Chapter 2

A short detour is required before we return to Slack. First, we must examine a National Public Radio interview, released on January 6, 1998, of Dr. G. Richard Seed, who wanted to make public his wish to clone a human within 90 days of his announcement:

RICHARD SEED, PHYSICIST AND PROSPECTIVE FOUNDER OF HUMAN CLONE CLINIC: It is our objective, it is my objective, to set up a human clone clinic in greater Chicago here; make it a profitable fertility clinic. And when it is profitable, to duplicate it in 10 or 20 other locations around the country and maybe five or six international. (Palca, 1)

According to an article from The Scientist, it "sounded like a pitch for sugar daddy funding" (Palevitz, 1). But who exactly is Richard Seed? The article "So who exactly is Richard Seed?" endeavored to answer that question.

At first sight, Richard Seed seems a serious contender in the race to produce the first human clone. He trained as a physicist, but turned to reproductive technology 20 years ago when he founded a company to transfer embryos from prize cows to surrogate mothers. Then, in the 1980s, he launched a company called Fertility and Genetics to apply the technique to people, using it to move fertilised eggs from healthy women, inseminated several days before, to those with fertility problems.

That effort resulted in publications in The Lancet and The Journal of the American Medical Association, with one 1984 JAMA paper (vol 251, p 889) reporting the birth of a
healthy child. At the time, this embryo transfer was a competing technology to IVF [*in vitro* fertilization], but it never caught on. ("So who," 1)

To elaborate, a January 13, 1998 *Chicago Tribune* article states:

A 1984 article in the Wall Street Journal began like this:

"As many as three million American women are having trouble getting pregnant, and the Seed brothers want to help.

"Richard Seed, a nuclear physicist turned biomedical engineer, has developed a technique for transferring fertilised embryos from one woman to another.

His brother, Randolph, a surgeon, did the early clinical research on the method. Their work resulted last month in the first successful embryo transfer." (Kendall, 2)

A January 14, 1998 Associated Press story also informs us that Seed has three Harvard degrees, a fact that ends up circulating in newspapers such as the *Washington Post* for months (S. Cohen, 2). But as it turns out, those degrees are a Bachelor's, Master's, and Ph.D. in physics (Kendall, 2). It also turns out that he has no medical license. And Seed's ability to clone a human successfully was at best doubtful, as the *New Scientist* explained.

"Seed has enough credentials to make you listen," says Lori Andrews, an expert on the legal issues surrounding reproduction at Chicago-Kent College of Law. "But so many people are far ahead of him."

In interviews last week, Seed did not acknowledge
that cloning a person would pose a far greater challenge than his previous work. This is in character, says Maria Bustillo of the South Florida Institute for Reproductive Medicine in Miami, a coauthor on some of his papers.

"He was always kind of eccentric with a lot of grandiose ideas, but I'm not worried. He's not capable of pulling this off." While Seed provided money for the research on which she collaborated, Bustillo notes, his scientific input was limited. ("So who," 1)

John Epogg, a developmental biologist at Jackson Laboratory in Maine, pointed out the problems with cloning humans when interviewed by NPR:

I would be very concerned about the health of the fetus and the health of the baby that would come from this, because there is really very, very little in terms of animal studies that would give you a secure sense that the -- that any baby that would be born would be without abnormalities. After all, there have just really been a couple of animals born by this technology, and that's really not enough to have statistically evaluated how normal they are. (Palca, 2)

The scientists whose research led to Dolly also expressed their concerns in the *New Scientist* article "Crossing the line":

...while commentators debated the moral implications of Seed's plan, the Roslin team stressed health and safety objections. Harry Griffin, the institute's assistant director, says that to make Dolly, 277 cloned cells were implanted
into temporary surrogate mothers to identify those that began to develop normally. Only 29 did, and these were then transferred to more than a dozen ewes. Dolly was the only one of these embryos that survived gestation or that didn't die shortly after birth from cardiovascular or other developmental abnormalities. "This is the sort of information that people like Richard Seed don't seem to read," Griffin says. (P. Cohen, "Crossing," 1)

Lord Robert Winston, a fertility expert who helped produce the first test-tube baby in 1978, summed it up in a Reuters wire service story by saying, "My first reaction is that here is somebody who is trying to make a quick buck off of self-advertising, because of course there is no way you could clone a human being safely at this point. I think the man is clearly unhinged and I don't think he is to be taken seriously" ("Storm," 1).

And after a while, Seed did not come to be taken seriously, as the article "Seed is a scientist with a fertile imagination" noted:

Despite his new, grandiose business plan (Motto: "Identical twins -- 30 years apart!"), it appears certain that Seed will never be able to claim a human clone as one of his products.

Doubts have been raised about whether he truly has a partnership with an undisclosed reproductive physician, an imperative for the venture.

And his most recent scientific work -- skin grafts on four mice -- was not only unsuccessful, but seems paltry in comparison with his past promise and accomplishment.
By the end of a remarkable week in the life of Richard Seed and the world’s evolving struggle with cloning, what some had feared was a real-life science fiction horror story was looking more like a sad comedy.

"He’s searching for a bit of fame and glory and something to make his name," said his brother, John Seed, a physician in Princeton, New Jersey. "There are financial things, too. He'd like to make a fast buck.”

(Kendall, 1-2)

Nevertheless, all of this commentary comes after the fact, since the NPR story did, after all, go to air. And it immediately hit the collective imagination with outrageous statements from Seed like:

I am an independent thinker. I don't happen to agree with the President of the United States. He does not have the power to stop me at the moment.

•••

I've said many times, you can't stop science.

•••

God made man in his image. God intended for man to become one with God. We are going to become one with God. We are going to have as much knowledge and almost as much power as God. Cloning and the reprogramming of DNA is the first serious step in becoming one with God. Very simple philosophy. (Palca, 2)

* The response from the media and the public was unsurprisingly fast,
since Seed managed to singlehandedly represent a legion of fears that the public held about science with a few key loaded terms like "you can't stop science," and "We are going to have as much knowledge and almost as much power as God." Seed, unlike Slack, was ready, willing and able to draw sensationalism to his endeavors.

The news frame surrounding Seed was most definitely a mobilizing one. Palca, the science correspondent who covered the story, begins his report noting that, "Just days after news of Dolly made headlines last February, political, religious, and scientific leaders from around the world were issuing statements condemning the idea that the same technology might be used to clone humans" (Palca, 1). He ends his report with, "Even if Seed fails in his attempt to clone a human this year, by saying he's going to try, he is forcing society to confront a difficult question that won't be going away" (Palca, 3). The issue of cloning is therefore defined as a collective one.

Returning to Palca's commentary concerning "leaders from around the world" and their reactions concerning cloning technology:

PALCA: Some called it immoral under any circumstances. Others said it might be morally acceptable, but cloning humans is certainly unethical right now, since the procedure has not even been perfected in animals. (Palca, 1)

Palca then goes on to say that, "Richard Seed doesn't agree" (Palca, 1). A clearly defined opponent was therefore established, and the responsibility for the collective problem is placed firmly on Seed's head. (However, while Seed is a target here, it is important to consider that he may not be the only one here. More later.) A collective response to the problem of Seed is suggested through the actions of acknowledged public authority figures, and
this response consists of the moral appeals that make up the last characteristic that Ryan uses to typify mobilizing frames.

PALCA: And it's these kinds of scientific doubts [raised by Epogg], and especially the fact that most cloning attempts in sheep have failed [1 in 277 when it came to Dolly], that led the National Bioethics Advisory Commission to conclude, for now, human cloning is unethical.

In June, the commission urged President Clinton to continue a moratorium he had already put in place that banned federal funds from being spent on human cloning, and the president agreed.

WILLIAM J. CLINTON, PRESIDENT OF THE UNITED STATES: Today, I am sending legislation to the Congress that prohibits anyone in either public or private sectors from using these techniques to create a child. Until the day I sign the legislation into law, the ban on federal funding I declared in March will remain in effect. And once again, I call upon the private sector to refrain voluntarily from using this technology to attempt to clone a human being.

PALCA: The president may not have the power to stop Seed, but the Food and Drug Administration may. FDA officials say that they have regulatory authority over anyone wanting to try human cloning, and Seed would have to get FDA approval to proceed with his cloning
work.

In addition, several states, including Illinois, are considering legislation that would ban cloning. California has already passed such a law.

•••

PALCA: Seed may ultimately have to move offshore. The American Society for Reproductive Medicines has called human cloning unacceptable. (Palca, 2)

Those who covered Seed had a field day with comparisons to science fiction. Witness Dateline NBC’s January 11, 1998 report, “Send in the Clones”:

UNIDENTIFIED MAN #1: (“The Boys From Brazil”) I have the money and I have the bill, and no one can stop me!

ROB STAFFORD reporting: (Voiceover) In this 1978 movie "The Boys From Brazil," human cloning is the dark side of science -- or science fiction.

UNIDENTIFIED MAN #1: (“The Boys From Brazil”) You are the living duplicate of the greatest man in history: Adolf Hitler!

STAFFORD: (Voiceover) But to this man, cloning is the beginning of a brave and wonderful new world.

(Stafford, 1)

From here, we immediately go to a quote from Seed. Seed’s introduction was noticeably preceded by a number of different cues. As can be witnessed, the show openly acknowledges the fact that it is referencing fantasy (ala "brave and wonderful new world," "science fiction") and therefore a sense of magic (ala Faust, who sold his soul to the Devil for knowledge).
This particular program also linked Seed (and therefore cloning) with money ("I have the money") and power ("no one can stop me!").

Richard Seed was acknowledged as "the media's man of the moment" by Stafford in the show (Stafford, 1). It's easy to see why; Stafford himself says "[Is] a man named 'Seed' really the one who will produce the first human clone?" (Stafford, 1) in the show:

Mr. RICHARD SEED: I think clones will be fun. I think you'd have a good time raising your clone. I think you'd love it.

• • •

Mr. SEED: My personal target is to produce a pregnancy in -- within a year and a half.

• • •

Mr. SEED: I'm probably one of the most qualified people in the world.

• • •

Mr. SEED: (At symposium) I mean, I -- I can't wait to make two or three of my ownself.

STAFFORD: Are you a little crazy?

Mr. SEED: That's possible.

STAFFORD: Should a person who's a little crazy...

Mr. SEED: I'm brilliant, and I'm also brilliant.

STAFFORD: ...be the first person to be cloning humans?

Mr. SEED: I'm also a near genius. Oh, you wouldn't take on a project like this unless you're a little crazy.

• • •
STAFFORD: Are you playing God?
Mr. SEED: We play God all the time. We make these
decisions regarding life and death all the time.

STAFFORD: What will you do if the federal government
stops you before you even get started?
Mr. SEED: Go offshore.
STAFFORD: Where will you go?
Mr. SEED: I'd like to go to Tijuana. (Stafford, 1-3)

By presenting Seed as an eccentric (without much difficulty,
admittedly), the news media gave the public a far more engaging target than
Slack. With images of "fun" and "Tijuana" and a set time ("a year and a half")
for a sense of immediacy, of news, Seed both put a sensational personality to
the controversy and added a sense of urgency, unlike appropriately cautious
Slack and Dixon's "10 years." Moreover, Seed stated explicitly what the frame
surrounding Slack's statements had only implied.

* 

It is around this time that hapless Slack and his headless clones make
an ignominious reappearance. Charles Krauthammer wrote an essay titled
"Of Headless Mice... and Men; the ultimate cloning horror: human organ
farms" which ran in the January 19, 1998 issue of Time. Krauthammer
ultimately asks that cloning be banned, and specifies headless clones in
particular at the end of his essay:

The time to put a stop to this is now. Dolly moved
President Clinton to create a commission that
recommended a temporary ban on human cloning. But
with physicist Richard Seed threatening to clone humans,
and with headless animals already here, we are past the time for toothless commissions and meaningless bans. Clinton banned federal funding of human-cloning research, of which there is none anyway. He then proposed a five-year ban on cloning. This is not enough. Congress should ban human cloning now. Totally. And regarding one particular form, it should be draconian: the deliberate creation of headless humans must be made a crime, indeed a capital crime. If we flinch in the face of this high-tech barbarity, we'll deserved to live in the hell it heralds. (76)

The title speaks fairly readily for the rest of the essay. Once again, the symbol of the human organ factory is brought up. The mice mentioned in the title of the essay are described in the excerpt supplied below:

Take the mice. Researchers [at the University of Texas] found the gene that tells the embryo to produce the head. They deleted it. They did this in a thousand mice embryos, four of which were born. I use the term loosely. Having no way to breathe, the mice died instantly. (Krauthammer, 76)

This indeed is true, as the January 1996 Discover confirms:

...William Shawlot and Richard Behringer of the University of Texas M. D. Anderson Cancer Center in Houston created 125 headless mice by knocking out a gene called Lim1 in the developing embryos. The gene, they reported last March, turns out to be an "organizer" gene: it switches other genes on and off, and in so doing
tells cells at the front end of the embryo to become a head.

Only four of the headless embryos survived until birth, and with "no nostrils, no mouth to breathe through," says Behringer, they died immediately. The experiment wasn't just an exercise in scientific sadism, though. *Lim1* belongs to a set of genes, called the homeobox genes, that are essential to embryonic development -- and that are present in all animals. *Lim1*, for instance, has already been found in frogs. So by studying headless mice, the researchers are finding out what goes into making a human head too. "The frog gene and the mouse gene are almost identical," says Behringer. "I would be very surprised if there wasn't a human gene." (Oliwenstein, 1)

While Krauthammer acknowledges that this research may have some legitimacy, he suggests that there are darker ramifications to it all as well:

Why then create them? The Texas researchers want to learn how genes determine embryo development. But you don't have to be a genius to see the true utility of manufacturing headless creatures: for their organs -- fully formed, perfectly useful, ripe for plundering.

• • •

Take the mouse-frog technology, apply it to humans, combine it with cloning, and you are become a god: with a single cell taken from, say, your finger, you produce a headless replica of yourself, a mutant twin, arguably
lifeless, that becomes your own personal, precisely tissue-matched organ farm. (76)

The story in the media is no longer about headless tadpoles, but of the headless humans that the headless tadpoles suggest are possible. The background of conjecture that surrounded the original content has moved to the foreground. In many ways, the above essay acts as a climax of fear, where the stage set unwittingly by Slack has become a scene for a discourse resurrected by Seed. Indeed, Krauthammer opines, "Headlessness will be cloning’s crowning achievement" (76).

Krauthammer draws heavily on fiction to present his argument, as can be seen in his above allusion to *Brave New World* and this reference to Shelley: "For sheer Frankenstein wattage, the purposeful creation of these animal monsters has no equal" (76).

Turney analyzed how stories such as *Frankenstein* continue to endure, noting that, "The accumulated retellings of the Frankenstein myth are now so numerous as to almost defy empirical analysis. Today, we encounter Frankenstein in many forms" (34):

...Mere numbers go some way to establishing the pervasiveness of the myth, so it is worth noting that, up to 1982, Glut lists 130 other fictions based on *Frankenstein*, almost 50 fiction series, more than 40 film adaptations, over 80 stage productions, and 80 films. In the comics, the only area where Glut claims to have been selective because of the overwhelming mass of material, he lists nearly 600 individual items and 30 series, not counting newspaper strips.

As with popular culture in general, there is far too
much material here to get to grips with. Widening the scope just a little inflates Glut's numbers still more. Stephen Jones' *Illustrated Frankenstein Movie Guide*, compiled ten years after Glut's catalogue, lists more than 400 films more or less based on the *Frankenstein* script.

(28)

... Just a taste: a computer search of the text of the British *Financial Times*, perhaps the country's most serious title of all, between 1990 and 1994, yields fifty-two uses of 'Frankenstein'. Aside from references to film and TV and the other arts, the monster was coupled with:

- the Channel Tunnel
- the poll tax
- the US Internal Revenue Service
- artificial intelligence
- municipal planning officers
- a 'monster' recycling plant
- Iraq/Saddam Hussein (several times)
- privatisation of electricity...
- a Swedish politician
- Soviet central planning
- genetic research
- the Labour Party
- the Department of National Heritage
- the Ulster Freedom Fighters
- a soccer analyst
'machines' in general
virtual reality
fashion journalism
the (much revived) New York Post
US trade laws.

Other newspapers show a similar pattern: a mix of political and technological links, mostly serious, with a scattering of light-hearted uses in other areas. (228)

"This taken-for-grantedness," says Turney, "shows how well the cultural script has been learned. In consequence, the single word 'Frankenstein' is seen constantly as a metaphor in media commentary of all kinds, especially political commentary" (35).

The situation that the headless clones and the scientists associated with it are packaged in is in many ways similar to the one that surrounds Frankenstein and his monster, although the former have not of course achieved nearly the level of notoriety that the latter have. The headless clone has been shorn of its original context, much as Frankenstein and his monster have been shorn from the novel in which they find their origin, and the headless clone is once again brought up months after it was first introduced to the media, much as Frankenstein has been brought up time and again in the mass media. And in time, the headless clone became involved in public discourse, as Frankenstein has for over a century -- as an icon of popular culture, albeit a minor one.

* 

Why is it that the stories of Victor Frankenstein or Jonathan Slack or Faust or Seed are retold?

Why, then, has the story endured? Is it simply
because the frame is so open at various points that it is infinitely adaptable? Or are there particular reasons, culturally general enough to read across all the retellings, with all their differences of detail, yet still specific to the culture which we share with Mary Shelley -- broadly, the culture of modernity? (Turney, 35)

Turney goes on to answer his own questions at length, coming to conclusions that are in many ways pivotal when it comes to understanding the media events that surrounded both Seed and Slack, since the inferences Turney makes reveal what stories like Frankenstein are "seen constantly as a metaphor" for:

The first answer is to try to isolate what has endured in all the renderings of the myth since 1818. The story, for all of its familiarity, is still a frightening one. It is frightening because it depicts a human enterprise which is out of control, and which turns on its creator. So much carries over from the earlier myths about the getting of knowledge. But Frankenstein is about science. What is more, the science is pursued, if not always with the best of intentions, then for motives with which we can readily identify.

•••

The Frankenstein script, in its most salient forms, incorporates an ambivalence about science, method and motive, which is never resolved. (35)

Turney argues that Frankenstein is both a script that continues to be cued time and again in scripts up to the modern day and a script that in itself
is a collection of cues to older scripts, such as the knowledge narrative and in specific familiar stories concerning the Tree of Knowledge of Good and Evil or Faust. While the stories surrounding Seed may not explicitly cue the script of Shelley’s novel, like *Frankenstein* it is apparent that they at least tap into many of the same themes, particularly that of a perceived ambivalent nature of science.

Seed in particular made the process of cuing easy with his statements. The aforementioned *Dateline NBC* report was preceded with commentary by Jane Pauley which noted that "the prospect of human clones loomed as a dark, but distant possibility" (Stafford, 1). Krauthammer leads into his story with, "Last year Dolly the cloned sheep was received with wonder, titters and some vague apprehension" (76). The words "possibility" and "apprehension" here suggest an uncertainty over whether something is positive or negative, and thus ambivalence.

Turney also states that *Frankenstein* is compelling precisely because it is frightening. Krauthammer is certainly telling a frightening story with his open critique of cloning. He plainly uses words such as "anxiety" and "scariest" in the first paragraph and "panicked" in a later paragraph to set up this mood of fear. (e.g. "'Alive.' Never have a pair of quotation marks loomed so ominously.") Words such as "obscure" and "overlooked" to create the type of atmosphere of tension found in a great many horror stories. Most of all, he suggests coercion the aforementioned "ripe for plundering," as well as in some other instances:

While prominent scientists are prepared to acquiesce in -- or indeed encourage -- the deliberate creation of deformed and dying quasi-human life, you know we are facing a bioethical abyss. Human beings are ends, not
means. There is no grosser corruption of biotechnology than creating a human mutant and disemboweling it at our pleasure for spare parts. (76)

Notice how Krauthammer acknowledges "quasi-human life" as "human beings" in order to accentuate his argument that coercion is being suggested by scientists. Krauthammer also, as previously mentioned, brought up images of infants ("tiny infant organs"), and children in society are relatively helpless and often vulnerable to coercion (note popularized fears concerning child pornography) (76).

Hearkening back to Slack for a moment, we also now see how the knowledge narrative was used to tell a frightening story. And the previous stories (e.g. the one that quoted Dr. Patrick Dixon) used imagery of dismembered children much as Krauthammer did, much as horror movies use gore to frighten or titillate an audience. And remember that Tom Fenton, in his October 20, 1997 report on CBS Evening News, acknowledged that newspapers were "running horror stories about headless human bodies."

Seed certainly "depicts a human enterprise which is out of control" if we rely on Lord Robert Winston ("I think the man is clearly unhinged"). Seed's comment that "the President of the United States," who is generally considered one of the most powerful figures in America, "does not have the power to stop me at the moment," emphasizes how little control anyone seems to have over him. He clearly taps into cautionary "myths about the getting of knowledge," especially with his constant references to both knowledge and God. And the Sunday Times depicted Slack as a scientist who would engage in cloning research, no matter how repugnant many people thought it. Krauthammer spells out how the lack of legal control that exists over cloning of headless organisms:
"It would almost certainly be possible to produce human bodies without a forebrain," Princeton biologist Lee Silver told the London Sunday Times. "These human bodies without any semblance of consciousness would not be considered persons, and thus it would be perfectly legal to keep them 'alive' as a future source of organs."

Seed seems to pursue the science of cloning "if not always with the best of intentions, then for motives with which we can readily identify." To once again quote Dateline NBC's report, "Send in the Clones":

STAFFORD: (Voiceover) Sixty-nine-year-old Richard Seed. He has a Ph.D. in physics from Harvard and a dream of opening cloning clinics across the country, producing 500 clones a year. And why does Seed want the job?...

Mr. SEED: Scientific challenge. Do some infertility help. Third is to -- third reason is to advance science; fourth, is to advance human kind [sic]. Fifth, is to make a living.

STAFFORD: In that order?

Mr. SEED: Yeah. Well, no, I'll put make a living up there at three or something. (Stafford, 1-2)

As is evident from the above excerpt, the coverage surrounding Seed also provided something that the coverage around Slack did not -- fun. The science of biology, as Turney noted, carries with it an atmosphere of fear, and humor is a common response to fear:

In addition, as with all truly frightening myths, we have tried to tame Frankenstein by making fun of it. Karloff's
monster has been domesticated, in media ranging from the 1960s US television series *The Munsters* to the British children's comic the *Beano*, which features Frankie Stein. A distant descendent of Karloff even featured as Frank in the British Conservative government's television commercials for shares in its soon to be privatised electricity generation concern in the early 1990s. (35)

Seed's popularity might have been in large part due to his eccentricities, which took the edge off of the frightening implications of cloning research with a reassuring touch of surreality. Humor also deflates Seed's credibility, which in turn is a useful for the news frames asking support from their audiences against cloning.

Ryan states that news frames are often chosen by editors and/or writers because they speak to and for certain specific implied audiences. "The selection of audiences may be conscious or unconscious; in practice, however mainstream writers often cater to dominant social groupings" (57).

Krauthammer does not imply an appeal to Congress; he instead makes a direct appeal to ban cloning, and in particular make the cloning of headless humans "a capital crime" (76). (The choice of the term 'capital crime' may in itself be intentionally ironic; a capital crime is one punishable by death, traditionally via beheading [from the Latin *caput*, meaning head].) It is natural for mobilizing frames to target legislative bodies, since they are ostensibly political entities that are delegated authority in order to fix problems depicted as collective ones.

The fact that the "deliberate creation of headless humans" is impractical was overlooked by and large in the news media. Krauthammer gives some lip service given to the unlikeliness of his nightmare coming to pass:
There are, of course, technical hurdles along the way. Suppressing the equivalent "head" gene in man. Incubating tiny infant organs to grow into larger ones that adults could use. And creating artificial wombs (as per Aldous Huxley), given that it might be difficult to recruit sane women to carry headless fetuses to their birth/death. (76)

None of these objections, however, (that were, in fact, previously raised by scientists, e.g. Slack) stopped Krauthammer from merrily continuing along with his diatribe.

An article written by Glenn Zorpette for the *Scientific American* came out on the same month Krauthammer's article did. The article described how "the alarmed pronouncements that made their way into the popular media" seemed "informed by the weirder veins of pulp science fiction rather than by scientific plausibility" (1):

...According to Behringer, the idea of developing Slack's technique into something that could be used with humans is "a complete fantasy. I can't understand where this is coming from."

"To get it to work in humans," explains Brigid L. M. Hogan, a cellular biologist at Vanderbilt University Medical Center, "you would have to implant the partial embryo back into a woman, and no one would want to do that." Alternatively, it might be possible to culture embryos using some kind of artificial life-support system that could nurture the embryo for perhaps a couple of months, until rudimentary organs had been formed.
Versatile cells known as stem cells could then conceivably be taken from these organs and used to repopulate and repair the corresponding damaged organ in a human. The only technical problem is that the life-support system called for in this scenario is far beyond current technology. "I cannot tell you how dopey it is, physiologically or cost-wise," Caplan declares. (1)

* 

The fact that mobilizing frames were launched at the time is fairly evident in hindsight. But who exactly were the parties involved in the implied conflict? Seed is an obvious target, and not far behind him cloning research. But what some scientists at this time were cautious of was an ambivalence towards science that they felt was expressed in the most popular news frames, and the potential that this ambivalence had for a negative overreaction against medical research and free inquiry of science in general. The aforementioned Scientific American article, titled "Off with its head! Headless embryos are here. 'So what?' biologists say" states:

Many biologists and ethicists, however, are far more troubled by flights of morbid fantasy, which they say could have a chilling effect on potentially beneficial research.

... 

In the meantime, Caplan and other ethicists worry that potentially valuable offshoots from embryological research could be precluded if the public becomes overly exercised about the lurid science fiction. "We should not permit the nightmare visions to impede research now,"
says ethicist Ronald M. Green of Dartmouth College. "Research on cell differentiation and the genetics of embryological development [has] great potential benefits." For example, a rare genetic disorder in humans called anencephaly can partly or completely block the development of the brain and head; it is possible that work such as Slack’s could shed light on the condition -- and its possible prevention. (1)

The news frame established by Zorpette's article is a mobilizing one. The implied issue, conflict, and solution are, however, different, because the implied audience targeted by *Scientific American* is not the same one the more popular frames are targeting. The implied audience here is instead made up of those who might feel threatened by restriction of research, e.g. those who might benefit from such research, academically, financially, and/or medically.

Ryan states that frames are shaped by what she calls "contests":

In the process of story-making, reporters and editors do not necessarily search out raw happenings, since deadlines and short-staffing severely curb the investigative urge. Instead, they are bombarded by prepared, pre-packaged events aggressively marketed by sponsors who, be they establishment institutions or social movements, hope these events will carry their frames in media coverage. It is in competition among existing interpretations that frames emerge and develop. (75)

What we have here, then, is a frame contest, between those against human cloning and those defending cloning research. Many of the tactics
used by news frames against human cloning were previously discussed earlier in this work. For example, a method that Ryan says is used in frame contests is discrediting via extreme cases, e.g. "focusing on bra-burning in the women's movement or on violent incidents in largely peaceful demonstrations" (85). News frames against human cloning did not interview less controversial scientists, leaving Seed as the lone voice in defense of free inquiry. By focusing on an extreme among the scientists working in the field, all others end up getting discredited. Ryan also describes the tactic of misrepresentation, and the comparisons that were at times made between researchers and Nazis were at best questionable representations of the scientific profession.

The news frames that defended cloning research adopted tactics similar to the ones that Turney described scientists using during the controversy that ensued over recombinant genetics:

At least three [tactics] were identifiable... One is to acknowledge that fears about the consequences of experimental biology may be of interest at some future date, but to argue that they are irrelevant to immediate practical concerns. The advances in question are so far distant, and so extraordinarily difficult to achieve, it is suggested, that there is no need to be concerned about them now.

... The second is to develop the rhetoric of reason versus emotion, and apply it asymmetrically... The concrete hazards were defined in such a way as to seem manageable and others to seem so nebulous as to be of
little importance. The benefits, by contrast, were depicted as both highly desirable and virtually certain. The position was reinforced by the assertion that this was the rational, scientific view, and that critics who saw the issues in different terms were hysterical or irrational.

•••

Finally... is the argument that all consideration of the possible consequences of biological investigation is undercut by the absolute primacy of scientific values. The pursuit of truth is a sufficient good to override all other concerns. (209-210)

The writer of the cited Scientific American article arguably uses all three tactics. The first tactic was used when authority figures were quoted as saying that ectogenesis was at best a distant possibility. The second tactic was used when the ethicists were said to have worried over the possibility "that potentially valuable offshoots from embryological research could be precluded if the public becomes overly exercised about the lurid science fiction." The third tactic was used with the last sentence of the article:

"There's an impulse to prohibit, prohibit, prohibit," Green says. "We don't even know what we're prohibiting yet."

(Zorpette, 1)

The contesting frames practically begged to move the controversy over cloning from the mass media to more political arenas for a final showdown.