Joint Reply

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We have the good fortune to have had the opportunity to sit down and talk about the issues involved surrounding human-embryonic stem-cell research. We wish this could happen more often in our often divided and divisive world today. In fact, we largely agree on what is at issue and even on what ought to be done.

Yes, research on human-embryonic stem-cell research should be allowed. This does not mean that the research will lead to therapies, nor that we should rush to develop therapies or should put our emphasis on doing so. And, simply because no widespread therapy has yet to be developed, it does not mean that embryonic stem-cell research is fruitless and should be abandoned. Rather, there are overriding reasons to allow research and to discover what we can learn. Ideally, this research will lead us to discover alternative therapies so that we do not need human embryos for medical reasons. And it is important that any research to be done should be done in a well-thought-out regulatory context, with careful attention to the safety of all involved, and reflectively respecting the range of divergent views about embryos insofar as that is possible.

Moreover, we should remind ourselves that research on embryonic and fetal tissue is far from being a new phenomenon. The research needed to perfect IVF technology, which is responsible for providing thousands of babies to infertile couples, involved embryonic experimentation. Indeed, many of the common vaccines that we routinely use today, e.g., chicken pox, hepatitis A, polio, rabies, and rubella vaccines, were all cultured on tissue from aborted fetuses. We have all benefited from research on embryonic and fetal tissue, and, unless we are willing to eschew these vaccines, it seems inconsistent as best, hypocritical at worst, to deny those afflicted with spinal-cord injuries, Parkinson’s disease, Alzheimer’s disease, and diabetes a chance to be cured of their ailments, as we have been largely cured of those above-mentioned.

Given what we know now, and for the foreseeable future, research can be carried out with available “extra” embryos that are now being discarded. While there are arguments that such extra embryos ought not to be produced, it is a fact that they exist and that they are being discarded. Carrying out useful research on these extras seems defensible, given all the circumstances. The onus is on those who oppose their use to argue how incinerating embryos or flushing them down a drain does a better service to humanity than allowing the deaths of these embryos to contribute positively to the world.

Moreover, as long as society condones the use of certain fertility treatments, and, indeed, federally funds it to a limited extent through insurance coverage, there is no consistent basis for not endorsing embryonic stem-cell research as well; if embryo destruction is deemed acceptable for producing infants for the
infertile, it should be deemed acceptable for producing therapy for the sick. One concern that some critics have is that the process will not stop there, however. From research with the otherwise-discarded extras, we will be tempted to continue to develop therapies that will require more and more embryos. We may even be tempted to generate embryos solely for research purposes, so the complaint goes.

Yet this is not obvious, and in fact it is very likely, given the history of biology, that the lessons learned from effective research will lead to therapies that are not what we predict now and that rely on new approaches. Indeed, there is already accumulating evidence that the knowledge researchers are gaining about development from study of human-embryonic stem cells is yielding the knowledge to develop alternatives. Induced pluripotent stem cells are one example, and so are other reprogramming strategies with so-called adult stem cells.

There are very likely many ways that will emerge that do not rely on either embryonic or fetal stem cells for therapeutic use. But we will not and cannot know that unless we carry out the research now. We have to learn what development can do and how it does work before we can develop the same capacities in other ways. And we can do this research in a respectful and responsible way, as by developing regulations and standards for embryo handling and prohibiting production of embryos solely for research purposes. That is what we need: thoughtful, reflective, balanced science in the context of informed understanding of social contexts.