, translational and non-translational researchers alike have been searching for a means to sidestep the controversial aspects of obtaining embryonic stem cells. So Maienschein et al.’s example was of an intervention neither motivated by, nor intended solely for the purpose of, translational research

Second, even if this intervention had been motivated by translational demands, it changes rather than distorts the bioethical discussion. With this technological change, new questions arise. For example, is it ethically appropriate to alter reproductive materials with the intention of disabling the future embryo? ”Distortion” implies a negative alteration, but it remains unclear why the new and different moral questions raised by a translational push should be viewed pejoratively.

Conclusion

Although we share with Maienschein et al prudential concerns about translational research, they fail to make the case that translational demands on research have negative effects. Practically, their argument will not stem the tide of funding agency demands for translational research. Conceptually, their case depends on an undefined account of science, which, in turn, contributes to the difficulty in determining the nature of any potential distortions. Additionally, the concerns they raise about bioethical discussion are mistakenly placed on the shoulders of translational research. Finally, Maienshein et al have not even made the case that translational research will not make a positive impact on science and bioethics.