

*Preface*

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## Cloning Then and Now

In May 2013, American scientists announced a long-awaited development: that they had produced stem cells from cloned human embryos. Using a technique called nuclear transfer—the same technique employed by Scottish researchers over a decade earlier to create the cloned sheep Dolly—Shoukhrat Mitalipov and his team at Oregon Health & Science University removed the nuclei from human egg cells and inserted nuclei taken from skin cells; the resulting cloned embryos were then destroyed to produce stem cells. The researchers’ paper, published online in the science journal *Cell*,<sup>1</sup> became one of the most talked-about items in the scientific community in 2013.<sup>2</sup> It was labeled “a holy grail” by University of Pennsylvania researcher John Gearhart.<sup>3</sup> “This is a huge scientific advance,” said Harvard scientist Dr. George Daley, “but it’s going to, I think, raise the specter of controversy again.”<sup>4</sup>

Mitalipov also expected as much, noting in a press release that “nuclear transfer breakthroughs often lead to a public discussion about the ethics of human cloning.”<sup>5</sup> A reporter for *Nature* opined that Mitalipov’s announcement “is sure to rekindle” the debate about cloning.<sup>6</sup> Declared the author Wesley J. Smith on *National Review Online*: “The great cloning debate is about to begin.”<sup>7</sup>

And yet no such debate has materialized. While news of the Oregon cloning breakthrough was widely reported, very few publications offered editorials or op-eds discussing its implications; radio, television, and Internet outlets produced nearly no in-depth analyses or panel discussions; and policymakers stayed almost entirely silent.<sup>8</sup>

Contrast this muted response to the public reaction following researcher Ian Wilmut’s 1997 announcement that he and his colleagues had used nuclear transfer to create Dolly, the first cloned mammal. World leaders condemned the research. The U.S. Congress held a series of hearings on the ethics of cloning, a federal bioethics commission was charged with making “every effort to consult with ethicists, theologians, scientists, physicians, and other citizens” to address the ethical and legal implications of the Dolly breakthrough,<sup>9</sup> and President Bill Clinton signed an executive order forbidding the use of federal funds for cloning research.<sup>10</sup> The media coverage was intense, with hundreds of op-eds, radio discussions,

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and television debates, not to mention a flood of books and academic articles.<sup>11</sup> A handful of biotech boosters made the case for cloning, like molecular biologist Lee Silver, who argued that cloning would allow genetic engineering to become a reality.<sup>12</sup> On the other side were arrayed critics, like Pope John Paul II, who in 2001 condemned cloning as “irresponsible” and “unworthy of man.”<sup>13</sup> The United Nations General Assembly in 2005 adopted a declaration calling on its member nations to “prohibit all forms of human cloning inasmuch as they are incompatible with human dignity and the protection of human life.”<sup>14</sup>

Today, these passionate and proactive debates regarding both the extraordinary hopes for and the deep moral anxieties about human cloning have all but disappeared from the public discourse—a failing this report is intended to help rectify. As human cloning has arrived on our doorstep, we need now more than ever to discuss the ethical problems it raises and to develop a plausible political and legal approach to address those problems.