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In Vitro Revelation

By ROBIN MARANTZ HENIG

YESTERDAY, the Nobel Prize in Physiology or Medicine was awarded to a man who was reviled, in his time, as doing work that was considered the greatest threat to humanity since the atomic bomb. Sweet vindication it must be for Robert Edwards, [the British biologist who developed the in vitro fertilization procedure](#) that led to the birth of Louise Brown, the first so-called test-tube baby.

It's hard to believe today, now that I.V.F. has become mainstream, that when Ms. Brown's imminent birth was announced in 1978, even serious scientists suspected she might be born with monstrous birth defects. How, some wondered, could it be possible to mess around with eggs and sperm in a petri dish and not do some kind of serious chromosomal mischief?

And yet, in the 32 years since, our attitude toward Dr. Edwards's research has completely changed: I.V.F. is now used so often it is practically routine.

The history of in vitro fertilization demonstrates not only how easily the public will accept new technology once it's demonstrated to be safe, but also that the nightmares predicted during its development almost never come true. This is a lesson to keep in mind as we debate whether to pursue other promising yet controversial medical advances, from genetic engineering to human cloning.

Dr. Edwards and his collaborator, the gynecologist Patrick Steptoe, who died in 1988, became notorious after they announced that they had fertilized a human egg outside the mother's womb. In England, reporters camped out on the lawn of the prospective parents, Lesley and John Brown, for weeks before the baby's due date.

When Mrs. Brown checked into Oldham General Hospital, outside Manchester, to give birth, she did so under an assumed name. Still, reporters sneaked past security dressed as plumbers and priests in hopes of getting a glimpse of her.

Meanwhile, criticism of the pregnancy grew increasingly extreme. Religious groups denounced the two scientists as madmen who were trying to play God. Medical ethicists declared that in vitro fertilization was the first step on a slippery slope toward aberrations like artificial wombs and baby farms.

Fortunately, Louise Brown was not born a monster, but rather a healthy, 5-pound, 12-ounce blond baby girl. She had no birth defects at all, and suddenly her existence seemed to demonstrate only that there was nothing to fear about I.V.F. The birth of the "baby of the century" paved the way for a happy ending for millions of infertile couples — nearly four million babies worldwide have been conceived with the procedure.

True, I.V.F. has not been without consequences. It immediately raised new questions: Would single women or gay couples use the technology? Would it be all right for couples to create and save excess embryos to be used in later attempts if the first try failed?

It has also opened the door to new controversial concepts: "designer babies," carrying certain selected genes; pre-implantation genetic diagnosis, which allows the possibility of choosing the baby's sex; and human cloning.

Even today, not everyone is comfortable with in vitro fertilization. In a [2005 survey](#), 13 percent of British adults, and a surprising 22 percent of those under 24, said the risks involved in such fertility treatments might outweigh the benefits.

Yet with I.V.F. the public has shown how it can debate the usefulness of a new medical technology, reject its abuse and in some cases embrace its benefits. We approve when a woman in her 30s who otherwise couldn't conceive does so through in vitro fertilization, for example, but we cry foul when a 60-year-old tries to do the same.

As Dr. Edwards himself noted in the early 1970s, just because a technology can be abused doesn't mean it will be. Electricity is a good thing, he said, regardless of its leading to the invention of the electric chair.

Science fiction is filled with dystopian stories in which the public blindly accepts destructive technologies. But in vitro fertilization offers a more optimistic model. As we continue to develop new ways of improving upon nature, the slope may be slippery, but that's no reason to avoid taking the first step.

Robin Marantz Henig is the author of "Pandora's Baby: How the First Test Tube Babies Sparked the Reproductive Revolution."