

COMPETING “ORIGINARY” TECHNOLOGIES: HUMAN  
CLONING, EMBRYONIC STEM CELLS AND BUDDHISM IN  
SOUTH KOREA AND BEYOND

A Dissertation

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This dissertation explores the emergence and development of a South Korean Buddhist discourse supporting cloned human embryonic (hSCNT) stem cell research as a national and global project of religious cultivation which mobilized Korean Buddhists via a more participatory “Buddhist Bioethics” promoting the scientist Hwang Woo-suk (黃禹錫) and his controversial work.

I begin with an analysis of the fears and fantasies surrounding the figure of the “human double” or *Doppelgänger* and the “human clone” in the traditional American and Western European contexts where, I argue, the double/clone exhibits the characteristics of what Jacques Derrida dubs “the supplement” – that which is invented to supplement or extend the “original” human being but also inevitably returns to haunt, enslave, and sometimes even destroy its human source. Given that Buddhism employs different ontologies of human being – including the doctrine of no-self *anatman* 無我, for example – when compared to traditional Western-European, Christian metaphysics, I ask does the modern introduction of “man-made-human” (人造人) and “human cloning” (複製人間) discourse in Korea provoke similar anxieties, apprehensions, and phantasmagorias? When examining the work of Han Yong-un (韓龍雲), an early Korean Buddhist modernizer, and Korean

newspapers from the early twentieth century to the present day, I find that a deep-seated dialectical ambivalence akin to the haunting logic of the Derridean supplement also surfaces in “doubles/clones” discourses in Korea, although there are also significant variations as well as subtle differences. A striking variation, which forecasts later Korean Buddhist understandings of Hwang’s human cloning research, is found in a newspaper editorial whose author can only comprehend the dangerous duplicity of human cloning via U.S. global politics. However, this “independent” understanding serves to magnify Korea’s subjugation and post-colonial status several years later, when it is repeated, again, during the “Hwang Scandal.”

To further illuminate (Korean) Buddhism’s role in this national and international scientific event, I show how American scientists and journalists publicly presented “Buddhist human cloning beliefs” as well as how Hwang Woo-suk presented his own Buddhist beliefs to the American public and to Korean Buddhists. I present materials gathered from fieldwork with Korean Buddhists rallying to support Hwang’s research; interviews with people involved in organized discussions of Buddhist bioethics, and primary source material from Buddhist newspapers to explicate how Korean Buddhists came to participate in a “Buddhist Soteriology” of stem cell science. In certain Buddhist discourses, Hwang is described as *seonjisik* (*kalyāṇamitr* 善知識) who sacrificed worldly comfort for “pure” scientific pursuits. Moreover, his cultivation of “originary technology” loosely mirrored ideas about Zen (*Seon* 禪) practice; and Korean Buddhist women were particularly instrumental in pledging to donate eggs as *dana* (布施) to support Hwang’s research endeavors.

## BIOGRAPHICAL SKETCH

Marcie Middlebrooks was born in Seattle Washington in 1972 and grew up in the Renton/Skyway area. She attended Lakeridge Elementary School, Dimmitt Middle School and Renton High School. She received a B.A. from Bryn Mawr College in 1994 majoring in Anthropology and Sociology at Haverford College. In 2005, she received an M.A. in Religious Studies from Seoul National University (Thesis: *Hanmaum Seonwon gwa Daebaeng Seunim ui Juingong Gae-nyeom-e gwan han yeongu*) and then an M.A. in Anthropology from Cornell University in 2007.

For all the Rogues at the Inn

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## NOTES ON PRESENTATION

Throughout most of this dissertation, I have used the Revised Romanization System for the transliteration of Korean terms; this system was officially adopted by the Republic of Korea and is currently used in most books, newspapers, and documents published in South Korea. I have, however, followed the precedents already set for the Romanization of well-known proper nouns and personal names even if they do not match Revised Romanization guidelines. When possible, I have included Sino-Korean characters in parenthesis along with their standard Korean language pronunciations, to make the text more accessible to readers familiar with Chinese characters and to sidestep the inevitable homonyms confusions. For the most part, I have used pseudonyms in following with standard anthropological practices as well as the Korean proclivity to use different names in different contexts and adopt nicknames on the internet. Although most of the people I spoke with did not object to the use of their formal family names, wide-spread digitalization and internet use has introduced changes in academic archiving standards as well as the processing of personal information which may go beyond my interlocutors and my own expectations. Thus, I have decided to err on the side of caution. For the sake of brevity, I often refer to the Republic of Korea or “South Korea” as simply “Korea” although, depending on the historical context of my comments, “Korea” may also refer to the Korean peninsula and nation as a whole. Perhaps too frequently, I simply write “America” when referring to the U.S.A. in particular and must apologize for these rough and inaccurate abbreviations which are, nevertheless, quite common practice.

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## PREFACE

The South Korean scientist, Hwang Woo-suk and his team of stem cell researchers first attracted the attention of the global scientific community and the international news media in early February 2004 when Hwang was widely reported to be the first scientist to successfully clone a human being by creating a human embryo whose nucleus DNA matched that of an adult female donor. Other teams of scientists had previously announced similar human cloning claims, but Hwang's research was believed to be the most scientifically significant since it was published in a top-tier peer-reviewed scientific journal (*Science*) and included data indicating that the team had also extracted "patient-matching" human embryonic stem cells from the newly cloned embryo. The creation of such "patient-matching" human embryonic stem cell lines has been considered a potentially promising and profitable technology since the late twentieth century when human embryonic stem cells were first cultivated as immortal cell lines. Thus, Hwang Woo-suk's February 2004 paper meant much more than a miscellaneous "first" for biology. Hwang's work pointed towards a possibly valuable area of future biotechnological development which could produce lucrative medical technologies appealing to affluent and aging populations.

Not long after Hwang Woo-suk's 2004 article on "patient-matching" (or "cloned") human embryonic stem cells had been published, Hwang announced that he would voluntarily halt his human embryonic research to allow time for the public discussion of various related ethical issues.<sup>1</sup> During this self-imposed moratorium, Hwang was awarded the newly created South Korean *Top Scientist*

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<sup>1</sup> Hwang Woo-suk's voluntary moratorium (a well-timed "break") on human embryonic stem cell research was reported as being between February 2004 until September 2004 in *Science* - Hwang, et al (June 17, 2005:1783). However, the efforts to pass various bills and clear the way for Hwang's research had been underway for some time. In fact, a *Bioethics and Biosafety Act* had passed the National Assembly late in 2003. This *Act* - which took effect in January 2005 - included a provision which effectively exempted Hwang from the new research approval process.

*Award*. Serious questions, however, were raised when *Nature* (a well-known U.K. based science journal) learned that two junior researchers on Hwang's team had donated eggs for Hwang's embryonic stem cell experiments.<sup>2</sup> During an interview with *Nature*, a PhD student working with Hwang indicated that she had donated her own eggs for the team's research. The *Declaration of Helsinki* (first promulgated in 1964) as well as various international ethical guidelines for scientific research, prohibits the use of donations from researchers or anyone who may directly benefit from the particular research being conducted. Hence, claims that Hwang Woo-suk had not observed proper ethical procedures, while conducting his award-winning research, were raised. Moreover, since the researcher-donors were junior members of the Hwang team, questions about coercion and the use of undue influence were also raised. Inquiries into whether women had been paid for making egg-donations revealed that some women had been paid for eggs however such transactions were not illegal in South Korea at the time.

Hwang denied any knowledge of unethical egg donations<sup>3</sup> and attributed the emerging allegations to misunderstandings caused by difficulties in communicating in English - a foreign language to most Korean researchers, including himself.<sup>4</sup> Hwang also hinted that the journal, *Nature*, may have chosen to voice these allegations because the Hwang team's ground-breaking 2004 article had been published in *Science* instead of *Nature*. Although the *Korean Bioethics Association* (KBA)<sup>5</sup> and some other civil society groups, like the *People's Solidarity for Participatory*

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<sup>2</sup> Cyranoski (1) (May 6, 2004) and Cyranoski (2) (May 6, 2004).

<sup>3</sup> Later it would be revealed that Hwang had circulated consent forms to his female lab researchers in 2003. See Baylis (2009:392). Ryu Young June, a researcher in Hwang's lab, would later reveal that Park Eul Soon, another researcher in Hwang's human embryonic stem cell team, donated her eggs to avoid being dismissed by Hwang. See Lee, Jae-myeong (March 5, 2014).

<sup>4</sup> In *Na ui Saengmyeong Iyagi (My Stories of Life)* - which was published in December 2004 and includes an autobiographical narrative written by Hwang (2004) - Hwang mentions an unnamed Tokyo-based science reporter with a heavy Eastern-European accent.

<sup>5</sup> The *Korean Bioethics Association* (KBA) which had issued a "1999 Proclamation on Cloning Bioethics" in March 1999, sent a letter objecting to Hwang's cloned embryonic stem cell research procedures to the journal *Science* in 2004.

*Democracy* (PSPD) called for further investigations of Hwang's work and tighter regulations and government oversight, the South Korean President Roh Moo-hyun commended Hwang's team and pledged continued government support of cloned human embryonic stem cell research. When a new *Bioethics and Biosafety Law*<sup>6</sup> went into effect in January 2005, a provision ensured that Hwang's team was exempt from most new oversight regulations. Instead of following the general procedures detailed in the new law, Hwang was allowed to request approval for his human embryonic cloning research from the Ministry of Health and Welfare. Then the Seoul National University Veterinary School - where Hwang was a professor with considerable influence - created an Internal Review Board (IRB) to oversee the remaining details of Hwang's research protocol.<sup>7</sup>

Hwang Woo-suk appeared frequently in the South Korean news media to accept awards and to explain his research to the Korean (and sometimes American) public. Hwang received the *Ilmaek Cultural Prize*<sup>8</sup> and was chosen by the *Journalists Federation of Korea* to receive the "Korea's Pride Prize."<sup>9</sup> Princeton University President Tilghman (who had conducted research on stem cells for many years, herself) publically delivered her congratulations and encouragement to Hwang and

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<sup>6</sup> Proposals for a new law intended to replace the 1983 *Genetic Engineering Promotion Law* (also called the *Biotechnology Promotion Law*) had been submitted in various forms by different groups to the National Assembly since at least 1999. Competition between the *Korean Ministry of Health and Welfare* (保健福祉部) proposals and those of the *Korean Ministry of Science and Technology* (MOST, 科學技術部) continued until the *Bioethics and Biosafety Act* passed the National Assembly at the end of 2003. The resulting *Bioethics and Biosafety Law* - which went into effect in early 2005 - is said to have favored the *Ministry of Science and Technology's* pro-biotech industry approach.

<sup>7</sup> The *Ministry of Health and Welfare* issued a temporary approval for Hwang's research in early January 2005. The SNU Vet. School IRB appears to have been largely perfunctory - some IRB members seem to have been unaware that they had even been appointed to this board. Previously, ethical protocols involving human egg donations for Hwang's research had processed by an IRB at *Hanyang University Hospital* beginning in 2001. For more information see Kim, Kunbae (2007:227) and Han, Aera (2006).

<sup>8</sup> This *Ilmaek Cultural Foundation* (一脈文化財團) prize is given in four main areas; Hwang was awarded the prize for Science and Technology. See <http://www.ilmac.or.kr/>.

<sup>9</sup> 자랑스러운 한국인 대상. The award was announced in late 2004 and given to Hwang Woo-suk in 2005 by the *Journalists Federation of Korea* (韓國言論人協會).

his team when she visited South Korea in the fall of 2004.<sup>10</sup> This show of support was widely reported in Korea's daily newspapers as was the publication of a research article (in *Developmental Biology*) which was authored by Hwang and his American research partner, the University of Pittsburgh professor and scientist, Gerald Schatten.<sup>11</sup>

Princeton University President Tilghman's public and press-friendly visit with Hwang Woo-suk and her encouragement of Hwang's embryonic stem cell research took place approximately a month before voters of the State of California approved the *California Stem Cell Research and Cures Initiative* – otherwise known as *Proposition 71*. Approved by a wide margin of almost 60% of participating California voters, *Prop. 71* allocated three billion dollars in public funds to stem cell research with embryonic stem cell research marked as a top funding priority.<sup>12</sup> Passed nine months after the publication of the Hwang team's 2004 *Science* article, *Proposition 71* had been widely promoted in California and was backed by a wealthy California real-estate lawyer, various Hollywood celebrities, Silicon Valley "dotcom" fortunes, and venture capitalists, as well as scientists and the biotech industry.<sup>13</sup>

Approximately thirty-five million dollars was spent on promoting *Proposition 71*.<sup>14</sup> Thus, *Proposition 71* promotion budget constituted more than half of all government funding for Hwang from the years 1998 to 2005.<sup>15</sup> The Hwang team's government funding for these seven years, from 1998 to 2005, was only slightly more than two percent of the total three billion dollars California dedicated to stem

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<sup>10</sup> Jang, Won-rak (September 25, 2004), Hwang, Se-won (November 2, 2004), Lee, Myeong-jin (November 3, 2004), etc. This story was carried in most Korean language daily newspapers.

<sup>11</sup> Simerly, Calvin et al (December 15, 2004).

<sup>12</sup> Bellomo (2006:67). Efforts to pass this initiative had begun in late 2002 after Pres. G. W. Bush announced his embryonic stem cell policy.

<sup>13</sup> *Ibid.* Planned Parenthood supported *Proposition 71* while the California Nurses Association opposed it along with parts of the Green Party.

<sup>14</sup> Fox (2007:413). Fox notes that \$200,000 was spent to oppose *Proposition 71*.

<sup>15</sup> Kim Gyoung Rae (2010:172) sites a figure of sixty seven billion six hundred million won (67, 600, 000, 000won) which would translate into roughly 62.5 million US dollars at current exchange rates.

cell research with *Proposition 71*. Other states in the U.S. also approved funding measures for human embryonic stem cell research although on a much smaller scale.

Although his stem cell research public promotion budget was nothing like that of California's *Proposition 71*, Hwang Woo-suk was tireless in promoting his research to the Korean government and public. Between late 2004 and June 2005, Hwang appeared on many TV programs<sup>16</sup> to explain human embryo cloning and its possible therapeutic applications to a Korean audience. He gave public lectures, spoke with various religious leaders, and answered questions on the radio. Moreover, the Korean press's flattering and overly optimistic news reports helped raise public trust and expectations considerably.

More research was needed, however, before investors world-wide would be convinced that cloned embryonic stem cells could translate into profitable medical treatments. Hwang Woo-suk's 2004 *Science* research article showed that human somatic cell nucleus transfer (hSCNT) procedures or human cloning technology was costly and inefficient, at least at the present state of development. Moreover, the 2004 article results were obtained by using an adult (somatic) cell and an egg cell from the same woman. Thus, it was not yet clear whether hSCNT procedures would work on infertile women or men. As one of Hwang team's researchers later explained – "Professor Hwang's February 2004 article was not enough to make his stem cells economically valuable ... with just that one article ... (it would not appeal to) the medical market which requires treatments which can be used by many persons."<sup>17</sup>

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<sup>16</sup> One example is Hwang's appearance on the SBS TV Program *Diagnosing Current Affairs (Sisajindan)*. See No, Byeong-cheol (January 6, 2005) and also Kim, Tae-Ho (2008:30).

<sup>17</sup> *PD Notebook* (December 15, 2005) 제보자 A: "황교수님의 2004년 2월 논문만으로는 그 걸 경제화 시키지 못 한다는 압박감이 있었습니다... 그거 하나만으로는 남녀노소 다 필요한 의료시장에 한번에 한 200개 시도해서 하나정도 한다는 건 효율성이 너무 낮고 그래서 사람들에게 뭔가 보여줘야 한다...."

In late May 2005, the journal *Science* once again announced that Hwang Woo-suk and his research team had submitted a second ground breaking research article on “patient-matching” embryonic stem cell lines which would be published. The Hwang team’s 2005 *Science* paper<sup>18</sup> promised considerably greater efficiency in producing patient-matching human embryonic stem cells. Hwang Woo-suk had reportedly overseen his team’s creation of eleven new human embryonic stem cell lines – each line matched a different individual cell donor – each and every human donor was reported to be suffering from incurable diseases or injuries. Moreover, in contrast to the Hwang team’s previous 2004 *Science* publication, the 2005 research paper claimed that a variety of adult-cell donors (men and women as well as children and adults) had been cloned.<sup>19</sup> As would be expected, Hwang’s 2005 paper was lauded in human embryonic stem cell research circles for showing a significant improvement in the efficiency and application of human embryonic cloning technologies and hopes for related developments in future medical therapies ran high.

A short time before the publication of Hwang’s 2005 *Science* paper, Ryu Young June - a former member of Hwang’s human embryonic stem cell research team (Ryu was listed as the second author in the 2004 *Science* paper) - heard that, Hwang was planning on testing his “patient-matching” human embryonic stem cells on a young boy suffering from paralysis. Ryu found Hwang’s 2005 *Science* article highly dubious and, as a medical doctor, Ryu was concerned that a clinical-trial which used the Hwang team’s cells would prove dangerous. He submitted an anonymous tip to a T.V. investigative news program – *P.D. Notebook* – and began cooperating with both the *P.D. Notebook* and the *People’s Solidarity for Participatory Democracy (PSPD)* investigations of Hwang’s work.

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<sup>18</sup> The publication of the second *Science* article was announced on May 20, 2005 and printed on June 17, 2005.

While Hwang Woo-suk was observing an indefinite self-imposed research moratorium not long after the publication of his 2004 *Science* article, citizens groups began organizing to help support Hwang and his human embryonic stem cell research. These advocacy groups joined together to launch larger scale joint citizens' campaigns supporting Hwang in response to both the specific questions raised about human egg procurement procedures and the broader criticisms of cloned human embryonic stem cell research in general. Along with these public rallies, organized citizen groups, Korean Buddhist groups, and the *Korea Science and Engineering Foundation* (founded in the 1970s) among others began raising funds for Hwang's research.<sup>20</sup>

After Hwang Woo-suk's 2005 *Science* paper was published, many South Koreans believed that Hwang might be the first Korean scientist to win a long-sought-after Nobel Prize. Plans for a *World Stem Cell Hub* – based in Seoul but with branches in Europe and the U.S. - were announced. Hwang Woo-suk was appointed director of the *Hub* which officially opened in early October 2005. Scientists, who had been working on creating “patient-matching” stem cells in the U.S., pointed to then President Bush's stem cell policy which they claimed greatly hindered human embryonic stem cell research in the U.S. They warned that the U.S. would fall far behind Korea since the government funded *World Stem Cell Hub* and Korean investment in human embryonic stem cell research would make Korea a world-leader in the field.<sup>21</sup>

While the *World Stem Cell Hub* was attracting attention in both Korea and the U.S., *PD Notebook* (the investigative news program) sent a reporter to Pittsburgh to interview a former Hwang team researcher (Kim, Sun Jong) who had worked on

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<sup>19</sup> The cells used for extracting nucleus DNA were all skin cells, however. See Hwang et al (June 17, 2005).

<sup>20</sup> 韓國科學財團. See Kwon, Yang-Hoe (February 15, 2005).

Hwang's 2004 and 2005 *Science* articles. Kim was working in the University of Pittsburgh laboratory of Hwang's American partner, Gerald Schatten. Not long thereafter, Schatten - who was listed as a co-author of Hwang's much-lauded 2005 *Science* article - suddenly and unexpectedly announced that he would truncate his partnership with the Hwang and the Korean research team. Schatten cited the controversy over eggs procurement practices as the reason for his decision. Ten days after Schatten's announcement, *PD Notebook* broadcast its first full-length investigative report into the ethical issues surrounding Hwang's research.

This first lengthy *PD Notebook* report focused primarily on the ethical issues surrounding the procurement of human eggs for Hwang's research. Hwang Woo-suk's research team and supporters responded robustly to the *PD Notebook* program. Roh, Sung-Il - the director at Mizmedia Hospital which had supplied Hwang's team with eggs - announced his intentions to sue *PD Notebook*. The following day at press conference, Hwang announced that he would take full responsibility for any ethical violations regarding egg procurement procedures and resign from his position at the *World Stem Cell Hub*. Hwang promised to return to the laboratory as a humble researcher and devote himself entirely to embryonic stem cell research.

Public interest in and outspoken support for Hwang Woo-suk increased greatly as these events unfolded. When Pittsburgh's Gerald Schatten announced he would stop collaborating with Hwang's team, membership in an online Hwang support group (*Daum Café's* "I love Hwang") doubled.<sup>22</sup> *PD Notebooks'* show questioning Hwang's research ethics, prompted such an intense public outcry that the show's advertiser-sponsors decided to publically withdraw all financial support for this investigative news program just three days later. Hwang Woo-suk's

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<sup>21</sup> *Business Wire* (November 23, 2005). Dr. Robert Lanza (vice president of ACT) and Ronald Green (chair of ACT's Ethics Advisory Board) stated, "It reflects how far the United States has fallen behind its competitors in this pivotal area and how much the lack of federal leadership has handicapped US efforts."

<sup>22</sup> See Cheon (2006:395).

supporters demanded an official apology from MBC and held demonstrations in front of the broadcast station's headquarters. Even Korean President Roh Moo-hyun publically criticized *PD Notebook's* journalistic ethics.<sup>23</sup>

Despite the overwhelmingly negative public response to their investigation, *PD Notebook* pushed forward with a plan to test samples of the Hwang team's "patient-matching" stem cells lines and compare their DNA analysis with those of the corresponding donors to determine if the cells were, in fact, "patient-matching." Hwang Woo-suk had agreed to this testing procedure during an earlier interview with *PD Notebook* and even provided some stem cell samples. However, the DNA fingerprinting results from these early samples were exceedingly difficult to determine. When *PD Notebook* requested additional cell samples, Hwang Woo-suk refused and held a press conference repudiating *PD Notebook's* request and suggested that the news media was not respecting the normal scientific verification process. In the meantime, YTN (a Korean News Service) revealed that *PD Notebook* had, itself, used tactics which transgressed the journalistic code of ethics during its interviews with Kim Sun Jong in Pittsburgh.<sup>24</sup> Apparently, Kim told YTN that he had misspoken during his interview with *PD Notebook* because he had been threatened. Thus, Kim retracted his previous claim that he had been ordered to doctor his laboratory research results and instead asserted that the data used in Hwang's *Science* papers was, in fact, reliable.

When the YTN's report on *PD Notebook's* violation of journalistic ethics surfaced, the South Korean prosecutor's office began investigating *PD Notebook*. A day later, MBC decided to completely abolish *PD Notebook*. Meanwhile, the *Biological Research Information Center* (BRIC) – an online site used by younger less-established Korean researchers – posted commentary revealing that some of the

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<sup>23</sup> Hong (2006:32).

photographs used as evidence of separate stem cell lines in Hwang's 2005 *Science* paper were, in fact, doctored duplicates of a single cell line. Questions about Hwang's research results had been posted anonymously on BRIC before and the U.K. journal *Nature* had called for a reexamination of Hwang's published results a few days previously. In the meantime, the Secretary of the Korean Ministry of Science and Technology (MOST) incorrectly assured the public that all scientific reports published in *Science* were fully verified before publication. However, after prompting from the Seoul National University (SNU) Medical School and other groups, the President of Seoul National University announced that the university would conduct its own internal investigation of Hwang's research results.

Hwang Woo-suk, who had been hospitalized in early December 2005, returned to his laboratory a day before Mizmedia Hospital's Roh Sung-Il held a press conference to announce that most, if not all, of the eleven patient-matching stem cell lines which were the bases of Hwang's 2005 *Science* article, did not exist. The next day, Hwang called a press conference to refute Roh's claims and explain that the "patient-matching" stem cells had either been contaminated or switched out for other cells in the lab. Then, Hwang assured the press that he did, in fact, possess the "original technology" to make patient-matching embryonic stem cells.

Roughly a week later, when the Seoul National University Investigative Committee announced its mid-investigation findings, they confirmed that the data presented in Hwang's 2005 *Science* paper had been altered and at least nine of the eleven "patient-matching" stem cell lines did not exist. Moreover, the SNU Investigative Committee determined that Hwang's team had, in fact, used many more human eggs than had been reported in their published research articles. Hwang announced that he would resign from his position at the SNU Vet School

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<sup>24</sup> *PD Notebook* had led Kim to believe that Hwang Woo-suk would be prosecuted for various violations and Kim would also be subject to prosecution if he did not cooperate with *PD Notebook's* investigation.

after the SNU Committee's mid-investigation report. When Hwang announced his resignation, he emphasized to the South Korean press and public that his patient-matching stem cell technology existed and belonged to all Koreans.

Disputes over the accuracy of the SNU mid-term investigation report arose among those who continued to support Hwang Woo-suk and his human embryonic stem cell work. Public fundraising efforts were organized to help Hwang continue his research even without government resources. Hwang supporters continued their public demonstrations and candle-light vigils in Seoul and throughout Korea. When the SNU Investigative Committee announced their finalized results, they concluded that the Hwang team had not produced any patient-matching stem cells.<sup>25</sup> Later, *Science* announced it would retract Hwang's 2004 and 2005 papers. That same day, Hwang held a press conference during which he suggested, once again, that the patient-matching human embryonic stem cells had been switched and replaced with other cells by junior researchers without his knowledge. He asked for six more months to recreate the missing stem cells. Meanwhile, the Korean Prosecutor's Office began conducting its own investigation into Hwang's research. Hwang's supporters also continued their public demonstrations. In early February 2006, a Hwang supporter set himself on fire in protest and died. In May 2006, the Prosecutor's Office announced the final results of their investigation which, for the most part, confirmed the SNU Investigative Committee's previous findings. Nevertheless, Hwang's devoted supporters continued their organizing efforts and demonstrations of support for Hwang Woo-suk and his research.

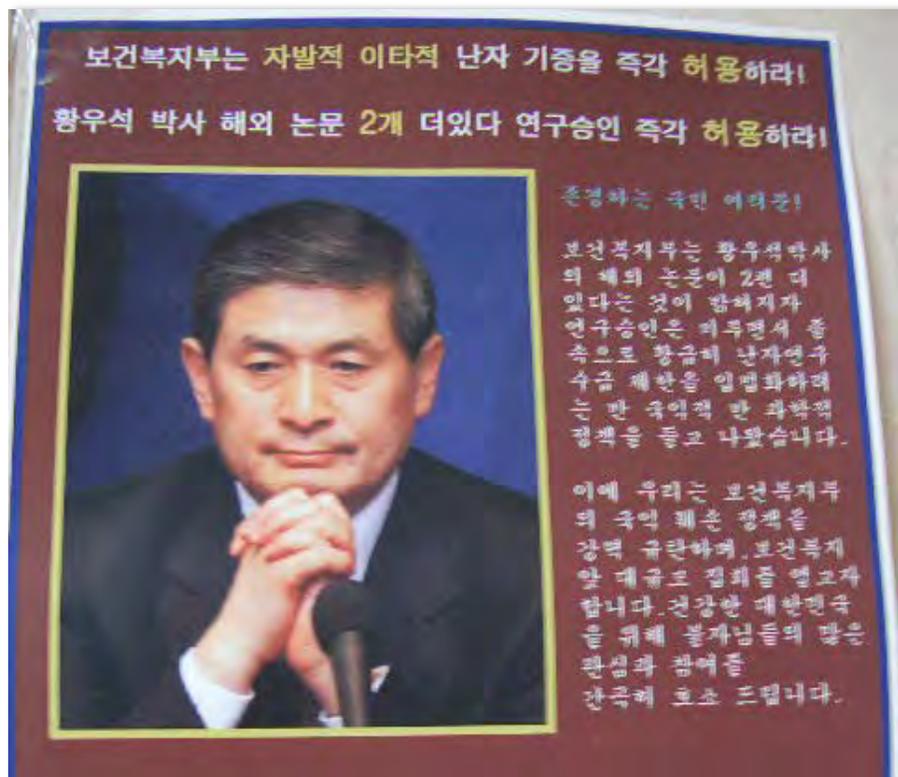
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<sup>25</sup> The committee concluded that Hwang's 2004 *Science* research paper results indicated that a human embryo had been produced by a process of parthenogenesis (self-fertilization of the human egg) rather than somatic cell nucleus transfer.

## Introduction: From the Temple Door to Global Biopolitics

I was swept up in a wave of energetic Buddhist involvement with an international scientific drama one day in June 2007 when I visited a Zen (*Seon*, 禪) Center for an unassuming day of fieldwork. It was the fifteenth day of the lunar month - a time when Buddhist services are often held – when I arrived at the center’s main temple complex in a satellite city of Seoul. As I approached the busy entrance, I was greeted by the stem cell scientist Hwang Woo-suk’s likeness plastered to the temple’s door.

Figure 1. Poster encouraging Buddhists at a Zen Center to rally at the Ministry of Health and Welfare and demand immediate approval of Hwang request for permission to conduct human embryonic research in South Korea.



The poster, with Hwang's handsome face, urged Buddhists to gather at a local Ministry of Health and Welfare office that afternoon for a large-scale rally. We should (or so the poster said) - "...be concerned and involved for the sake of the health of the Republic of Korea."<sup>26</sup>

After completing the customary half-bow offered before entering the Seon Center complex, I pushed through the heavy glass doors into the hustle and bustle of a fundraising bazaar already well underway. Comfortable loose-fitting clothing, white rice cakes, and bottles of gob-stopper sized dietary supplements from the Seon Center's North American branches were, temporarily, stacked high. The four character Sino-Korean compound *Ya-dan-beop-seok* (惹端法席), an expression of chaotic uproar, is said to have originated in similarly boisterous economic activities accompanying Buddhist services. Yet, despite my frequent encounters with the more energetic aspects of Buddhist assemblages, I had not anticipated that this morning's material and spiritual exchanges would lead to an afternoon of rallying for Hwang Woo-suk, a South Korean stem-cell scientist. Nor had I imagined that my initial step into the Seon Center that June would lead me back to an entangled intersection of scientific, religious, economic, affective and ontological investments which had erupted into controversy a few years previously.

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<sup>26</sup> See poster above (Page 1, Figure 1). The second full paragraph third sentence reads: 건강한 대한 민국을 위해 불자님들의 많은 관심과 참여들 호소드립니다.

In time, I would learn that the controversy surrounding Hwang Woo-suk's work - dubbed the South Korean Stem Cell Scandal<sup>27</sup> - and its aftermath had impacted the practice and understanding of science, Buddhism, and bioethics on a global scale. I would also come to realize that the tale of Hwang and, to a lesser extent, that of his South Korean supporters was becoming part of an archive of bioethical case studies or precedents which would, either knowingly or unknowingly, be incorporated into the rulebook of future skirmishes over the fluid boundaries of religious, biological, and economic spheres and push into the more rarified realm of basic ontology. Yet, despite this stem cell scandal's reverberating importance for stem cell science, science studies, Buddhist ethics, American bioethics<sup>28</sup>, and numerous other peoples and fields, I could not find an in-depth and ethnographically-informed analysis of Korean Buddhism's extended engagement with the veterinarian scientist, Hwang Woo-suk, his team of experts, and the transnational human cloning stem cell research story.

My pursuit of this subject - and my grappling with the broader resonances and thicker meanings of the Buddhist participation in human cloning and embryonic stem cell discourse - would take me farther afield than I ever imagined. And yet the Korean

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<sup>27</sup> The "South Korean Cloning Controversy" is another common headline phrase which appears in the English-language press (BBC News, etc.). The word "clone" carries particular implications which I will address briefly below.

<sup>28</sup> Charis Thompson's recent (2013) book - *Good Science: the ethical choreography of stem cell research* - clearly articulates the "lesson" scientists, bioethicists, and others were drawing from the Hwang Woo-suk stem cell research scandal, namely, that "good science" (the production of valueable scientific technologies and knowledge) requires "good ethics" (integrated bioethical oversight). This "lesson" which echoes long-standing insights that "ethics" is not something set aside and determined or dispensed with yes/no answers, but rather an integral (even if sometimes unspoken) aspect of much if not all human being, human interactions, human actions, and talk.

stem cell controversy would also, through the high-wired circuits of global science's economic system, bring me back to North America to examine another developed nation's democratic biotech bubble – that is the public politics of human cloning and human embryonic stem cell research in California. Ultimately, Hwang Woo-suk's transnational human cloning stem cell saga would point me towards a more basic and fundamental investigation of competing political ontologies since the definition of an “originary” consciousness (or sentient-otherness) seemed to be at stake. In a fascinating way, the global secular “free-market” competition between “world religions” became, in this South Korean (and also American) controversy, a public venue for testing a continually emerging conundrum of Humanism and Science – that is the increasingly persistent and sometimes uncanny erosion of the politics-of-the recognition-of-sentience and where sentience is ultimately located. And also of ethnographic interest is how such political ontologies and their accompanying “ethical acts” become intertwined with technology. Such questions are bound up in the relations between “mind” and “matter” and how connections between “mind” and “matter” are imagined or understood as we will see below.

## **On the Road: Bodhisattvas Rallying for “the Health of the Republic of Korea”**

After entering the bustling Seon Center, I weave my way through the fundraising bazaar and head towards the main Dharma hall<sup>29</sup>, which is aglow with warm wood floors, brightly painted beams, and a golden Buddha sitting, luminous, in the mid-morning sun. The worship space is full of laypeople; mostly women - mothers and grandmothers - packed in seat cushion to seat cushion. Most are here for the full-moon service and many have travelled more than two or three hours one way to reach the Seon Center after feeding husbands and children and checking up on aging in-laws or other elders. In Korean Buddhist communities, it is customary to call these married laywomen by the lofty Sanskrit moniker Bodhisattva (*bosal-nim*, 菩薩님), while unmarried youth (boys and girls) are referred to as Dharma friends or helpers (*beop-u-nim*, 法友님). The Bodhisattva laywomen, nuns, and I - along with a few elderly or unemployed laymen and children - chant sutras in vernacular Korean and sing Buddhist hymns while occasionally rising to bow towards the altar and each other. It is an ordinary yet nevertheless inspiring routine. Today, however, before the service ends, I see an unfamiliar young woman reaching for the microphone held by the presiding nun.

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<sup>29</sup> In most Korean Buddhist contexts, this would be the *Dae-ung Jeon* (大雄殿) which houses the main Buddha figure (本尊佛像).

“Have you seen the signs for Dr. Hwang Woo-suk’s stem cell research rally?” the woman asks after a short greeting. “Practice,” she tells us, “is an important part of Buddhism, and it is extremely important that you practice what you truly believe.” Next, the woman urges the Seon Center’s Bodhisattvas and all others gathered here today, to join a rally of citizens demanding that Dr. Hwang be allowed to continue his cutting-edge stem cell research. A bus sits outside the Seon Center ready and waiting to ferry us to the rally the woman explains and then she urges all to attend the rally and finally relinquishes the microphone with a familiar Buddhist salutation: “May you all become Buddhas.”

The morning Buddhist service (*yebul*, 禮佛) closes with a few more parting words and gestures. Laywomen stack and stow their seat cushions and move downstairs towards a basement cafeteria. Outside the Center, a rally-bound bus filling up with Bodhisattvas in high spirits. When I arrive and climb onto the bus, the driver and rally organizers are busily welcoming all aboard. Despite the gravity of our serious mission - to demand government approval for Hwang’s human embryonic cloning research – we, bus riders, are buoyed up with a distinctly recreational air of anticipation.<sup>30</sup> Bodhisattva Rose, a Seon Center grandmother appears out of seemingly nowhere. She grabs me with her large strong hands and pulls me further

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<sup>30</sup> At the time, a joke about an apocryphal “grandmother” (Kr. *Halmoni*) testing her wits on a Korean T.V. game show, was popular. When asked to name a place where people gather to be entertained by song and dance, this woman reportedly replied, “tour bus!” instead of the correct answer, “cabaret.” Indeed, as is the case with most private charter buses in Korea, our rally bus was equipped with a karaoke sound-system, a mounted T.V. as well as plenty of tasseled curtains, and other accoutrements which indicated we were fully prepared for an afternoon of adventure.

back into the cavernous yet cozy vehicle. “This is my friend...” Rose shouts an introduction over an on-board sound system which is now blaring Korean trot. “This is my friend, Bodhisattva Yuna. Here, sit down, here.” Rose vanishes, again, only to return with a full, round, and yet un-nibbled rice cake.

And then we are on the road. Between chews of rice cake and my persistent questionings, Bodhisattva Yuna admits to being fuzzy on the details of the stem cell research uproar but believes, nonetheless, that Dr. Hwang has been wronged. Before more can be said, a rally organizer stands up to test a karaoke microphone. Electronic trot recedes into the background as the organizer asks for our complete attention. After a few more words of welcome and praise, she speaks to spur Hwang Woo-suk’s research forward, once again, with a rallying call to action, in case we have, momentarily, forgotten the task at hand.

“Today,” the rally organizer declares with prophetic determination, “we will go to the Ministry of Health and Welfare to demand the immediate approval so Dr. Hwang can resume his research.” She pauses for a smattering of cheers from the back of the bus. “Dr. Hwang,” she explains, “... was a very enlightened monk in a previous life. If he had become a monk, again, in this life we would all support him in his endeavors but in this life he became infatuated with science. Since he is so devoted to his scientific research, Dr. Hwang lost his family and lives, humbly, in a rental

apartment which he pays for month-by-month. Dr. Hwang lives like this because of his selfless devotion to this research.”

The organizer tells us that there are very few Buddhists in the upper levels of scientific research in South Korea. “Most scientists are Protestant Christians or Catholic,” she explains and then suggests that if a scientist like Hwang Woo-suk starts to become prominent and successful, the Catholics or some other Christian groups will begin to interfere with his/her research and impede scientific progress. “Yes,” our bus organizer resolutely declares with a defiant tension breaking through into her voice, “...Dr. Hwang is being persecuted because he is a Buddhist scientist.”

With an emphatic motion towards the bumpy backseat of the rally bound bus, the organizer introduces another younger-looking woman who wears a large floppy hat with dark lunar sunglasses. A light-colored cloth sash stretched diagonal across her chest displays the words - Bioethics Law (*saengmyeong yullibeop*, 生命倫理法). The organizer explains that this fellow rallier had been Catholic all her life but decided to abandon her religion because of the Catholic Church’s strict prohibitions on stem cell research. “You see,” the organizer continues, “Dr. Hwang currently has the stem cells but the Catholics are after him...if Hwang is prohibited from conducting research for two more years this is the equivalent to a lifetime of inactivity in the field of stem cell research.” From the back of the bus, the ex-Catholic Hwang supporter chimes in with

a rhythmic rallying cry: “Immediate approval for (Hwang’s) research!”<sup>31</sup> Her chant, which is muffled by the roar of passing traffic, is uttered again – and amplified this time - by the organizer with the microphone. Then the bodhisattvas join in and chant in unison as if on cue: “Immediate approval for (Hwang’s) research!”

After an awkward but brief pause to catch her breath, our rally bus organizer professes - “Dr. Hwang is the most brilliant Buddhist scientist in the world today and he must continue his research, here, in Korea!” She warns us, “Don’t think of this as someone else’s concern - this is our issue and we must be attentive!” And then, in a softer but still insistent tone, our speaker-organizer opines: “Dr. Hwang is a *Seonjisik* (善知識)... a true *Seonjisik*,” *Seonjisik* is a Sino-Korean translation of a Sanskrit word<sup>32</sup> used for great teachers who illuminate the roads leading to enlightenment and thus help edify other sentient beings.

### **“Why are they still protesting?” - the Presentation of Public Pathologies**

The narratives the organizer rehearses before the travelling Bodhisattvas on our rally-bound bus are a cacophonous combination of previous reports, rumors, and rationales which helped “make sense” of the 2004-2005 Hwang scandal while,

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<sup>31</sup> 연구승인 즉각 승인하라!

<sup>32</sup> The Sanskrit word – *kalyāṇamitra* – is also translated as 善友 · 親友 · 勝友 · 善親友 Kim Kwan-eung (1988:832).

simultaneously, defending and fortifying Hwang Woo-suk's scientific claims.<sup>33</sup> The sources of these narratives were varied but many segments (and even some stories) can be traced back to Hwang Woo-suk, the scientist himself, who spoke frequently at press conferences and during interviews, appeared on T.V. and radio shows, offered public lectures, and published popular prose. Thus, it is not completely surprising that, South Korea's mainstream media served as a vehicle for disseminating sections and segments of similar sounding pro-Hwang claims and rationale even up into the year 2006 when the Seoul National University Investigative Committee announced its final findings.<sup>34</sup> A South Korean daily newspaper reporting on Hwang Woo-suk's press conferences could easily introduce and even spread the idea that Hwang Woo-suk's research results had been tampered with or somehow unjustly altered by shadowy foes, when Hwang Woo-suk's press-conference statements were published in newspaper articles.

By June 2007, however, when I boarded a rally bound bus at a Buddhist Center, South Korean mainstream media coverage and some of the public controversy and confusion over the "Hwang scandal" had cooled. Starting in 1998, the Korean mainstream media had all too-eagerly reported on Hwang's scientific triumphs. But by 2007, however, the scandalous air had cleared and Korea's mainstream media, some

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<sup>33</sup> Needless to say these narratives did much more than simply bolster support for Hwang Woo-suk's human embryonic stem cell research as will be seen in subsequent chapters.

<sup>34</sup> The SNU Investigative Committee announced its mid-investigation findings on December 23, 2005. Hwang Woo-suk promptly and publically questioned these findings. The final results of the SNU Committee were then announced on January 10, 2006.

public commentators, and scholars were busy proffering prepackaged psychological explanations to help account for or otherwise rationalize the persistence of Hwang supporters who continued to believe and even insisted that Hwang Woo-suk possessed the “originary technology”(woncheon gisul, 源泉技術) of cloned human embryonic stem cells. These highly visible pro-Hwang advocates were complicating the mainstream media discourse – that is the “public consensus” that Hwang’s claims had been proven irrefutably false - with their public demands that Hwang Woo-suk’s “originary technology” be recognized and his cloning research resumed. Thus, the “(democratic) pathology” of persistent pro-Hwang beliefs and grass-roots advocacy became a topic of mainstream media discourse, as well.

This public dis-ease was treated by various commentators who reassuringly appeared in the public domain to identify or diagnosis the problem with explanatory expertise more compatible with neo-liberal era internationalism. Hence, much of the wide-spread citizen (thus “democratic”) support for Hwang’s research which swelled up in 2004 and 2005, as well as the ongoing or persistent faith of Hwang’s active supporters was re-interpreted via theories developed in the psychological sciences. For example, the “Stockholm syndrome” – that is the empathy or emotional attachment experienced by hostages who identify with their captors – was invoked by the mainstream commentators to explain the activities of new voluntary citizen

groups demanding government approval and recognition of Hwang's research.<sup>35</sup> Kim Jongyoung, a sociologist interested in understanding the views of Hwang's more active supporters, observed that the term "Cognitive Dissonance" was also frequently invoked in explanations of the seemingly irrational and ignorant demands of Hwang supporters who had, by 2007, come to be publically known by the derogatory moniker - Hwang's crazed fans (*Hwang-pa*).<sup>36</sup> During his research (which began in November 2005 and concluded in May 2007), Kim found that many active and vocal advocates of Hwang Woo-suk's human embryonic research were at least as informed, if not better informed about the details of both the Hwang team's scientific work and related developments than mainstream" commentators. Advocates of Hwang's embryonic work, however, interpreted the events surrounding Hwang's research – as well as the import of this research - quite differently from mainstream media commentators.<sup>37</sup>

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<sup>35</sup> Kim, Jongyoung (2007:83-84). Kim observes that the "Stockholm Syndrome" was invoked by one of Hwang Woo-suk's research partners, Moon Shin Yong (a fertility expert and medical doctor) in January 2006, and subsequently spread like rapidly in the South Korean mainstream press as way of explaining South Korean citizen's ongoing support for Hwang Woo-suk.

<sup>36</sup> See Kim, Jongyoung (2007). In this particular "mainstream" diagnostic discourse, Hwang supporters were described as simply ignoring or rejecting any new information which conflicted with their belief in Hwang. In this way, Hwang supporters were said to have overcome "Cognitive Dissonance" by denying "the facts". See also Kim (2009).

<sup>37</sup> *Ibid.* Kim Jongyoung makes many insightful observations but, nevertheless, limits his own analysis by underestimating psychological factors and by too-quickly dismissing the possibility that the continued support for Hwang Woo-suk and Hwang's research could be an expression of fascist or "pseudo-facist" tendencies. Instead, Kim focuses on the overarching sociological and (primarily domestic) political factors which, while illuminating, doesn't do enough to shed light on important religious and postcolonial dynamics which deeply influenced many of Hwang's supporters. Below, in this dissertation, I will articulate the import of global and domestic religious politics and the impact of religious ontologies as well as broader postcolonial influences which shaped the South Korean public response to the Hwang scandal. My analysis is broadly based on fieldwork in Korean Buddhist Communities, on-and-off for almost a decade, as well as interviews and conversations conducted between June 2007 and March 2008 (and in the summer of 2009). To better situate my analysis, I also analyze the introduction of U.S. and U.K. "artificial human" (man-made-men, 人造人間) and "human clone"(複製人間) discourse as it was presented to the Korean public via Korean newspapers

My conversations and interviews with both lay and ordained Buddhists – beginning in June 2007 and continuing through to March 2008 and then for a couple of months in the summer of 2009 – led me to believe that, contrary to claims that South Koreans no longer supported Hwang Woo-suk and his stem cell research, people’s understandings of Hwang’s research was – at least among most Buddhists I spoke with - much more supportive than would be expected. A poll conducted by *SBS News* on July 2008, showed that over eighty-eight percent (88.4%) of South Koreans thought Hwang should be given a chance to resume his cloned human embryonic stem cell research.<sup>38</sup>

Figure 2. A banner hoisted by the Jogye Temple Laity in Insadong, Seoul. They assert that Hwang has “Original Technology” and urge permission be given for Hwang to resume his research immediately.



starting in the Japanese colonial period (more specifically in the 1920s and 1930s) up until the beginning of the twenty-first century.

<sup>38</sup> Kim, Yumi (2008).

Roughly five or six months before the Bodhisattva and I boarded the bus bound for the Ministry of Health and Welfare Office to join a rally demanding government approval for the resumption of Hwang's research, the *Joong-ang Daily* newspaper reported that more than seventy six percent (76.8%) of the South Korean public supported the resumption of Hwang's research.<sup>39</sup> Thus, even though theories about the pathology of vocal Hwang advocates were being circulated, the demands made at Hwang supporter rallies were generally supported by the public.<sup>40</sup>

Many of the Buddhists I met in 2007, 2008 and 2009, expressed a weary sense of frustration over the derailment of Hwang's human embryonic cloning research and Korean stem cell science. Lay Buddhists who supported Hwang's research and were either too busy or too exhausted to participate in pro-Hwang rallies would often express their disappointment over the upset of Hwang's scientific progress with a weary or cynical nod to Korea's post-colonial positioning and/or destructive political-religious-power jealousies inside South Korea.<sup>41</sup> Some Buddhists, as I will explain in

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<sup>39</sup> *Ibid.*

<sup>40</sup> See also Leo Kim (2013). In the July 2008 *Joong-ang Daily* poll, respondents selected reasons why they believed Hwang Woo-suk should be given a chance to restart his human embryonic research. The most popular reason selected by 58% of the respondents who approved of the resumption of Hwang's work, was "because (Hwang Woo-suk) is a scientist much needed in the stem cell research field (줄기세포 연구에 없어서는 안될 과학자). Twenty four percent of these respondents answered – "because (Hwang Woo-suk) can make (cloned human embryonic) stem cells (줄기세포를 만들 수 있어서). Only nine percent replied "because (Hwang Woo-suk) has been penalized long enough(충분한 자숙)". These answers suggest that the general South Korean public approval for the resumption of Hwang's research is not, generally, based on a desire to compromise with vocal Hwang advocates or promote "public peace." See Kim, Yumi (2008).

<sup>41</sup> Leo Kim (2013:348) gives one of the clearest descriptions of the South Korean public perception that internal jealousy must have played a substantial role in Hwang Woo-suk's scientific upset and defeat. In Kim's semantic network analysis of Hwang supporter's internet dialogues, he contrasts this more "domestic" or "inner-looking" public critique with all

Chapter 5, interpreted the scientific practices of cloned human embryonic stem cell research via certain select patterns or structures of Korean Buddhist worldviews and even hinted at startling links and overlaps between stem cell research and a modified (Seon) “Buddhist soteriology”.

Public rallies supporting Hwang’s cloned human embryonic work would attract several thousand active participants in 2005 and early 2006. Although no official South Korean Buddhist position on Hwang’s research was announced, monks and sometimes nuns in prominent positions in the Buddhist community as well as active and prominent Lay Buddhists made comments at public Buddhist-related events and organized new Buddhist-affiliated groups dedicated to supporting Hwang Woo-suk’s research (for example, the Assembly of Korean Lay Buddhists for Dr. Hwang Woo-suk<sup>42</sup>). Moreover, some prominent long-standing Buddhist organizations – like the Korean Buddhist Orders Association (KBOA, *hanguk-bulgyo-jeongdan-hyeop-uihoi*, 韓國佛教宗團協議會)<sup>43</sup> - released reconciliatory public statements about the events unfolding around the Hwang Woo-suk science scandal. Buddhist leaders and laity

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too-blunt and stereotypical assertions that “Korean nationalism” is the primary reason why the Korean public supported Hwang and his research. Leo Kim’s analysis is refreshing, however, his contrast between outward-looking or “positive” nationalism and inner-looking (negative) denouncement of the Korean people’s so-called “national traits” (in this case, jealousy), misses the interconnectedness of these two affective nation-focused explanations. Both of these explanations are a part of Korea’s paradoxical and pervasive post-colonial position – an affective and economic complex which has been explored by Chakrabarty (2000) - and others - in the South Asian political-historical context.

<sup>42</sup> 황우석 박사를 위한 한국재가불자들의 모임. This group (“Assembly of Korean Lay Buddhists for Dr. Hwang Woo-suk”) was composed of twelve other smaller groups and held numerous press conferences to publically announce its position on the events unfolding around the Hwang Woo-suk incident.

<sup>43</sup> The KBOA was first formed in 1969 as an organization bringing the leadership of South Korea’s various Buddhist Orders together. Currently, the KBOA includes 28 different Buddhist Orders in South Korea. For a list, see <http://www.kboa.or.kr/>. Last accessed 12/20/2014.

who were less enthusiastic or even opposed to Hwang's research published some articles in Buddhist magazines and journals and attended public discussions of Buddhist and Bioethics to express their views. However, they represented a minority position and were much less visible in Buddhist publications (Buddhist newspapers, magazines, journals, etc.) circulating in South Korea and in the unfolding public discourse.

As the Hwang scandal unfolded, and official fact-finding reports were publicized, and more time passed, the intensity and size of public protests aimed at defending and protecting Hwang and his cloned human embryonic stem cell research diminished. Organized public rallies for Hwang continued but, according to Kim Jongyoung's observations, after March 2006 the number of active participants declined from several thousand people to a few hundred persons per rally.<sup>44</sup> Around this time, in early April 2006, the Buddhist Bioethics Research Committee (*byeondae-bulgyo-saengmyeong-yulli-jeongnip-yeongu-wiwonhoi*, 現代佛教生命倫理定立研究委員會) – a research committee<sup>45</sup> (composed of Buddhist monks, laymen and laywomen) formed within the largest South Korean Buddhist Order (Jogye Order) – published a large single volume compilation of their findings, suggesting that cloned human embryonic stem cell research conflicted with the Buddha's teachings. This Buddhist

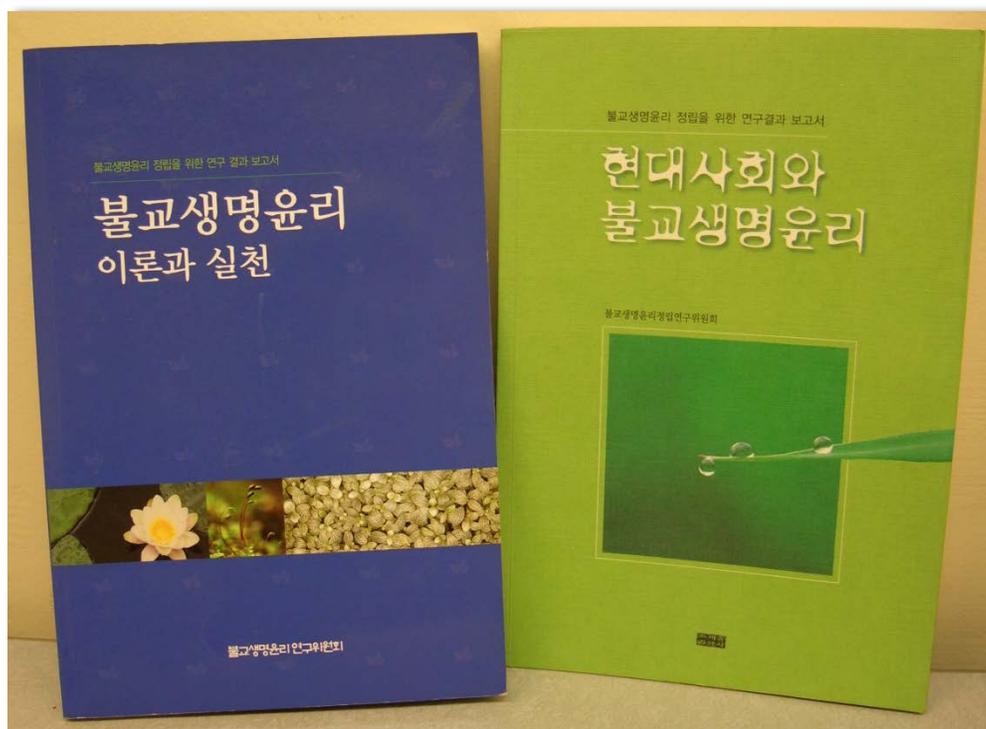
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<sup>44</sup> Kim (2009:678).

<sup>45</sup> Many of the final committee members were university professors and represented various areas of expertise.

Bioethics Research Committee’s book<sup>46</sup> – which was edited into a slimmer and less-technical version published a year later to help educate the general Korean Buddhist public – informs readers that the bioethical positions articulated within the book are not the Korean Buddhist Order’s official position and represent just one opinion among many expressed.<sup>47</sup> In other words, the Buddhist Bioethics Committee is explicit that their book should not be confused with a blanket orthodox stance.

Figure 3. Books published by the Buddhist Bioethics Research Committee



<sup>46</sup> See *Hyundae Saboe-wa Bulgyo Yulli* (*Modern Society and Buddhist Ethics* 現代社會와 불교 生命倫理) published by the Joggye Order Publishing Company (曹溪宗出版社). The slimmer “general-reader” or educational version - *Bulgyo Saengmyeong Yulli: I-ron kwa shilcheon* (*Buddhist Bioethics: Theory and Practice* 佛教生命倫理: 理論과 實踐) – was published in April 2007 by the Joggye Order Publishing Company (曹溪宗出版社), as well.

<sup>47</sup> See *Bulgyo Saengmyeong Yulli: I-ron kwa shilcheon* (2006:11). The text reads: 본 보고서에 기술된 많은 견해들 중 일부 견해에만 주목하여 이를 종단의 공식 의견인 양 일방적으로 이해하지 않기를 희망한다.

A reshuffling of the members of the Buddhist Bioethics Research Committee and a restructuring of this committee's management and research methods seems to have taken place, early on as the Hwang incident was beginning to unfold - between the end of 2004 and the beginning of 2005. In early June 2005, a South Korean national daily newspaper reports that one prominent member of the Buddhist Bioethics Committee – an Ordained monk and Professor of Buddhist Outreach and Sociology (*pogyo-saboibak*, 布教社會學) at Joong-ang Sangha University (*Joong-ang Seungga-dae*, 中央僧伽大) who had been advocating systematic research into Buddhist Bioethics not long after the publication of the Hwang team's first *Science* article (in Feb. 2004)<sup>48</sup> – planned on publicly presenting the South Korean Buddhist position on Hwang's research by the end of 2005.<sup>49</sup> However, given the ongoing and outspoken public support for Hwang's research expressed by prominent Buddhist monks, it is not surprising that a daily Korean leftist newspaper reported that the Buddhist Committee had been forced to delay the presentation of their findings because of the strong pro-Hwang stance taken by the Korean Buddhist Order's Head.<sup>50</sup>

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<sup>48</sup> Staff (February 28, 2004) “조계종 총무원 사회부장 미산 스님은...“앞으로 체계적으로 연구해 책자도 발간하고 신도교육에도 이를 반영할 계획”

<sup>49</sup> Eom, Juyeop (June 8, 2005) “대한불교 조계종 ‘불교생명윤리정립을 위한 연구위원회’의 생 명조작분야 연구위원인 중앙승가대 미산 스님은...“올 연말까지 이에 대한 종단의 입장을 정리할 것”이라고 말했다.”

<sup>50</sup> The *Hankyoreh Newspaper* reported that the source of this information was a member of the Buddhist Bioethics Research Committee itself but subsequently this person publically denied the *Hankyoreh* report.

Not long after the Buddhist Bioethics Committee's book appeared, eight senior Buddhist monks publically signed a petition supporting Hwang Woo-suk. This petition urged the resumption of cloned human embryonic stem cell research and was reportedly sent to the South Korean President's office.<sup>51</sup> A number of other South Korean Buddhists – both ordained and lay - publically dedicated large sums of money, acres of land, and even their own eggs, to help Hwang resume his research. Support for Hwang Woo-suk was clearly a religious as well as a sociological, economic, cultural and psychological phenomenon.

At a fall rally for Hwang Woo-suk in 2007, I meet a young medical doctor, while I tagged along with the ralliers who were marching - with their flags and banners held high - to a nearby subway station in one last display of support for Hwang's "orginary technology" or research before they dispersed to board underground trains heading home. The young doctor, who was finishing up her residency at a public health clinic, was both puzzled and exasperated. After politely inquiring about my reasons for participating in the rally, she partially relaxed into the exhaustion felt after a long day of seeing patients. "Why are they *still* protesting?" she asked out loud.

We met several times again later. I tried to provide the big-sisterly advice she was seeking but mostly ended up listening. She was excited about joining an upcoming group medical mission organized by an international Christian association

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<sup>51</sup> Bak, Intak (April 27, 2006).

and experiencing more of the world. She yearned for this international experience but, at the same time, felt bound by her fledging medical career in South Korea which would require a big investment of time and severely limit her geographical mobility. Moreover, she would soon become the most economically successful person in her family and keenly felt that she should help her widowed mother who had struggled to put her through medical school. Needless to say, I did not have any easy or satisfying answers for the doctor who, with the urgency of youth, felt her life slipping away into lives of others (her patients and her family). I am struck, in retrospect, by the overlap between the young medical resident's frustration and the frustrations fueling many of the people who rallied for Hwang Woo-suk. Both felt bound by the demands of larger national structures which they were, nevertheless, irreconcilably attached to. Both the young medical doctor and many of Hwang supporters fantasized about the power of an international otherness which remained elusively beyond their reach. The young doctor, however, (who was full of desire to experience and somehow become part of that international beyond) anticipated the opportunity - even if only unsatisfyingly brief - of reconciling her conflictedness by participating in an international medical mission which was Christian-affiliated.

## **At the Ministry of Health and Welfare Office**

It is uncomfortably hot when our bus stops in front of the Ministry of Health and Welfare Office. As we trade air-conditioned comfort for a scorching sidewalk, our guide urges us, once again, to focus on rallying for Hwang Woo-suk's research since the Buddha teaches that practice (*shilcheon*, 實踐) is more important than prayers (*gido*, 祈禱). Hand-held fans decorated in slogans are distributed and pro-Hwang placards have already been attached to metal railings which protect pedestrians from traffic. A nearby convenience store has put out plastic chairs and tables for customers and a few rally participants take up residence under the large shade-giving umbrellas atop these tables.

The rally is well organized. Important persons – like invited speakers and several Buddhist monks and one nun – are ushered towards the shade and given frozen water bottles. People line the narrow sidewalk as shoppers emerge from a Department Store not far away. A well-decorated portable stage has emerged from a truck with clean white siding which makes the slogan painted on its side – “Patient-matching stem cells are the originary technology of the Republic of Korea” – stand out.

Figures 4 and 5. Truck stage used at a rally before the Ministry of Health and Welfare Office supporting Hwang Woo-suk's research. The slogan painted on the truck asserts that patient-matching stem cells are the originary technology of the Republic of Korea.



A distinctively dressed and coiffured woman, perhaps in her mid or late thirties, stands nearby the truck. She is wrapped in a long cloth banner that urges the South Korean government to protect the rights and interests of the people<sup>52</sup> and carries a Korean flag. When she climbs up on stage during an interlude, she tells the small crowd - “We, Korean citizens, should be able to use Dr. Hwang’s stem cell treatments, here, in Korea without having to travel abroad for medical therapies or being forced to fork over large bundles of money to pay for foreign patents.” Later, I learn that “Atom” has been a near constant presence at pro-Hwang rallies for some time. When I speak with her directly, Atom recalls both the physical and emotional exhaustion she felt while protesting, every day, on a narrow swath of earth for two years straight – a location not far from the Seoul National University’s Veterinarian College where Hwang Woo-suk had worked. “Yes,” Atom told me, as the crowd of participants and on-lookers waned in the late afternoon, “...some people think that we, supporters of Hwang’s research, are only ‘crazed fans’ (*Hwang-pa*) but other people nod their heads in agreement and even applaud our work.”

On the well-equipped truck stage, inspiring speeches are interlaced with energetic music - including a live saxophone performance. Bodhisattva Rose, who has been cheering with the other laywomen sitting on the now tarp-lined pavement, rises up to dance while waving a colorful banner which reads: “Defeating difficult-to-cure

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<sup>52</sup> 정부는 국민의 권리와 이익을 지켜야 할 의무가 있다!

diseases is genuine bioethics.”<sup>53</sup> I speak with a laywoman I recognize from the bus. She believes that many people have been tricked by the false media coverage about Hwang’s research. In modern societies, she explains, almost one hundred percent of our information comes from the television and newspapers. “It is all too easy to be brain-washed,” she observes. With a lingering sense of disbelief, the laywoman tells me about one afternoon when a Christian marched straight into her Buddhist Temple and shouted – “Believe in God! Believe in God!” - Over and over again. “That woman had definitely been brainwashed,” she concludes.

Figure 6. Banner on sidewalk railing at a rally for Hwang’s research. Notes that public opinion polls suggest 76.8% of Korean citizens hope Hwang resumes his research.



<sup>53</sup> 난치병을 치유가 참 생명윤리다.

A new speaker is now center stage. “We must let Hwang resume his research quickly – every day counts!” he urges and mentions a T.V. investigative news show, *Chujeok 60 bun*, which produced a full episode revealing some “lesser-known truths” about the Hwang Woo-suk controversy. The speaker explains that this episode, which raises questions about the activities of Hwang’s American research partner (Gerald Schatten), was completely cut out of the KBS (*Korean Broadcasting System*<sup>54</sup>) broadcast lineup. The speaker suspects that powerful people at KBS – some of whom are Catholic - blocked the episode for nefarious reasons. He explains that Hwang’s American partner had attempted to clone human-like primates in his lab in America but failed miserably. After his repeated failure, the American scientist had reportedly declared – ‘(cloning) is not something humans can do; only God has this power.’

As the rally speaker speculates about how U.S. scientists’ undermined Hwang Woo-suk’s research, I move towards the tables where the two Buddhist monks and nun are sitting. Several times, already, the truck stage organizers have encouraged the ordained to give a speech. The monks brush the offers aside but, nevertheless, express support for Hwang’s research when I question them directly after introducing myself. Reluctant, perhaps, to appear overly involved in a controversial public affair before a stranger, like myself, one monk, nevertheless explains: “Since Christians believe in

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<sup>54</sup> KBS is a public-service Korean broadcast station and thus may be associated, by some, with the South Korean government.

God they make this kind of research difficult.” A moment later, the nun tells me – in a soft but strong voice, “I don’t really know all that much but I do know that our nation is weak and American is strong.”

For many South Koreans, particularly Buddhists, the U.S. has long been associated with Christianity. Moreover, during South Korea’s early years of “state-building” and the period of South Korea’s rapid industrialization, the U.S. was not infrequently described as an advanced Christian nation. As Bongseok Joo has noted, many in South Korea – and this includes South Korean Buddhists at least up until the 1990s – could not readily imagine non-Asian Americans eschewing Christianity for Korea’s backward Buddhism.<sup>55</sup> I recall being treated with great suspicion while asking some questions in a country-side temple in 1999 before the publication of a Korean-language biography of a “White Buddhist” American disciple of a South Korean Seon Master. After the release of this best seller, I was never again mistaken for an American missionary studying the competition. Nevertheless, despite the clear change in attitude I experienced while visiting Korean Buddhist temples, Korea’s colonial and post-colonial religio-cultural and economic reality - which has oft entangled “Western” (in particular U.S.) modernity, Protestant Christianity, and the push for technological, cultural, economic, and international-political advancement is not so easily forgotten or undone.

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<sup>55</sup> Joo (2011:618-621).

## Revitalizing Korean Buddhism with Regenerative Science

Although Buddhism on the Korean peninsula (as well as in other places in the world) has historically been an influential vehicle for the importation of advanced technologies and associated with powerful medicine and the healing arts<sup>56</sup>, modern scientific knowledge and medicine was more closely linked with Christian missionaries who founded many of Korea's modern medical institutions. An American Presbyterian medical missionary<sup>57</sup> opened the first modern medical hospital on the peninsula in 1885 during the Joseon (朝鮮, 1391-1910) Dynasty. Demand for this type of medical treatment was so high that, subsequently, many protestant missionaries opened clinics and focused on medical outreach. In addition to medical work, Protestant Missionaries provided access to modern education by opening “western-style” schools in Korea. Protestantism was adopted by key Korean reformers<sup>58</sup> - mostly nationalists who advocated modernization – and was called a “civilized religion.”<sup>59</sup> Overall, the number of Protestant-affiliated private schools in Korea greatly outnumbered all other religiously-affiliated educational institutions.<sup>60</sup>

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<sup>56</sup> See Baker (1994). Or for a Korean language primary source material example see Nam Jin-gak (2004).

<sup>57</sup> Horace Allen (1858-1932).

<sup>58</sup> For example, Yun Chiho (尹致昊, 1864-1945), An Chang Ho (安昌浩, 1878-1938) among others. See Cho, Kyuho (2013:104-119) and Wells (1990) for a more extended discussion.

<sup>59</sup> (文明의 宗教) See Cho, Kyuhoon (2013:104).

<sup>60</sup> At the time of the Japanese annexation of Korea (in 1910), almost forty percent of the private schools in Korea were religious schools. Of these 801 religious schools, 5 were Buddhist affiliated, 46 were run by Catholics, and 750 were affiliated with Protestant Christian organizations. See Cho, Kyuhoon (2013: 216).

Buddhism, in Korea, lost much of its status and political power during the Joseon Dynasty as Confucian thought and values were increasingly privileged. Confucian literati dominated the government and, eventually, Confucian values and practices became increasingly influential even among lower-born men. Subject to various repressive measures and formally divorced from politics, Buddhism came to be supported primarily by (lay)women. The present-day Korean practice of calling Buddhist laywomen Bodhisattvas is often explained as having originated during these difficult times. Although there were notable exceptions, for the most part, Joseon Era Buddhist monastics occupied a low social status. The early twentieth century Buddhist reformer Han Yong-un (韓龍雲, 1879-1944), who we will encounter again in Chapter Two, accused Korean Buddhist monks as being “stupid and weak” and “the lowest sort of humanity.”<sup>61</sup> Moreover, Han berated monastics for being “captivated by superstitious beliefs”.<sup>62</sup> This view of Korean Buddhism as a backward and superstitious religion for impoverished uneducated rural folk would continue to haunt the Buddhist Sangha and laity into the early twenty-first century.

Despite early Christian missionary efforts, less than one percent Korea’s population in the south, identified as being Protestant in 1945.<sup>63</sup> However, by the 1980s, the self-identifying Protestant Christian population had grown to represent at

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<sup>61</sup> Han (1910, 1923) 朝鮮佛教維新論 or *Joseon Bulgyo Yusinron*. Translated by Tikhonov and Miller (2008:75). Han describes Joseon Buddhist laity as “composed only of a minority of Korean women, with men being as rare among the lay followers as phoenix feathers or unicorn horns.”

<sup>62</sup> *Ibid.*

<sup>63</sup> Kim (2006:309-311).

least twenty percent of South Korea's total population. As Kyuhoon Cho observes, the support of Protestant Christianity under the United States Military Government in Korea (USMGIK, 1945-1948) and the subsequent Syngman Rhee regime (the First Republic, 1948-1960) contributed greatly to Protestantism's position as a mainstream religion in post-war South Korea.<sup>64</sup> Preferential treatment was given to Protestant churches when the property of former Japanese colonizers was redistributed and, as Incheol Kang has illustrated, Protestantism became a sort-of 'de facto state religion' of the Rhee government.<sup>65</sup> Kang notes that thirty eight percent of the ministers and vice-ministers of Syngman Rhee's government were Protestant Christians while less than five percent of the South Korean population identified as Protestant at the time.<sup>66</sup>

During the cold war, in South Korea, Protestant churches benefited from their association with anti-communist ideology. Protestant Christians who fled or defected from North Korea also played a role in making Korean Protestantism an anti-communist stronghold.<sup>67</sup> Moreover, early contacts and connections with Protestant Christian organizations and communities in the United States helped provide support for the, at the time, small number of South Korean students attending educational institutions in the U.S., as well as Korean immigrants. Thus, in South Korea,

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<sup>64</sup> Cho, Kyuhoon (2013:107).

<sup>65</sup> Kang, Incheol (1997).

<sup>66</sup> Kang (2006:162, 176-177) See also Cho, Kyuhoon (2013:107-108).

<sup>67</sup> See Cho, Kyuhoon (2013:108) especially footnote #64 for an example of how Protestant Christian policies continues to be influenced these factors.

Protestant Christianity became linked to social, economic, and political mobility as well as to education and opportunity. In fact, the Christianization of Korean diaspora networks - as well as the fact that, for several decades, South Korea was the only East Asian nation with a substantial population of Christians - has contributed to the common but misplaced assumption that, today, most South Koreans are Christian. In fact, South Korea has a multi-religious population and Buddhists occupy a not insubstantial percentage of the total population.<sup>68</sup>

Buddhism, in South Korea, fared better after the First Republic, with the subsequent developmental dictatorships, but remained a “backward traditional religion” appealing primarily to “under-educated” women. Buddhist monastics and laity, who fought against state violence and the repression of political dissent, were subject to targeted arrests and re-education camps as were other dissenting citizen leaders. In particular, when the former military general, Chun Doo-hwan sought to consolidate his regime’s power by arresting his opponents and detractors, confiscating

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<sup>68</sup> Korean 2005 government statistics indicate that Buddhists comprise 43 percent of South Korea’s religiously affiliated population; Protestants made up about 34 percent and Catholics represent roughly 21 percent. Catholics and Protestants are rarely grouped together in South Korea and their social and political stances often differ. Many of the South Korean Buddhist nuns I have spoken with over the years have expressed an affinity for Catholicism as Catholicism also has a visible and dedicated community of female monastics. Furthermore, Catholic churches and priests have played a highly visible role in supporting South Korea’s democratization movements and this, along with absence of “corruption scandals” within the Korean Catholic context has made Catholicism one of Korea’s “least corrupt” religious organizations. Yet, despite the affinity Korean Buddhists often feel for Catholics, the Korean Catholic Church’s resolute objections to Hwang Woo-suk’s human embryonic stem cell research, marked a clear difference (or according to some, even a political divide) between the Korean Buddhist Sangha(s) and the Catholic Church. Korean Buddhist complaints usually have centered on Evangelical Protestant Christians who adopted aggressive proselyting practices not Catholics. The most controversial and widely publicized (and illegal) actions taken by some Protestant groups include the vandalism of Buddhist temples and statues (which are often considered public national treasures) as well as the defacement of Tangun statues (the mythic founder of the Korean nation) displayed in public places. Thus, both Catholic and Protestant Christianity could be accused of violating the nation and national sovereignty in a way that Korean Buddhism could not. This, as mentioned above, is linked to Korean Buddhism’s general lack of international organizational connections.

their property, and forcibly subjecting them to re-education at the Samcheong Re-education Camp (*samjeong-gyoyukdae*, 三清教育隊), certain Korean Buddhist leaders and temples were targeted in what has been dubbed the “10 · 27 *Beomnan* (法難)”. Believed to be, partly, a response to Jogye Order’s Head, Venerable Wolju (宋月珠)’s opposition to Chun’s grab for power, Buddhist temples around South Korea were overrun with military troops at 4am on October 27, 1980.<sup>69</sup> This incident could be seen as highlighting, once again, the particular difficulties Korean Buddhist Orders had in maintaining some semblance of independence and internal self-governance in spite of an official State-Church divide.

Without the international organizational structures and global connections of Catholicism, or even Protestant Christianity, the opportunities that Korean Buddhists could successfully counter such government actions were extremely limited.<sup>70</sup> Moreover, since the Korean military government’s arrests and abductions were made under the guise of “purifying Buddhism of corrupt elements” even the legal status of the state’s crackdown could be creatively argued and hence justified. President Chun (of the Fifth Republic, 1980 – 1988), being Buddhist himself, supported particular

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<sup>69</sup> See Yu, Eung-o (2005).

<sup>70</sup> Since Chun Doo-hwan did not enjoy the same support within South Korea as his predecessor Park Chung-hee, he needed the support of the U.S. government. Undoubtedly a similar South Korean military crackdown on Christianity would likely have jeopardized Chun’s American support.

temples and monks which exacerbated political conflict within Jogye Order Buddhism as well as encouraged Buddhist collaboration with Chun's unpopular regime.<sup>71</sup>

Thus with its long-standing association with "backward and superstitious" religious practices as well as a feminized laity<sup>72</sup> - as well as being more isolated than Catholicism and Protestant Christianity - South Korean Buddhism subjected to state intervention<sup>73</sup> and repression in particularly intimate ways. Moreover, these interventions and co-optations have shaped and intensified internal Buddhist political conflicts (most notably, conflicts between married and celibate clergy) well into South Korea's post-democratization period. Furthermore, given Korean Buddhist, as well as most Korean citizens', relative international isolation during the 1960s and the 1970s (due to a repressive state apparatus as well as poverty), the western counter-cultural revolution which embraced Asian Religions (including Buddhism), was not really felt in South Korea until the 1980s when international travel and imported materials became more accessible to ordinary South Korean citizens.

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<sup>71</sup> More recently, questions have been raised about the relationship between the (at the time) dominant Seon (Zen) soteriological theory of sudden enlightenment and South Korean military governments like Chun Doo-hwan's regime. See, for example, recent articles by Sogang University Professor and Jesuit Priest Senecal Bernard whose criticism of Seon Subtism (especially that of Venerable Seongchul) have garnered interest in the Korean language press. For an overview of Ven. Seongchul's Subtist ideology and subsequent debate see Yun, Woncheol (2010).

<sup>72</sup> This pairing of "national-cultural tradition" and "women" is seen in many post-colonial contexts.

<sup>73</sup> During the First Republic, Buddhism underwent a "purification movement" in which married-monks who occupied various Buddhist posts and temples during the Japanese colonial period were replaced with celibate monks. Syngman Rhee and the South Korean courts are said to have played a large role in encouraging this post-colonial "purification" of South Korean Buddhism. Moreover, the post-colonial government's management of "tradition and cultural heritage" properties, meant that the state played a significant and often unwelcomed role in controlling Buddhist sites and practices.

Starting in the 1980s, South Korean bookstores began carrying books on “Indian Spirituality” – the musings and teachings of various Indian and other gurus popular in “the West.”<sup>74</sup> Rhi has described this ongoing phenomenon as South Korea’s reproduction of Orientalism.<sup>75</sup> I recall being somewhat surprised at the number of South Koreans I meet in the late 1990s who practiced Rajneesh’s dynamic meditation and Maharishi transcendental meditation, as well as the many English-language and Korean-language bilingual translations of Rabindrath Tagore’s poems alongside Herman Hesse’s *Siddhartha* on the shelves in South Korean bookstores.

Along with *Siddhartha*, Rajneesh’s interpretations of Buddhist sutras (like *The Heart Sutra*, *The Diamond Sutra* etc.) introduced Buddhism in a more accessible and global English-language format to South Korean university students and others.<sup>76</sup> As university students began visiting and studying in India, South Korean Buddhist monks, nuns, laywomen, and men began to visit Buddhist sites in South Asia. South Korean Buddhist outreach programs were also launched in India, Sri Lanka, etc.<sup>77</sup> This, wider-spread emerging public sense of Buddhist-Internationalism (beyond East Asia), combined with the South Korean state’s push for globalization (*segyehwa* 세계化, see Chapter two), and Buddhist pride in the presence of well-educated and elite

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<sup>74</sup> Joo, Bongseok (2011:621). Joo mentions Paramahansa Yogananda (1893-1952), Jiddu Krishnamuri (1895-1986), Maharishi Mahesh Yogi (1917-2008), and Osho Rajneesh (1931-1990).

<sup>75</sup> Rhi (2002).

<sup>76</sup> Joo, Bongseok (2011:621).

<sup>77</sup> One of the first of such programs was the *Jongto Society* (淨土會)’s Dalit outreach *Join-Together-Society* established in India in 1994. According to the Jongto Society website (<http://www.jungto.org/> last accessed 9/10/2014), this Buddhist group made their first pilgrimage to India in 1991 and first Dharma lecture tour of the U.S. was conducted in 1992.

“White Buddhist” American disciples of South Korean Seon Masters in the late 1990s, gave South Korean Buddhists a sense of new-found confidence and, increasingly, a feeling of overcoming accusations of backwardness.

With the 1960 and 1970 counter-cultural adoptions and adaptations of “Asian Spiritualities”, a long-standing but mostly forgotten discourse about the compatibility of Buddhism and science returned with a vengeance.<sup>78</sup> This discourse, which had first begun during the Victorian period (1837-1901) in Europe and America, emerged as Buddhism became increasingly fashionable in elite intellectual circles.<sup>79</sup> In Chapter three, I will present and analyze some examples of this kind of talk about the compatibility of Asian religions and science. I will discuss the molecular biologist Gunther Stent’s essay<sup>80</sup> about Western (Judeo-Christian) human cloning fears which was published in *Nature* in 1974. I will also introduce the more recent early twenty-first century musings about human cloning written by the Princeton University Biology Professor and science media pundit - Lee Silver.

In South Korea, a wealth of relatively recent books and articles linking Buddhism and science - especially Buddhism and biology - can be found. These publications - including both Korean language translations of English-language books

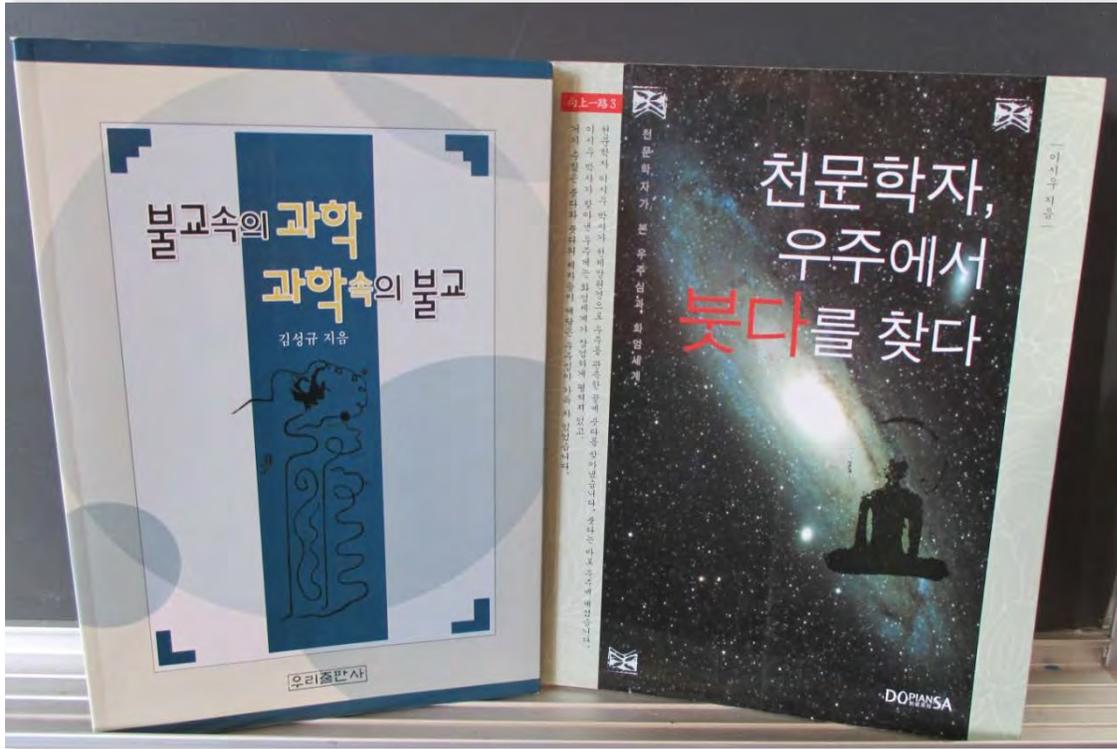
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<sup>78</sup> Donald Lopez traces the second-coming of this discourse about Buddhism’s compatibility with Science to the 1960s and mentions Fritjof Capra’s 1975 bestseller *The Tao of Physics*. Lopez (2012) and elsewhere.

<sup>79</sup> Lopez (2012:10). Lopez locates the emergence of this discourse in the 1860s.

<sup>80</sup> Stent’s 1974 *Nature* essay - “Molecular biology and metaphysics” - does not address Buddhism fully, but focuses instead upon “Chinese Religions” which, for my present-purposes, does not affect the general argument about “Asian Spirituality” and “Science” compatibility discourses.

Figure 7. Books published in Korea linking Buddhism and science.  
 On the right: *An Astronomer Finds the Buddha in the Cosmos*.  
 On the left: *The Buddhism inside Science and the Science inside Buddhism*.



and books written by South Korean scientists, Buddhists, amateur philosophers as well as fortune-tellers - set the stage for the South Korean Buddhist support for Hwang Woo-suk's human cloning and stem cell research. Given the continued outspoken concern among some reform-minded Korean Buddhists that certain “superstitious” religious practices continue to persist in Korean Buddhist circles today<sup>81</sup> (and particularly among Buddhist women), the mixing of scientific

<sup>81</sup> Nathan (2010).

terminology, fortune-telling technologies and Buddhist figures, symbols, and concepts continues prove quite marketable and even lucrative, at times.

Moreover, it is not surprising that – given the global success of the Korean Wave (*hallyu*, 韓流) – that Korean Buddhists would try to reclaim newly revalued cultural capital of “Koreanness” to transform previously unflattering characterizations of a “traditional backwards Buddhism” into a source of value.<sup>82</sup> Indeed, with the demand for “Asian Spirituality” rising in South Korea in the eighties, Korean monastics sometimes felt left out or neglected.<sup>83</sup> However, with the renewed and ongoing interest in “Eastern religions” and the proliferation of Korean language materials on Buddhism and science, Korean Buddhists increasingly envisioned themselves as becoming an important part of South Korea’s cultural export capacity. Relatively recent government investments aimed at equipping South Korean Buddhist Temples with facilities and cultural programs for hosting foreign tourists (via the Temple-stay Program<sup>84</sup>), have encouraged and rewarded Buddhist temple’s international-outreach aspirations. The U.S.A. has been re-imagined as a land ripe and ready for Buddhist propagation. Thus, advancement through a return to and a

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<sup>82</sup> The “national history” and “cultural properties” of Korean Buddhism had previously prompted accusations of “backwardness” and “superstitious ignorance” - as well as giving a “reason” for the state’s management and interference with Buddhist facilities through “cultural heritage laws”. However, with the renewed political power and sense of the international and domestic value of “Asian Spirituality” (re)discovered in the eighties, various Korean Buddhist Orders have successfully negotiated (and exchanged) the “global value” of “tradition” for state-funding to enhance Buddhist temple facilities to run a “Temple Stay Program” where (since 2002) Korean Buddhist temples have hosted both domestic students and international tourists and thus increased the scope of their outreach programs.

<sup>83</sup> See Joo, Bongseok (2011) for example.

<sup>84</sup> For a brief overview of this program - which began in 2002 – and its evolution see Kaplan (2010).

simultaneous active propagation or marketing of Korean Buddhism's cultural-religious-tradition seems almost inevitable with the post-Korean Wave slogan of globalization and economic expansion - "That which is the most Korean is also the most universal."

### **Stem Cell Research: Three Religions Two Colors?**

"Stem Cell Research: 'Three Religions Two Colors (*samjong-iseak*, 三宗二色)' Buddhism Supportive Position Prevalent. Catholicism Against It. Protestantism Negative"<sup>85</sup> is the title of a report published in the *Buddhist Newspaper* – the Jogye Order's official newspaper - in mid June 2005. To give readers a brief overview of how the major organized religious groups in South Korea are responding to Hwang Woo-suk's internationally acclaimed work, the *Buddhist Newspaper* report must paint with a broad brush. The Roman Catholic Church's stance towards cloned human embryonic stem cell research (like that of Hwang's team) has already been officially announced. In fact, several days earlier, a Korean Archbishop in charge of the Catholic Parish serving the Seoul National University campus area where Hwang worked as a professor, publically expressed his opposition to human cloning and declared the destruction of human embryos during stem cell research, murderous.<sup>86</sup> The Archbishop urged Hwang to halt his human embryonic research immediately but

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<sup>85</sup> "즐기세포 연구 "三宗二色" 佛 긍정 우세, 天 반대, 基 부정적." Bak, Gi-ryeong (June 14, 2005).

<sup>86</sup> See Kim, Keun Yeong (June 4, 2005) and Bak, Sangmi (June 11, 2005).

an hour long private debate between these two prominent men, did not (unsurprisingly) resolve their differences.<sup>87</sup>

The highly centralized international ecclesiastical hierarchy of the Roman Catholic Church helped ensure a unified official Catholic opposition to Hwang Woo-suk's human embryonic research. Finding a unified or singular Protestant Christian response to the ethical questions raised by Hwang's work would prove much more difficult. The above mentioned *Buddhist Newspaper* report anticipates that a Protestant Christian position will be announced by The National Council of Churches in Korea (*hanguk-gidokgyohoi-hyeop-uihoi*, 韓國基督教教會協議會) or KNCC soon in 2005.<sup>88</sup> And, although the KNCC did cautiously announce its approval of Hwang's human embryonic research in July 2005, it did not represent a unified South Korean Christian stance.<sup>89</sup> The KNCC is, indeed, one of the oldest and one of the largest national church councils in South Korea.<sup>90</sup> However, an even larger national Protestant Council<sup>91</sup> – the CCK or Christian Council of Korea (*hanguk-gidokgyo-chongnyeon-baphoi*, 韓國基督教總聯合會 or *hangichong*, 韓基總) – had already publically announced

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<sup>87</sup> See Bak, Sangmi (June 11, 2005) and Ryu Jaekwang (June 16, 2005).

<sup>88</sup> Bak, Gi-ryeong (June 14, 2005). Bak writes: “한국기독교 교회협의회는 지난 9 일 ‘배아줄기세포 연구와 기독교 윤리’를 주제로 토론회를 가졌다. 백도웅 목사는 토론에 앞서 “기독교의 명확한 입장을 정리하기 위해”라고 밝혀, 조만간 기독교의 단일한 입장이 나올 것으로 전망되고 있다.”

<sup>89</sup> The KNCC statement expressed its support for cloned human embryonic stem cell research only such research is used for the good of treating and curing difficult diseases (“우리는 오로지 난치병과 불치병의 치료와 같은 긍정적인 경우에 한해서만 이 연구를 받아들일 수 있다”). See Kim, Daewon (July 15, 2005).

<sup>90</sup> The KNCC is said to have been founded during the colonial period in 1924 and then restarted again in 1946 during the United States Military Government of (South) Korea (USMGIK or 在朝鮮美陸軍司令部軍政廳, 1945-1948).

<sup>91</sup> Myung-Sahm Suh, personal communication.

their stance against the cloning of human embryos more than four years previously in 2001.<sup>92</sup> Moreover, the Korean Christian Bioethics Association (*hanguk-gidokgyo-saengmyeong-yulli-hyeophoi*, 韓國基督教 生命倫理協會) or the KCBEA also took a strong stance against human embryonic research around this time and later joined the Catholic Church in actively opposing the Hwang team's human embryonic research.<sup>93</sup> Thus, at the national level at least, South Korean Protestant leaders were divided over the ethical and religious implications of Hwang's research.

However, *Christian Today*, a Korean Christian newspaper, reported that a June 2005 survey, of roughly a thousand South Korean Protestants who attended Seoul area mega-churches, found that sixty-one percent approved of Hwang Woo-suk's cloned human embryonic stem cell research.<sup>94</sup> Some Korean Protestant leaders expressed surprise and dismay at the mega-church survey's results.<sup>95</sup> Certain Buddhist elites as well, had expressed concern over Korean Buddhists' support for Hwang's human embryonic research. However – unlike the Protestant Christian situation in Korea – no well-publicized organized Buddhist stance against Hwang's research had been taken.

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<sup>92</sup> Ham, Tae-gyeong (September 27, 2005). The CCK and other Christian groups made their announcements while a new Bioethics and Safety Act was being discussed by law makers and at public hearings. See Song, Yongchang (March 3, 2001).

<sup>93</sup> <http://www.cbioethics.org/intro/his.asp> (Last accessed 12/27/2014).

<sup>94</sup> Staff (June 21, 2005).

<sup>95</sup> See Staff (June 20, 2005).

The same day that *Christian Today* published the mega-church attenders' survey results, the *Dharma Treasure Newspaper* – a Buddhist newspaper known for publishing articles supporting Hwang Woo-suk - also told its Buddhist readers about this unexpectedly high percentage of Protestant Christian approval for Hwang's human embryonic research.<sup>96</sup> Later on, Buddhist Lay groups, Buddhist Monks and Buddhist affiliated publications<sup>97</sup> would loudly and publically criticize Christians (both Catholic and Protestant) for “interfering” with the Hwang team's research. However, at this earlier date, Buddhist sympathy and support for human embryonic research was expressed in more ecumenical terms.

Hwang Woo-suk, who had converted from Catholicism to Buddhism in 1987, made a point of speaking with Catholic, Protestant, and Buddhist leaders in South Korea to answer their questions and explain his research to the public. As mentioned above, Hwang met with the Korean Archbishop who had publically urged Hwang to stop his research. This well publicized yet private meeting between a religious leader and a world-famous scientist was later described as resulting in a “conversation with true emotion” (*jeonggam* 情感 *inneun daehwa* 對話) in which both men agreed to share the opinion that “life must always be respected”.<sup>98</sup> An editorial in *Christian Today*

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<sup>96</sup> Staff (June 21, 2005).

<sup>97</sup> For a good example, see Bak, Intak (November 25, 2005) which includes the full text of a declaration signed by a number of Buddhist groups.

<sup>98</sup> Staff (June 20, 2005). “두 사람 사이에 상호존중을 바탕으로한 정감있는 대화가 오갔으며 '어떤 경우에도 인간의 생명을 존중해야 한다'는 데에 의견을 같이했다.”

observes that - “everyone was deeply moved by the idea that a world-renown scientist would humbly seek out a religious leader to explain his scientific research and ask for greater understanding...”<sup>99</sup> In North America, the *National Catholic Reporter* ran a brief note (“Archbishop, scientist meet”) about this equally brief event in Seoul which, the *Catholic Reporter* noted, was initiated by Hwang and “failed to narrow the gap ... between the Catholic Church and Hwang.”<sup>100</sup> In South Korea, however, this meeting – imagined as a moment of communion and fellowship between Hwang and the Archbishop – carried enough allure and personalized dramatic power to entice affective sensibilities and shape the mediation of public sentiments.<sup>101</sup>

Hwang Woo-suk and his human embryonic research team, who had become scientific celebrities in South Korea, also meet with the Protestant National Council of Churches in Korea (KNCC) to respond to their questions before the KNCC announced their support for Hwang’s research. Not long after the KNCC announced their conditional approval, a *Christian Today* report described the meetings between KNCC representatives and Hwang Woo-suk as more like an exchange of friendship than a serious discussion or debate.<sup>102</sup> Nevertheless, previous *Christian Today* editorials had made a point of scolding other Protestant groups – like the Korean Christian

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<sup>99</sup> *Ibid.* “세계적인 권위를 가진 과학자가 겸허히 종교지도자를 찾아가서 자신의 연구에 대한 이해를 구하는 장면은 온 국민을 감동케 했다.”

<sup>100</sup> Staff (July 1, 2005: 4).

<sup>101</sup> *Ibid.* This potential impact was not lost on the editorial staff of *Christian Today* who noted that the meeting between Hwang and the Archbishop could very well become nothing more than a “press play” (언론플레이).

<sup>102</sup> Kim, Daewon (July 12, 2005).

Bioethics Association (KCBEA) which had opposed human embryonic research early on - for describing Hwang's research as being "experiments on living beings (*saengche silbeom*, 生體實驗)" or "an ethically criminal act violating the moral injunction against murder "(*sal-in*, 殺人).<sup>103</sup>

But, moving beyond - at least for the time being - the more specific semantic details which marked the place of general public discourse about Hwang's human embryonic work, it is clear that Hwang Woo-suk's own public self-presentation and his description of his scientific work, is – for the most part - expressed in a broadly inclusive and ecumenical tone. This is illustrated most clearly in Hwang's inspirational and autobiographical essay which was published (along with the life story of another South Korean scientist, Jaecheon Choi) in the hardcover book - *My Stories of Life (Nanui Saengmyeong Iyagi)*. In this book, Hwang's autobiographical narrative portrays his Buddhist practices and beliefs with an actively accommodating approach to embracing Christian and other (Confucian, etc.) religious values, beliefs, and affiliations. In other words, the thoughts and values Hwang presents in his own personal narrative are not, for the most part, exclusively Buddhist and express a shared and intermixed, overlapping or even syncretic conceptualization of moral actions and meanings.

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<sup>103</sup> Staff (May 30, 2005). "...살인하지 말라는 도덕법을 범한 윤리적 범죄행위."

The intermixing or overlapping understandings of the three religious teachings – Confucianism, Buddhism, and Daoism – have a long history in Korea<sup>104</sup> and thus it is not surprising that *My Stories of Life* opens with a passage from the *Analects of Confucius* (*non-eo* 論語), describes Hwang’s Buddhist experiences, and celebrates the effortless strength of nature. Christianity is most clearly added into the mix through the paintings and drawings of Kim Byung Jong, a devout Christian, whose evocative work revolves around life, nature, and Jesus Christ. In *My Stories of Life*, Kim Byung Jong’s paintings are placed besides the text of Hwang Woo-suk’s autobiographical narrative, and thus add another element of intertextual and ecumenical pluralism to Hwang’s story about stem cell science.

For example, Kim Byung Jong’s simple broad-brush paintings of Jesus, which highlight the raw physicality and fleshy incarnation of human suffering, are positioned next to Hwang Woo-suk’s reflections on science and his desire to help those who are suffering. In his essay, Hwang eschews moral abstractions and instead confesses - “Life has never been an abstraction to me.”<sup>105</sup> Such sentiments resonate with Korean Zen or Seon which insists that enlightenment cannot be understood through words or conceptual abstractions while also pointing to Jesus in the flesh - as God incarnate - in Christianity. Like Jesus or the Buddhist Bodhisattvas who materially appear in this

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<sup>104</sup> The most obvious historical example of this would be 崔致遠 (857-?) of Shilla but the practice continues into the present day in various religious movements and more modern discourses about religious pluralism and ecumenicalism.

<sup>105</sup> Hwang; Choi; Kim (2004:31) “...내게 생명은 추상이 아니다.”

world to help those suffering, Hwang Woo-suk presents himself as living a scientific life devoted to easing human suffering from disease.

Other examples of a similar sort of poetics of religious pluralism can be found in Hwang's autobiographical essay in *My Stories of Life*. For example, the pure and unblemished character of Jesus and Jesus's sin cleansing tears comes to overlap with a Buddhist emphasis on the importance of purity of thoughts, intentions, and actions. To varying degrees, these overlapping tropes (re)appeared in religious discourse which urges public support for Hwang's human embryonic research. For example, a Christian man who frequented rallies to support Hwang Woo-suk's work later explained his feelings for Hwang as follows: "I felt it was amazing that someone as kind and pure as Hwang Woo Suk actually existed in this world. I thought he was purer than Jesus Christ."<sup>106</sup> Similar remarks about the purity of Hwang Woo-suk's motives and the singularity of his focus on curing disease were expressed by his Buddhist supporters. Thus the (paradoxically) contagious ideal of purity – articulated early on in *My Stories of Life* and elsewhere - was employed by both South Korean Christians and Buddhists to describe Hwang Woo-suk's character, his intentions, his actions, and ultimately his scientific research. Furthermore, the idea of "miraculous healing" and Jesus's healing miracles in Christianity – most iconically illustrated in the

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<sup>106</sup> Kim, Jongyoung (2007:105). "황박사님과 같이 착하고 순수한 사람이 세상에 있나, 신비롭게 느껴지기도 했어요. 예수보다 더 순수한 분이라고 생각했죠."

promises that Hwang Woo-suk and his team's stem cell research would help "the crippled" or disabled walk – surfaced frequently in South Korean news media and, most notably, was adopted as the visual design commemorating Korean human embryonic stem cell research on Republic of Korea postal stamps. The 2005 commemorative stamp shows a man rising from his wheel chair and jumping for joy before embracing a woman alongside a rendering of a magnified human egg undergoing microinjection – an iconic picture which Sara Franklin has described as signifying the new "global biological."<sup>107</sup> Such hope-filled visions and pledges of miraculous healing, as well as promises made to disabled persons and their family, not infrequently appeared in Hwang's comments and his autobiographical essay in *My Stories of Life*. Moreover, the narrative of a popular South Korean musician (Gang Wonrae) who was paralyzed in a motorcycle accident and his hopes for Hwang's research added elements of emotion and celebrity advocacy which resembled those of the well-known embryonic stem cell research advocate, Christopher Reeves. Such promises of healing or restoring human bodies also resonated with ideas about Buddhism's healing powers, as we will see later. This overlap and the Christian support for Hwang's research - the mobilization of Protestant symbolism and discourse to bolster Hwang's stem cell research - did not preclude a Korean Buddhist understanding of cloned human embryonic research from emerging with varying

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<sup>107</sup> Franklin (2005).

degrees of consciousness and complicity. Indeed, the overlapping religious symbolism and support appears to have, in some cases, encouraged the development of Korean Buddhist human embryonic stem cell research discourse.

However, there is little doubt that Hwang Woo-suk's most productive and long-lasting engagement with a religious community was with the communities of South Korean Buddhism. Hwang published an article on human cloning and stem cell research in the magazine *Buddhism and Culture* in early 2003. In 2004, Hwang Woo-suk's lecture, titled "Cloning Technology and Buddhism", was filmed by the Buddhist Television Network (BTN) in a Dharma Hall and broadcast, repeatedly during the

Figure 8. Buddhist TV Network (BTN)'s Invited Special Lecture,  
Hwang Woo-suk: "Life Cloning Technology and Buddhism"  
(*Saengmyeong Bokje gwa Bulgyo*, 生命複製과 佛教)



Chuseok (秋夕) holidays. Hwang also received the Jogye Order's "Award for Lay Buddhists" (*buljadaesang*, 佛者大賞) in 2004 and one week after the *Buddhist Newspaper* article – "Stem Cell Research: Three Religions, Two Colors" – appeared in 2005, the head of the Jogye Order Venerable Beopjang (金法長, 1941-2005) visited Hwang Woo-suk's laboratory to offer his support and encouragement.<sup>108</sup> This would not be the only time the head of South Korea's largest Buddhist order would publically visit Hwang Woo-suk - Venerable Ji-gwan (李智冠, 1932-2012) visited Hwang with encouraging advice when the scientist was hospitalized later in December 2005 - but it is a good example of the mutually reinforcing exchange which developed between Korean Buddhist leaders, the Korean Buddhist community and the stem cell scientist, Hwang Woo-suk.

### **Mahayana Buddhist Ontologies and Synthetic Biology**

"Considering Buddhism has placed an emphasis on the virtue of compassion, it has a long tradition of practicing medicine. I think Buddhism can make sense out of biotechnologies. The religion is the best fit Hwang could opt for," said Dongguk University Professor of Buddhist Studies Kim Yong-Pyo.<sup>109</sup> As shown above and in the chapters that follow, there are many reasons which help explain why Hwang Woo-

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<sup>108</sup> Eom, Hyeon-gyeong (June 20, 2005).

<sup>109</sup> Kim, Tae-gyu (May 24, 2005).

suk found support for his research in the Korean Buddhist community. One particularly suggestive reason - a reason which seems to occasionally surface in the growing but often redundant popular literature on Buddhism and science - is the idea of an agreement or, at least, commensurability – or the possibility of creating commensurability – between Mahayana Buddhist ontologies and emerging scientific practices and ideas which challenge any clear, unbridgeable, or absolute distinction between sentient bio-matter and non-sentient matter.

Evelyn Fox Keller has noted that in biology in general and more specifically in the developing field of synthetic biology, the equation of synthesizing or making (bio-engineering) with understanding has become particularly salient.<sup>110</sup> Moreover, the idea of engineering organisms with generalizable or standardized parts and procedures has attracted the attention of certain synthetic biologists and the media. For example, Drew Endy, a “biological engineer”, seeks to make bio-engineering easier by developing standard biological parts, tools, and procedures which can be used to make organisms with different functions that can be used for different purposes. As Endy explained in an online scientific magazine, “I’m not interested in pursuing any one application in biotechnology right now, because I want them all to come true, and I want them all to come true on a time scale that’s relevant to me. I can be very direct....”<sup>111</sup> Such mass industrialized, interchangeable, and functional or use-focused

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<sup>110</sup> Keller (2009). Keller notes that this is not necessarily true of all types of synthetic biology as the field is quite broad.

<sup>111</sup> Endy (2008).

visions of synthetic biology bring to mind Martin Heidegger's pessimistic view of science and technologies transformation of the material world.

In "The Question Concerning Technology," Martin Heidegger uses the phrase "standing-reserve" to describe objects which exist only as ordered material that has been stripped of its autonomy or otherness and exist only for human use or consumption.<sup>112</sup> Although Heidegger invokes the image of an airplane on a runway as an example of "standing reserve", it is easy to imagine a similar "standing reserve" being created for and available to scientists – or more specifically "biological engineers" - who could use these standard biological components or parts to modify or assemble organisms for particular purposes. This vision has, at least partially, been realized with the invention of "Bio Bricks" – standardized DNA plasmids – in 2003. Moreover, Drew Endy is known for his role in developing a community devoted to making such bricks.<sup>113</sup>

While such developments seem to be far removed from the soteriological concerns of Mahayana Buddhism, the question of the connection between "mind" and "matter" or "materiality" seems to frequently become a point where these two discourses become linked and commensurability is created. The Buddhist doctrine of transmigration is sometimes linked to the conservation of mass – the material-based theory of evolution is (mis)interpreted as an evolution of spirit or "mind." Donald

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<sup>112</sup> Heidegger (1993:322) explains: "Whatever stands by in the sense of standing-reserve no longer stands over against us as object."

<sup>113</sup> Keller (2009:296).

Lopez refutes these loose matter-to-mind mappings or translations (discursive constructions of commensurability) by arguing that “Buddhists are strict dualists” on the question of the relation of mind and matter.<sup>114</sup> Lopez states, “...it is a fundamental tenet of Buddhist philosophy that cause and effect must be of the same substance.... Thus, mind and matter, although closely related in many ways, are different substances, such that mind cannot be produced from matter.”<sup>115</sup> And while this stance poses problems for the idea of a strictly atheist or materialistic evolution, it nevertheless seems generally true that the various forms of “matter” and “mind” are less fixed in Buddhist ontologies within and between the various Buddhist realms<sup>116</sup> than in traditional Christian theologies where paradise is being with God (who is something more than human). Thus while Heidegger – at least in “The Question Concerning Technology” – sees “standing reserve” or the lack of essential material difference – in a pessimistic or even dystopian vein, Buddhists have generally celebrated the idea living in realms pure consciousness – in realms without form (*musaeek-gye*, 無色界) or without certain “essential” differences (without sexual difference or food consumption, for example).<sup>117</sup> Thus, it seems, perhaps, that living

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<sup>114</sup> Lopez (2012:69)

<sup>115</sup> *Ibid.*

<sup>116</sup> Also, for example, between “animals” and “human beings” as transmigration into different types of sentient beings can occur even within the same realm.

<sup>117</sup> For example, Lopez (2001:19-20) recounts what he dubs a “widely known creation myth” in which the first humans could fly, were self-illuminating, did not require food and without “the marks of gender.” However, the ingestion of a substance made them heavy so that they could no longer fly and they produced material waste and acquired sexual differences. This correlation of increased materiality and material differences with more suffering, more desire, and lower

in a more material world that could very roughly approximate a world of “pure consciousness” – a human world in which material can change into various different forms but, nevertheless, shares an underlying sameness or, in the realm of bio-engineering, an identical “Bio Brick” mass - seems loosely commensurable with – although not the same as - the idea of being or existing in a realm without form<sup>118</sup> or, perhaps be imagined as being both human and a Buddha, that is, perhaps, “enlightened” in some Mahayana approximations of the word.

Imagine a world or realm - one in which the various forms, shapes, and the properties and functions of “matter” may be easily altered or “bio-engineered” in accordance with an individual person’s needs and desires. This is not a realm of formlessness. Nevertheless, perhaps the realm in which matter can be easily altered is like the aforementioned the Heideggerian image of a place with plenty of “standing reserve”, but in a more optimistic vein, and with limitless “standing reserve” for everyone. How would such a world be described in Buddhist terms? For many (Lopez included), such a world would be securely located inside the realm of desire (*yok-gye*, 欲界) and be a part of that realm. To exist in such a realm would be to be bound by sensual desire.

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levels of consciousness is also seen in the fact that the highest realm in the Buddhist universe is the “realm of formlessness” or the *mu-seak-gye* (無色界).

<sup>118</sup> Perhaps the analogy of the experience of varying degrees of weightiness or gravity or even speed would make the comparison more imagineable.

Some, however, might see things differently and imagine such a world full of “standing reserve” as suggestive of – or, at least, facilitating and thus encouraging - a different economy of desire and an enlightened way-of-being – which moves beyond the Realm of Desire which in (Mahayana) Zen or Seon Buddhism, is said to be identical to the Realm of Enlightenment. Or perhaps such a world full of “standing reserve” would be likened to a Buddhist Pure Land where jewels and beautiful things are so abundant there is no hoarding or selfish desires and beings can hear edifying words (the Buddhist Sutras) all the time and thus, can more easily attain enlightenment. This brings us, once again, to questions about the complex ways in which “mind” and “matter” are said to be related – and understood as being related - in Buddhism.

### **One Buddhist’s View on Human Cloning: Connecting “Mind” and “Matter”**

A constant blur of activity, Venerable Cheong-ah lives by a 27 hour day clock with little if any sleep. A graduate of a prestigious cosmopolitan school in Seoul, Cheong-ah left Korea to pursue a doctoral degree in physics at a large American research university, when such opportunities were restricted to the wealthy or the very talented and lucky. After receiving his doctorate, Cheong-ah was offered a prestigious postdoctoral position at an east coast Ivy League University but, by then, he had already decided to return to Korea to become a Buddhist monk. When I meet him,

again, a few days later at a small temple near Seoul for an interview which continued on into the early morning hours of the next day, Venerable Cheong-ah explained his decision to study Buddhism to me in fluent English - “I was always trying to compare Buddhism and physics. One side of my brain is always occupied by physics and one side is always occupied by Buddhism. These two sides work separately so I wanted to bring them together.”

This desire to bring physics and Buddhism together was much more than just a purely theoretical exercise for Venerable Cheong-ah – it was an urgent and necessary task. While completing his doctoral research, Cheong-ah recalls puzzling over the many different ways of combining physics and his understandings of the material world with more “spiritual” or “mind-centered” ideas. He explains, “This (combination or reconciliation) is still difficult to do, even now... but, I thought, perhaps this will be possible in the future and if we fail then humankind will not survive.” Once, Venerable Cheong-ah recalls attending a physics lecture on the evolution of the universe. During the lecture, he felt as if the right side of his brain and the left side of his brain were connecting and working together. “It felt great,” he tells me. “I was so happy. I could understand what the similarities and differences were (between Buddhism and Physics).”

As a fully ordained monk with English language skills, scientific expertise, and endless energy, Venerable Cheong-ah became involved in many important Buddhist

projects including early discussions about how the Jogye Order should respond to questions about the ethics of Hwang Woo-suk's research. When I ask Cheong-ah directly about the Buddhist ethical position on Hwang's research, he replies, "From a Buddhist theoretical viewpoint - there is no problem. Hwang was handling only physical flesh and not the mental aspects at all.... People imagine that producing a human being is like producing in the factory but this is not true." Cheong-ah continues to explain that cloned human beings are not exactly alike just like identical twins are not exactly the same.

In 2003, before the Hwang team's human embryonic research was published in *Science* making Hwang an internationally recognized and controversial figure, Venerable Cheong-ah published an essay – "A Buddhist Understanding of Cloning" – in a Buddhist magazine.<sup>119</sup> In this essay, Cheong-ah explains the process of cloning (somatic cell nucleus transfer) and the possibility that cloned human embryos can be grown outside of the human body. He describes cloning as an epochal technology (*boikgijeok-in* 劃期的인 *gi-sul* 技術) which can be used for both creating organs needed for transplantation surgeries and for creating people in test tubes.<sup>120</sup> In addition to articulating what he sees as some of the more immediate practical material benefits of *in vitro* cloning, like the laboratory creation of human babies for infertile persons and for women who want to forgo the pain of pregnancy and parturition,

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<sup>119</sup> Cheong-ah (2003).

<sup>120</sup> Cheong-ah (2003:52).

Venerable Cheong-ah imagines that modifying human bodies may allow for changes in human social structure which, he believes, could lessen desire and alleviate conflict and thus help human beings come closer to attaining the ultimate goal of Buddhist Enlightenment.

Cheong-ah reasons that if people could reproduce asexually through human cloning, then the desires and pressures which create human families and cause conflict inside those families could, potentially, disappear. And while he admits that the dissolution or collapse of the kinship system could cause some initial confusion, he speculates that this liberation from sexual desire and family conflicts could also raise humankind to a higher level of spiritual understanding and interaction. He explains that, from a Buddhist perspective, the dissolution of the current social structure may, in fact, be beneficial for all. Cheong-ah explains that, “human being” is not, ultimately, our Buddhist goal:

**The basic Buddhist perspective on the possible dissolution of basic modern social structures like the family, society, the nation, race, etc. ... is the following: the human world is not our final destination. If it is possible, we should evolve and develop rapidly and liberate ourselves from this place. So many aspects and structures of human society are heavily influenced by the method of human reproduction that we use for propagating our own tribe – a method which originally is similar to that of non-human animals. Conflicts between husband and wife, conflicts between parents and their children ... and so on, all of these family problems... and then also national problems and even including the conflicts between the different races - all start with the idea that we must marry and create a family to have children.<sup>121</sup>**

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<sup>121</sup> Cheong-ah (2003:61-62).

Cheong-ah bases his argument on both the Buddhist teaching (that desires and attachments cause suffering) and evolutionary mechanisms and theories - that (hetero) sexual desire and sexual reproduction has evolved to ensure the perpetuation of the human species. Cheong-ah, however, explains that, as Buddhists, we should not remain in the human world. He suggests that by reproducing through sexless human cloning, humanity may lift what he describes as “a great weight which presses down on the shoulders of all human beings” – namely, sexual procreation. In this way, Cheong-ah explains, human beings may avoid the pressures and pains of reproduction associated with lower realms of consciousness and be purified of beast-like desires. In his essay, he explains:

**If the original method by which human beings propagate was replaced by the birth of cloned human beings, the most noticeable change would be that the human desire for sex would be greatly reduced and many of the attachments and love-obsessions people experience would vanish....**

**If this standard was adopted then many of the current stupidities and absurdities which appear in the human realm, would completely disappear and all human beings could live as brothers and sisters, as children and parents, as one nation with one country, and as one race.... If human beings acquired a new scientific technology which they can use to propagate their species, this would be a huge evolutionary development which would open up an opportunity for humanity to surpass its present level and transcend the “Realm of Desire” (*yok-gye*, 欲界) and enter into the “Realm of Form” (*saek-gye*, 色界).<sup>122</sup>**

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<sup>122</sup> Cheong-ah (2003:62). “만약, 본래의 인간 종족번식이 사라지고 복제인간의 탄생으로 그것이 대체된다면, 무엇보다도 먼저 인간이 색욕(色慾)이 엄청나게 줄어들고 많은 인간사(人間事)의 집착과 애착들이 사라지게 된다. 그리고 사람들이 육신으로 인간을 보는 관점에서 탈피하여, 정신과 마음으로 인간을 보는 차원이 보편적으로 자리잡게 된다. 그렇게 되면 모든 인간은 같은 형제자매요, 자식이요, 부모요, 한

Here, sexual desire is both a cause and a characteristic of birth into lower levels of the Desire Realm (*yok-gye*, 欲界). By eliminating sexual reproduction and replacing it with cloning, Cheong-ah speculates that sexual desire will lessen and humanity can collectively raise its level and enter another realm – the Form Realm in which beings have form but it is more subtle. Beings in the Form Realm are less subject to desire and without sexual distinctions. Venerable Cheong-ah proceeds to emphasize the importance of focusing on Buddhist cultivation practices and reasons that if “scientists can raise the level of all human beings by using scientific research results, this would be a manifestation of the Buddhist patriarchs and an expression of their hidden virtue.”<sup>123</sup>

## Overview of Dissertation Chapters

Chapter 1, “Human Cloning in the U.S.A.” follows the development of the public discourse on the “human double” and “human cloning” in America and Europe.

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국가의 한 민족, 한 인종로 현재와 같은 인간세상의 구조 속에서 발생하는 많은 어리석음과 부조리가 원천적으로 없어지리라 생각된다. 예를 들면, 한 국가에서는 국민의 영웅이 되면서 다른 국가에서는 국민의 원수가 되는 것과 같은 지극히 어리석고 사리에 맞지 않는 일은 사라지게 된다. 인간이 새로운 방법으로 스스로 자기 종족을 번식시킬 수 있는 과학기술을 획득하였다면 이는 곧 인간이 현재의 차원에서 크게 진화발전하여 육계에서 색계로 진입할 수 있는 계기를 맞이하였다고 생각한다.

<sup>123</sup> *Ibid.* “우리 불제자들은 구체적이고 실제적인 수행정진에 더욱 매진하여야 할 때이다. 그리고 또한 과학들과 그들의 연구결과로 인하여 인간 전체의 차원이 높아간다면 이것이 곧 불조(佛祖)의 음덕이요, 그들이 곧 불조의 화현(化現)이 아니겠는가.”

Roughly around the time the word clon(e) was coined, Freud's protégé Otto Rank introduced the concept of the (human) double or *Doppelgänger* into psychoanalysis. In Rank's treatment, "primitive man" was not frightened by his image-double and "primitive taboos" emerged to protect this double from harm. However, "mature men" of "civilized societies" were said to develop a more complex and, at times, horrifying experience of their own *Doppelgängers*. Freud would adopt and adapt Rank's concept of the (human) double and shape it into the super-ego which turns on and berates and punishes its "original source." I suggest that both the (human) double and human clone take on characteristics of the Derridean idea of the supplement. I consider the fantasies and fears about the (human) clone which emerged during the sixties and seventies, when the scientific possibility of creating a cloned human being was introduced to the American public. Then, I follow the development of human cloning discourse up until 1998 when a split in cloning terminology emerged around the time technologies for cultivating immortal lines of human embryonic stem cells became available.

In the second chapter - "Cloning "News" in Korea" - I follow the reception of American news about "man-made-man" (*in-jo-ingan*, 人造人間) and "human clones" (*bokje-ingan*, 複製人間) in Korea. I ask, given that Buddhism employs a different ontology of human being (take the doctrine of *anatman*, no-self or *mu-a*, 無我, for

example) compared to those operating in the “traditional Christian West”, does the modern introduction of man-made-human and (human) cloning discourse in Korea provoke similar fears (and fantasies) as it did in America and Europe? I begin my analysis with an essay – simply titled “Man-made-Man” – which was written by the early Buddhist modernizer, Han Yong-un (韓龍雲, 1879-1944) and continue up Korean newspaper’s coverage of the 1997 announcement about the first successful cloning of a mammal, Dolly the sheep, and Korean newspaper’s interpretations of American moves to institute an international ban against human cloning. I find that the haunting logic of the Derridean supplement also surfaces in Korean human doubles discourses however there are certain key variations. I analyze these variations and place the reception of news about human doubles and human clones within a Korean colonial and post-colonial political context.

As South Korea was interpreting and importing the rapidly spreading ban on human cloning, some American scientists and journalists pointed to “the East” and “Eastern religions” as an example of a non-Western non-Christian culture which did not object to human cloning. In chapter three, “A Korean Evangelist Goes to America”, I show how Hwang Woo-suk expressed his Buddhist beliefs to American journalists when his first revolutionary announcement of success in creating patient-matching human embryonic stem cells was made in 2004. I follow how American molecular biologists

(like G.S. Stent and Lee Silver) represent Asian beliefs and how these or other similar ideas are reported in the English language press and helped fuel a “stem cell investment gold rush” with the passage of Proposition 71 in California.

Hwang Woo-suk’s stem cell project promised a revolutionary and expansive source of (inter)national bio-power built upon the union of national sovereignty, the magic of science, and universal Buddhist values. In the fourth chapter of this dissertation - “The Pluripotent Powers of Korean Buddhism: A New Global Standard and a National Cultural Revival” – I discuss Hwang’s autobiographical descriptions of his impoverished rural childhood, life-long devotion to cows, and improving people’s lives. Although differing perspectives existed within the Korean Buddhist community, here I show how the cloned human embryonic stem cell research debate, provided an opportunity for Korean Buddhist leadership and laity to embrace a popular public stance and use it to represent Christianity as a “Western religion” which contrasts with Korean “Eastern ethics.” The association of Hwang’s research with his rural childhood and Korean cows also connects with Hwang’s devotion to his self-sacrificing and hardworking mother. I briefly consider this idea of Korean mothers while highlighting the material importance of women and mothers to human embryonic research. Women have also been an important resource for Korean Buddhism although their religious practices have repeatedly been judged

“superstitious.” Efforts to reform and modernize Korean Buddhist women’s religious practices often redirect women’s labor and bodies towards public (as opposed to family-centered) and largely voluntary civil society work for the benefit of the nation. I show how, appeals made to Buddhist women to publically participate in Hwang’s humanitarian research, by pledging to donate their eggs, were a particularly effective discourse. Even Buddhist nuns agreed to offer their own reproductive tissue – despite the risk of (re)feminizing themselves – to publically participate in Hwang Woo-suk’s Buddhist stem cell science.

In the last chapter, “A Buddhist ‘Soteriology’ of Stem Cell Science: Cultivating Originary Technologies and Verifying Virtues”, I show how certain Korean Buddhist engagements with Hwang Woo-suk’s stem cell research produced an understanding of science that resonated with certain Buddhist ideas of spiritual cultivation and enlightenment. This “Buddhist soteriology” – which emerged more fully as the stem cell research scandal deepened – draws upon the fantasies, desires and anxieties surrounding regenerative “originary powers”, which are deemed valuable not only in scientific research but in the practice and propagation of Korean Buddhism and the perpetuation of the Korean nation, as well. I show how a material and moral economy which supported Hwang’s “patient-matching” stem cell quest fed on the sacrificial pleasures and soteriological sensibilities of Buddhists in a humanitarian age. I argue

that notions of virtue and cultivation linked Buddhism and science with hopes of (inter)national or global health. In this future-oriented vision, people and cells were moved by the forces of speculative capital, the promissory rhetoric of scientific research and syncretic “Buddhist soteriologies” which created connections between “mind” and “matter.”

### **A Note about Cloning Terminology**

In his book, *Cloning Terror: the war of image*, W.J.T. Mitchell asserts a “fundamental distinction” between therapeutic and reproductive human cloning and describes this distinction as “widely accepted.”<sup>124</sup> This is certainly not true in the U.S. and even less true in South Korea where polls have suggested that such clear-cut lines demarcating “therapeutic cloning” from “reproductive cloning” were not generally accepted by the public even when South Koreans overwhelmingly supported Hwang Woo-suk’s “therapeutic” human cloning. Ethical controversies are never described in value-free words for language already leans into the world in subtle but significant ways. Media studies, women’s studies, and science and technology studies scholars, have closely followed human cloning talk in the mass media and in parliamentary debates and see no fundamental distinctions. I will discuss their findings towards the end of chapter

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<sup>124</sup> Mitchell (2011:26). He sites Dr. Mark Siegler – Director of Medical Ethics at the University of Chicago – as backup for his “moral compass.”

one but nevertheless, it seems a brief history of the term “clone” and a short explanation about my approach to “human cloning” terminology may be useful here.

The neologism “clone” which appeared in the journal *Science*<sup>125</sup> in 1903, has taken on multiple meanings over the years and served in a wide variety of contexts. Around the 1920s, the word “clone” seems to have spread to signify “pure lines” of (animal-like) protozoa and then, by late 30s and early 40s, the “clone” crossed further over into the animal kingdom where it multiplied its uses again and occupied both macro and microscopic scales in its unified singular and plural forms.<sup>126</sup> The “clone” was mostly obscure until the sixties and seventies; a cloning process populated Huxley’s 1932 *Brave New World* but it was covered by the eponym “The Bokanovsky Process”. After being introduced as a possible tool for eugenic programs in the late 1960s, the digital revolution brought the “IBM Clone” into a brief circulation in the eighties but by the nineties the corporate clone-makers - Dell, Compaq, and others – were making “personal computers” not clones. “Clone” has proven a tenacious and popular word when applied to “copied” animals – especially those of warm-blooded type.

The birth of the world’s most famous sheep and, for the time being at least, the most famous cloned mammal, Dolly, prompted the adoption of various national and international human cloning bans. These were blanket human cloning bans until, in

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<sup>125</sup> Webber (October 16, 1903).

<sup>126</sup> Mittwoch (2002).

1998, technology for the immortal cultivation of human embryonic stem cells (hESC) became available and biotech researchers, investors, and others speculated that the stem cells extracted from embryos cloned from an adult human cell would “match” the cell donor’s DNA and thus could be transplanted back into the donor without provoking an adverse immune response. Around this time, a distinction in the regulatory language describing human cloning began to emerge. The cloning of human embryos (somatic cell nucleus transfer or hSCNT) for the extraction of stem cells became known as “therapeutic cloning”. The ideas about cloned human beings circulating in the media when Dolly was born, as well the press coverage of several so-called “maverick scientists” and IVF doctors who claimed to clone human beings using hSCNT, were relegated to the “reproductive cloning” side. “Reproductive cloning” was further defined as hSCNT with the intention of creating a human being. The so-called maverick scientists – especially those who offered their human cloning services as a treatment for infertility - objected to this split in human cloning terminology because, they argued, human “reproductive cloning” for those suffering infertility should also be recognized as a therapeutic treatment.

All words, even the most scientific, communicate, organize, and frame human perceptions, thoughts, and emotions. There are few, if any, “fundamental distinctions” in science which do not express some social, cultural, and economic component -

however subtle. In her work on the controversial issue of the adoption of brain death as the end of life in Japan, Margaret Lock observes that the exact determination of the boundary between life and death is not a question that can be determined by science alone. This holds true for the beginnings of life as well. Thus, in contrast to Mitchell's more fundamentalist approach to terminological distinctions, I hope, in this dissertation, to call attention to the ways in which the words we and others use shape the production of scientific practices and scientific knowledge without embracing any preset terminological toolbox.

## Chapter 1.

### Human Cloning in the U.S.A.

A central element in the political drama has been the public's confusion about different terms that play pivotal roles. One such term is "cloning."

Donald Kennedy<sup>127</sup>, Editor-in-Chief of *Science* (2006)

...an uncanny effect is often and easily produced when the distinction between imagination and reality is effaced, as when something that we have hitherto regarded as imaginary appears before us in reality...

Freud, *The Uncanny*<sup>128</sup> (1919)

The wisdom of our horror at human cloning can be partially articulated, even if this is finally one of those instances about which the heart has its reasons that reason cannot entirely know...

Leon Kass, *The Wisdom of Repugnance* (1997)

(T)his clever subterfuge ... all of this started ... in the political sphere with the democratic simulacrum, which today is the substitution for the power of God with the power of the people as the source of power, and of power as *emanation* with power as *representation*.... from the scenario of mass suffrage to the present-day phantoms of opinion polls...

Jean Baudrillard<sup>129</sup>, *Simulacra and Simulation* (1981)

Why do four out of five Americans think that human cloning is "against God's will" or "morally wrong?" Why are people so frightened by this technology? One important reason is that many people have a muddled sense of what cloning is. They confuse the popular meaning of the word clone, and the specific meaning it takes on in the context of biology.

Lee Silver<sup>130</sup>, Molecular Biologist (1998)

"Cloning" is an ambiguous term, even in biology.

Sir John Gurdon<sup>131</sup>, *pioneered animal cloning* (2002)

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<sup>127</sup> Scott (2006:xi).

<sup>128</sup> Freud (1997:221).

<sup>129</sup> Baudrillard (1994:42).

<sup>130</sup> Silver (1998:123).

<sup>131</sup> McLaren (2002:35).

## **American Fears and Fantasies of Human Cloning**

The discourse on human cloning – even to this day – continues to offer an inviting and contagious indeterminacy. Since its beginning, a particularly salient characteristic of human cloning talk has been its expansive fusion of fiction with public and private fantasy and horror even within the supposedly well-ordered land of “scientific fact.” This dynamic has also facilitated a number of interesting historical iterations. In part because of its particularly inviting indeterminacies, human cloning has also become a medium for attempts to articulate or represent a public’s relationship with biotechnology and an individual’s relationship with that the modern public human collective. Such relationships - especially as viewed through the human clone - are simultaneously intimate and alien. As will be seen below, the human clone exhibit the characteristics of what Jacques Derrida describes as “the supplement” – that which is added, paradoxically, to supplement or extend the power of an “original” human being and expand a particular “human presence” or “identity” but, because of the alienation inherent in the originary moment and which lies latent in all subsequent representations, the supplement returns as a haunting and dangerous presence.<sup>132</sup>

These multiple and multiplying engagements with human cloning have often drown out other discussions about the future directions of biotechnology and not infrequently come to “represent” and thus “replace” more mundane and specific

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<sup>132</sup> See Derrida (1974) and also Culler (1982).

concerns in public media discourse. The American news media’s reproductions of human cloning – which feeds a public fascination with human cloning stories – can be seen in the news media’s coverage of Hwang Woo-suk’s scientific cloning claims as well. Hwang’s team was by no means the first to report success in cloning a human embryo. Michael West, Jose Cibelli, et al of Advanced Cell Technology (ACT), a private biotech company in Massachusetts, had announced success in creating “the first human cloned embryo” almost three years before.<sup>133</sup>

Figure 9. Visuals from the *Scientific American’s* report “The First Human Cloned” covering the 2001 ACT somatic cell human embryo cloning (hSCNT) announcement.



<sup>133</sup> See Cibelli, Jose B.; Lanza, Robert; West, Michael D.; Ezzell, Carol (2002).

Even as far back as 1998 a three person research team at an infertility clinic in Kyunghee University Hospital in Seoul announced they had cloned a human cell and created a four cell embryo. Furthermore, scientists with expertise in animal cloning had speculated for some time that an adult human cell may have already been cloned in secret and possibly reached the four cell stage. Thus even though the Hwang team's initial ground-breaking 2004 *Science* publication announcement was lauded as the first claim of human cloning that has been verified, peer-reviewed, and published in a major journal at the time, the scientific novelty and economic promise of Hwang Woo-suk's research was located more in the alleged extraction of patient-matching stem cells from a cloned embryo than in the human cloning (hSCNT) claim.

Nevertheless, an account of the scene following the 2004 Hwang team *Science* announcement suggests that the press were more immediately interested in Hwang Woo-suk's successful human cloning story than in patient-matching human embryonic stem cell extraction. Right after the Hwang team's announcement, journalists raised questions about the feasibility of "reproductive cloning."<sup>134</sup> Further reinforcing the emphasis on human cloning, the first English language news report to break the Hwang team's story was a *New York Times* piece titled - "Scientists Create Human Embryos through Cloning."<sup>135</sup>

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<sup>134</sup> See Fox (2007).

<sup>135</sup> See Kolata (February 11, 2004). Posted the day before Hwang's and Moon's AAAS press conference announcement, this article, written by *the New York Times* science journalist, Gina Kolata, first informs readers that human embryos have

This American, as well as Western European, media emphasis on the human cloning side of Hwang Woo-suk's human embryonic research can be understood, in part, by what some scholars explain is the ready-made media framework of both animal (mammal) and human cloning. A media frame for human cloning had already been prepared and this framework was (to varying degrees) delivered "everywhere" as the "first simultaneously global biotech news"<sup>136</sup> about Dolly, the cloned sheep, in 1997. In fast paced news reporting, a convenient and effective ready-made news framework helps reporters and news outlets deliver their reports quickly while also creating both simultaneity and contextual background for emerging stories. Here, we can glimpse some of the power of a word like clone/cloning and of the language of science as a medium of public (and private) meaning expressed in a word's capacity to expand, to multiply, and to impart itself in semantic elsewhere – to move on into other meanings, minds, and mouths.<sup>137</sup>

Lee Silver, a molecular biologist who became a familiar face in the media in 1997 by serving as an expert guest commentator on science issues when cloning occupied American magazine covers and TV screens – appeared on twenty-two talk shows over a two week period.<sup>138</sup> In commentary published a few years later in *Nature*, Silver declared: "Cloning has a popular connotation that is impossible to dislodge. We

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reportedly been cloned and then that embryonic stem cells have reportedly extracted. Next, Kolata immediately reports that the expressed goal of the Hwang team is "...not to clone humans."

<sup>136</sup> Einsiedel; Allansdottir; et al (2002) consider Dolly to be the first simultaneously global bioetech news.

<sup>137</sup> Benjamin (2011:251-269).

<sup>138</sup> Kolata (1998).

must accept that the democratic debate on cloning is bereft of any meaning.”<sup>139</sup> And yet, it is clear that the “clone wars” – as the debate on human cloning has sometimes been called – carried certain kinds of meanings and, as we will see below, seemed to capture something basic about an individual’s relationship with themselves, the state, and social structures and why certain governing mechanisms have been so effective at giving individual persons both a sense of liberty and freedom from governmental control while at the same time greatly expanding and extending that control through public and state investment in biotechnology and biopower. (The key here is not the fixed meanings of words like “human cloning” but rather how and where these words move in public.<sup>140</sup>)

This paradox of democratic representational power is seen in the insistent expansiveness of human cloning talk – a phenomena which also accompanies the discovery of an expansive frontier of biotechnology. It is visible in human cloning’s surplus of investigatory iterations - this chapter included – and in the flood of published books and essays about human cloning. I count four different volumes titled *Human Cloning* – Ronald Cole-Turner (1997), James Humber and Robert Almeder (1998), Barbara MacKinnon (2000), Kerry Lynn Macintosh (2013) – on my desk. Other titles include *Cloning, The Human Cloning Debate, On Cloning, Beyond Cloning, Cloning: Opposing Viewpoints, Human Dignity and Human Cloning, The Ethical Issues in*

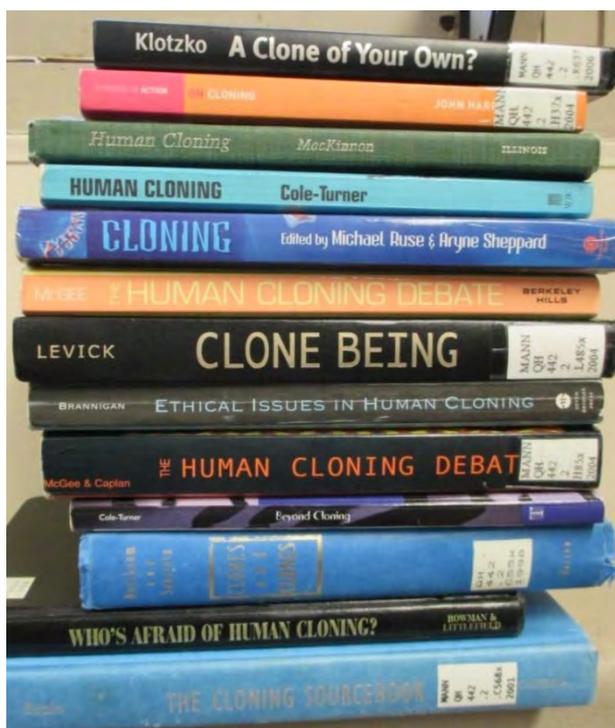
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<sup>139</sup> Silver (July 5, 2001:21).

<sup>140</sup> See Lacan (1996 ).

*Human Cloning, The Cloning Sourcebook, Cloning: For and Against, Cloning and the Future, Cloning after Dolly, Cloning: Responsible Science or Technomadness?, Clones and Clones, Clone Being, Cloning Human Beings, A Clone of Your Own?, Who's Afraid of Human Cloning?, The Clone Age and Clone* to name but a few.

Figure 10. Sample of English-language books on human cloning.



Journalists have reported that cloning has provoked “fascination, fear, and wonder.”<sup>141</sup> Cloning has been also described as “an extraordinary scientific advance that has potentially horrible implications....”<sup>142</sup> More than thirty years apart, Alvin

<sup>141</sup> McKie (March 2, 1997).

<sup>142</sup> *Ibid.* Spoken by Ellen Futter, the president of the American Museum of Natural History.

Toffler and *Newsweek* have likened animal cloning to building a nuclear bomb.<sup>143</sup> The fantasy of the unimpeded expansion human power and the nightmare of utter subjugation and impending annihilation are imagined and articulated in and through the same human medium, here, the human clone.

This human clone, in which absolute human power and absolute human subjugation is simultaneously imagined and expressed, has interesting literary, cinematic and psycho-analytic precedents. In the early twentieth century work of Otto Rank on the “human double” and later adaptations of this double by Sigmund Freud the supplemental nature of the “human double” is explored in ways that both forecast and shed light on the later developments of human cloning discourse.

### **Moving Mirror Images: the “Human Double” Enters Psychoanalytic Science**

In its early debut in the literature of Europe, the “human double” was paired with Romanticism – an intellectual and cultural movement reacting to the Enlightenment, Rationalism, Science, and the Industrial Revolution. Romanticism awakened an interest in European folklore which included tales of troubling human doubles – like the Irish *fetch* and the German *doppelganger*.<sup>144</sup> In these folkloric precursors and in European Romanticist Literature, human doubles have a knack for stirring up

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<sup>143</sup> See Toffler (1970) and Begley (March 10, 1997). Needless to say, it is somewhat surprising to envision a future of weapons of mass destruction (WMDs) in a little lamb named Dolly who was cloned from a mature ewe. See also Klotzko’s essay reprinted in Ruse, Michael; Sheppard, Aryne (1997).

<sup>144</sup> The term, “Doppelganger” was actually coined at the end of the 18<sup>th</sup> Century by the German Romantic author, Jean Paul.

emotional excess and driving their human counterpart into suicidal madness.<sup>145</sup> It is this troubling human double of late 18<sup>th</sup> to mid-19<sup>th</sup> Century European Romanticism that seems to have foreshadowed the now global “human cloning” news of the late 20<sup>th</sup> to early 21<sup>st</sup> Centuries.<sup>146</sup>

But before the human double of European Romanticist Literature could help usher in the human clone of our present digital age, this haunting phantom-like figure would play a part in the makings of 20<sup>th</sup> Century social scientific thought. Around 1914, Otto Rank, a protégé of Freud, took an interest in the human double or Doppelgänger. In addition to following the human double through Romanticist literature, Rank extended his investigation into the Doppelgänger’s folkloric roots and included the anthropological reports of the beliefs “primitive peoples” in his investigations.<sup>147</sup> The early twentieth Century, was a time when European, American, and Japanese colonial empires were bolstered up by various competing social evolutionary theories which explained the development of the human species, human thought, and human civilization along certain self-advancing lines. Otto Rank would bring these evolutionary theories into contact with the imaginary human double to help construct a new psychoanalytic science.

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<sup>145</sup> E.T.A. Hoffman (*Princess Brambilla*, *The Heart of Stone*, *The Sandman*, etc.), Maupassant (*The Horla*), Jean Paul (*Katzenberger’s Trip to the Spa*) and Edgar Allen Poe (*William Wilson*) are a few of the Romanticist authors, Otto Rank (1914) mentions when giving examples of Doppelgänger or “Double” figures in literature. Mary Shelley, the author of *Frankenstein*, is another important writer of the Romanticist period.

<sup>146</sup> *Frankenstein; or, The Modern Prometheus* was published in 1818. Stage adaptations were performed during Shelley’s lifetime and film “adaptations” began as early as 1910 (*Frankenstein*, silent film, 16 minutes in length, US production).

<sup>147</sup> Rank draws upon James Frazer’s *The Golden Bough* (1890) as well as E.B. Tylor’s *Primitive Culture* (1871), collections of German folklore and mythologies, archeological reports and other such writing as evidence.

A new silent film (*The Student of Prague*) served as the initial inspiration for what would become Rank's treatise, *The Double: A Psychoanalytic Study*. To borrow Rank's own words, the film's "vivid language of imagery"<sup>148</sup> seems to have drawn Freud's protégé into an intellectual quest for something universal and meaningful hidden in the human double in all its mediated forms – the literary, the folkloric and the ethnographic. Rank reads ancient origins in the human double as presented in the moving photographic images of this new medium of film.<sup>149</sup> For Rank, the film does not so much create its own new globalizing image of the human double. Instead, the film *compels* (as Rank explains it) "the modern interpreter" to solve an ancient puzzle about the psychological meaning and function of the Doppelgänger, for all of humanity.

As mentioned above, Rank's analytic approach was anchored in the projective powers of some influential anthropological ideas or metanarratives which helped shape Freud's thought, as well. Here we will ruthlessly lump these abstract evolutionary narratives together under the rubric of "Recapitulation Theories." Recapitulation theories tied together disparate states of life into an unfolding (meta) evolutionary lineage which bound certain unconnected points together to make a

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<sup>148</sup> Rank (1971:7).

<sup>149</sup> It seems more than coincidental that a study such as Rank's would be conducted during the early years of film. Rank believes that the clarity of these new moving images (in contrast with the presumably more opaque mediation of the words in short stories and literature) will better illuminate the real meaning of the Doppelgänger as human psychology. Rank explains that the film (*The Student of Prague*) has attracted his attention since in his previous studies which referred to other films, he has found that this "modern treatment (of topics) is often successful in reapproaching, intuitively, the real meaning of an ancient theme which has become either unintelligible or misunderstood in its course through tradition." Here we are reminded of Walter Benjamin's 1936 essay ("Work of Art in the Age of Mechanical Reproduction") linking of photography and psychoanalysis.

singular universal scientific story. Such theories suggested that the path of an individual organisms' physical development from conception to maturity (ontogeny) replicated (or a recapitulated) the stages of their species' evolution.<sup>150</sup> Individuals, thus, becomes a double of the past and future of the species. Echoes of earlier recapitulation theories are still heard in 21<sup>st</sup> Century discourse. Dipesh Chakrabarty (2000) describes one such echo as the strange and persistent idea that contemporary “developing nation-states” exist in a situation that is similar to (or the same as) a previous stage of “developed nation-states.”<sup>151</sup> More simply, the history of the “Western World” will be recapitulated or replayed in the development of the rest of the world. This developmental (human) doubling, which is located along a more-or-less singular line, defined ideas of universal human progress at the time.

In the first half of the 20<sup>th</sup> Century, the psychoanalytic project incorporated elements of this “recapitulation” drive – which can be seen in its spatial-temporal projection of the European past as the present of “the primitive.” Freud and Rank both hypothesized that the early growth stages of the “healthy” and “civilized” individual corresponded to the psychology of mature “primitive peoples.” Furthermore, the psychological development of a mentally unhealthy adult in the West was believed to mirror certain “primitive psychologies.” For example, Rank presents evidence for an “agreement in the psychology of aborigines and of

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<sup>150</sup> Here I am referring to the “Theory of Recapitulation” – “ontogeny recapitulates phylogeny” - which is found articulated in Ernst Haeckel's *General Morphology* (1866).

<sup>151</sup> Chakrabarty (2000).

neurotics.”<sup>152</sup> This kind of evolutionary equating and human doubling, which has already been discussed in postcolonial studies (as well as by anthropologists), is interesting as it anticipates certain moves seen in the late 20<sup>th</sup> and early 21<sup>st</sup> Century human cloning discourse and debates. One key component of interest here is how such “evolutionary or developmental equations” facilitated Freud’s articulation of a distinction or difference between the stages (or mental structures) which distinguish the psychology of the mature “civilized man” from his “primitive” counterpart – a distinction Freud also articulates as a difference in the “civilized” man’s and his “primitive” other’s experience of “the uncanny.”

To explain this, it is useful to begin with Rank’s and Freud’s thoughts about the origins of the primitive idea of a human double. Rank suggests that, initially, the “primitive human double” was thought to protect or extend the power of the original person. Thus the first human double became an (imaginary) psychological technique or technology which, according to Rank, both symbolized and assured human immortality. In an essay published five years after Rank’s study of the human double, Freud lauds Rank’s work and agrees with the premise that “the ‘double’ was originally a fantastic form of insurance or protection against the destruction of the ego....”<sup>153</sup>

Freud writes:

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<sup>152</sup> Rank (1971:81-82). Rank mentions that Freud has shown that the thinking of a “primitive man” resembles that of a child.

<sup>153</sup> Freud (1997:210).

**Such ideas, however, have sprung from the soil of unbounded self-love, from the primary narcissism which dominates the mind of the child and of primitive man. But when this stage has been surmounted, the ‘double’ reverses its aspect. From having been an assurance of immortality, it becomes the uncanny harbinger of death.<sup>154</sup>**

In other words, once the child or the “primitive society” has moved past this stage of “primary narcissism” then the relationship between man and his double reverses – instead of providing protection against death the double now brings death as a threat back to man. Here, Freud describes a “special agency” which forms in the place of the human double – the double which was once an enhancing (technology or extension) of the self now becomes a masterful other threatening death or the demise of the self. In other words, the newly imagined double grows and becomes, as Freud explains it, “able to stand over against the rest of the ego.”<sup>155</sup> This is more than just a moment of alienation for the new alienated self or double limits and even attacks the self.

Four years later (in 1923) Freud identified this now alien agency as the “super-ego” - which is said to emerge in the post-Oedipus stage of youth (when the child is said to adopt heteronormative desires, internalizes incest taboos, and hence culture). The super-ego is, therefore, associated with a rapacious desire for immortality (protection against death) which has been internalized, reversed or inverted, and thus become a special agency which seeks to ensure its own immortality by murdering the

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<sup>154</sup> Freud (1997:211).

<sup>155</sup> *Ibid.*

original ego.<sup>156</sup> Moreover, this inner agency must be developed in the process of becoming a mature adult and in the evolution of scientific knowledge and authority necessary for “advanced civilizations.”<sup>157</sup>

In this schema, the human double has – both “historically” and “developmentally” – been the evolutionary medium (the embryo) of the Freudian special agency or super-ego. The selection of the human double as the origin or source of the super-ego connects “the primitive” and “the civilized” in certain interesting (social evolutionary) ways which leave a mark on Freud’s understanding and characterization of religion, for example.<sup>158</sup> Rank writes that the appearance of an externalized human double in primitive societies, where it takes the form of a spirit, soul, or shadow, is frequently accompanied by certain taboos - like, for example, an injunction against stepping on another’s shadow - which are believed to protect their associated “primitive individuals” from contagious injury. (Here, in its treatment by contemporaneous others, the double already begins to become more liability.) However, the double does not come to haunt its human source until it has been internalized and inverted. Put another way, the double does not horrify or haunt its original other until it takes up residence within the self (or psyche) from which it first

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<sup>156</sup> This is not unlike the “(human) double” or Doppelgänger of Romantic Literature whose appearance would eventually lead, as is seen in *The Student of Prague*, to the death, or rather suicide, of the original protagonist.

<sup>157</sup> Although it is admittedly an oversimplification, we could say that – loosely following Freud and Rank – to be civilized is to fear the “death agency” within yourself and to be primitive is to fear a death which comes from the outside. This schema jives well with Foucauldian contrast between government through biopower and inculcated “techniques of the self” (that would correspond to the superego and its demands) and earlier displays of sovereignty through spectacular displays of punishment.

<sup>158</sup> Freud (1997:212) writes, “The ‘double’ has become a thing of terror, just as, after the collapse of their religion, the gods turned into demons.”

came and can – in various uncanny instances - invade the ego and even turn murderous and therefore suicidal. Thus, in its external form, the (life-giving) double’s assurance of immortality has been buttressed by a protective “no-touch” taboo. But how can the mature and civilized (hu)man being murder the internalized double-agency-super-ego without resorting to suicide? Is there a way to expiate one’s own internal double (without breaking taboos)? And if externalized, will the double ever revert to a more friendly form?

In his essay “The ‘Uncanny’”, Freud’s description of the simultaneous sense of intimacy or familiarity and strangeness or fear dubbed the ‘uncanny’, is associated with, among other things, the revival of repressed infantile desires or surmounted “primitive beliefs” (“superstitions”, for example) which have by coincidence been unexpectedly and temporarily confirmed.<sup>159</sup> By reading Freud closely, we can see that, in certain situations, only the “civilized” man will experience a sudden shiver or an uncanny sensation – because of his separation of narcissistic fantasy and

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<sup>159</sup> Freud (1997:226) writes, “Our conclusion could then be stated thus: an uncanny experience occurs either when infantile complexes which have been repressed are once more revived by some impression, or when primitive beliefs which have been surmounted seem once more to be confirmed. Finally, we must not let our predilection for smooth solutions and lucid exposition blind us to the fact that these two classes of uncanny experience are not always sharply distinguishable. When we consider that primitive beliefs are most intimately connected with infantile complexes, and are, in fact, based on them, we shall not be greatly astonished to find that the distinction is often a hazy one.” The “second type” of experiencing the “uncanny” is dependent upon the development of a ‘civilized rational scientific self’ which no longer believes in its misrecognized “self-power” (ie. superstitious primitive beliefs but nonetheless may have some ‘remaining impressions’ which can become ‘activated’ momentarily and thus re-emerge in the form of a phantom of the now-estranged and denied ‘infantile self’.) This “activation” registers (or ‘is experienced as’) an uncanny shiver or sensation. This rational scientific “civilized” self is momentarily forgotten as the former “infantile” self - who believed itself to be powerful - emerges. But the reality principal interferes via internalized science, education, and the ‘knowledge of civilization’, and the ‘narcissistic former self’ is overridden by the “mature and civilized self” which knows the limits of its own “self-power.” Nonetheless, when – as Freud describes his patients – a desired outcome (reality) is preceded by the conscious desire or wish, then there is a moment of confusion between the “fiction” or “fantasy” of the “infantile self” and reality. The “mature civilized self (man)” recovers by dismissing the (indirect) wish fulfillment as coincidental but, nonetheless, experiences an uncanny sensation.

rational/scientific knowledge. The “primitive man”, however, – a man who believes his imaginings, desires, and fantasies may have an unmediated “real” material impact - will find power (and also guilt and witchcraft) in the involuntary “material effects” of thoughts and fantasies. For such a “primitive” man, external material fact (the “reality principle”) and “imagination and fantasy” are not as distinct and separate categories as they are presumed to be for the “civilized” - rather such “primitive” (hu)mans would be in a state of something like “primitive mysticism” as described by Levi Bruhl, a contemporary of Freud.

The recognition - or rather making - of the distinct domains of “fantasy” and “fact” is a pre-condition for certain manifestations of the uncanny for, as Freud argues, the momentary blurring or sudden protrusion and overlap of the previously fixed boundaries between the imaginary (inner fantasy and desire) and material reality (external experience or social self) facilitates and enables the experience of uncanny effect. In Freud’s description, an individual’s momentary recognition of their double within themselves is – regardless of whether that inner double is the ever-demanding super-ego or the narcissistic id – an instance of unexpected (and unauthorized) boundary crossing and eerie discomfort. These moments are presented, in Freudian scenarios, when the ego-self, which represents and maintains (or generally conforms to) the reality principle, is temporarily and unexpectedly overwhelmed. Such confusion and crossings of the internal-boundaries of self-consciousness produces a

disturbing or uncanny feeling as the self faces itself (its double within) as an unrecognized stranger. In keeping with these crossed-lines of self-consciousness, reality, and fantasy, Freud describes the experience of the uncanny as being highly dependent on a certain indeterminacy and sensations associated with the unexpected. The uncomfortable and fantastic impact of the human clone may partake of this quality of indeterminacy in clonings continuing crossover and confusion between fact and fiction, as well as self and other, and the internal and the external.

### **The More Contagious “Democratic” Qualities of Human Cloning**

The dramatic affective responses to the figure of the human clone – both the fears and the fantasies – usually reflect the particular concerns of the time even when people are also wrestling with more expansive themes like the individual’s relationship to modern society and that society’s seemingly unceasing demands played out inside the “civilized” self. In the 1950s, when television sets became a more common household item in the U.S., human clonal imaginings – in the minds of American scientists, movie directors, and movie goers – reflected and re-projected certain preoccupations with a Cold War double. In the “race to outer space” between the U.S. and the USSR, human cloning technologies were imagined within the fantasies of space exploration and continued human expansion into the universe as well as “mutually assured (nuclear) destruction” known by the acronym MAD. Don Siegel’s

1956 film, the *Invasion of the Body Snatchers*, drew on contemporary American anxieties – fears of Soviet spies and communist invasions, in imagining hostile humanoid figures from outer space. The movie was released and garnered critical and commercial success with the story of unsuspecting Californians being replaced by duplicates – perfect physical copies – of themselves. These invading body-snatching duplicates returned in a 1978 remake of the film which triumphantly duplicated the 1956 version’s critical and financial success. Some say the film resonated with a growing dissatisfaction with the monotony and isolation of a suburban consumption oriented middle class America life.

As the science of physics and nuclear energy had greatly advanced during World War II, there was much anticipation that biology would also produce similar results, sooner rather than later. Moreover, in the 1950s, some technological achievements had materialized *before* their forecasted completion dates. In 1951, science fiction writer Arthur Clarke predicted that man would land on the moon in 1978. Thus, Neil Armstrong’s 1969 “one small step” was broadcast live to TV sets in the privileged “electrified” world almost ten years early. Scientific forecasts – including one produced by the RAND Corporation around this time – predicted that human cloning would be widespread by 2020 and the “breeding of hybrids and specialized mutants for space” would be routine by 2025.<sup>160</sup> The 1960s and 1970s

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<sup>160</sup> S.M.E. (May, 1969).

were a time of increased public scrutiny and skepticism of an earlier post-war devotion to scientific research and modern progress. The welding of a vision of future human cloning technologies to nuclear war scenarios and the threat of life in outer space were not completely restricted to the realm of fictional entertainments. The birth of bioethics in America was also soon to come.

### **Clonal Man as Aiding Human Evolution**

Of the participants invited to attend a 1962 International Ciba Foundation Symposium in London<sup>161</sup>, those who addressed human cloning paired it, in one way or another, with nuclear technology and space exploration. J.B.S. Haldane (1892-1964, a British evolutionary biologist) suggested that people who are particularly resistant to radiation poisoning could be cloned to ensure humanity's survival.<sup>162</sup> These expansive and empowering visions of human cloning technologies which would supplement and extend the life of the human species and help humanity survive in space and withstand nuclear attacks would soon return as dystopic tales in which the original individual human source of human cloning technologies would be threatened or even completely eradicated and erased by this dangerous supplemental technology. A lecture, which was later published as *Daedalus, or science of the future*, given by J.B.S.

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<sup>161</sup> The Ciba Foundation explains its reason for holding symposiums as being: "... (to) stir the imagination, speed the flow of information, and generally hasten the progress of work in medical and biological research." See Wolstenhome, Gordon (1963).

<sup>162</sup> Haldane (1963:343) envisions the future production of aseptic people who can colonize Mars or another similar planet without inadvertently risking the introduction of any of the earth's bacteria or viruses to the new environment. He also speaks of creating – through genetic modification – men without legs to be astronauts.

Haldane who had imagined human cloning as assisting or extending the power of the human species, influenced Aldous Huxley whose famous science fiction novel, *Brave New World*, re-presented Haldane's utopian scientific visions as the dystopian future of an evolved humanity.<sup>163</sup> By the 1950s and 1960s, Aldous Huxley's novel would become a much more recognizable reference in later discussions of human cloning than the Haldane lecture.

In the late sixties, Joshua Lederberg – a molecular biologist and younger admiring colleague of Haldane - published what is said to be an important early attempt to bring the scientific possibility of human cloning to the public's attention.<sup>164</sup> Lederberg's 1966 article - "Experimental Genetics and Human Evolution" – illustrates how he is primarily interested in human cloning as a tool for other kinds of scientific projects. Namely, Lederberg, like Haldane before him, believes human cloning will help facilitate the scientific control of human evolution. In this 1966 contradictory and confusing but oft-referenced article, Lederberg essentially argues that human cloning will greatly aid the study of genetics and help build a more solid scientific foundation for genetic engineering and eugenic technologies. With the right conditions and the accumulation of scientific knowledge and expertise, Lederberg fantasizes about a future in which humanity learns to shape its own biology. In the

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<sup>163</sup> Haldane (1924) predicted the development of IVF, cloning, and mechanical wombs among other things. See <http://vserver1.cscs.lsa.umich.edu/~crshalizi/Daedalus.html> last accessed 12/3/2013. See also Alexander (2003:19).

<sup>164</sup> Watson (1971:86), Kolata (1998:72-73), and Shinn (1998) all credit Lederberg for first introducing human cloning to the public as a serious scientific possibility.

end, Lederberg implies that this future – a future in which “clonal man” becomes a technological tool for furthering genetic engineering – is not that far away.

Joshua Lederberg’s somewhat fickle futuristic musings and presentation of “clonal man” to a science-minded audience, moved after its initial publication in *The American Naturalist*, a popular scientific journal, to the more “political” or “activist” *The Bulletin of Atomic Scientists*. Started by physicists concerned about the proliferation of nuclear weapons worldwide, *The Bulletin of Atomic Scientists* had subsequently expanded its coverage to include other emerging technologies, which were perceived as having an impact on international security and world safety. The Lederberg essay’s re-publication in *The Bulletin of Atomic Scientists* came at a time when debates on the official ethical regulation of scientific research on human subjects were still relatively new but becoming increasingly robust.

The first widely acknowledged modern code of ethics governing human subject research, the Nuremberg Code, had been promulgated in the late forties in the wake of WWII. The Helsinki Declaration followed in 1964. Lederberg’s 1966 essay published in *The American Naturalist* and then *The Bulletin of Atomic Scientists* appeared a few months after an anesthesiologist, Henry K. Beecher, published an influential article detailing the unethical practices employed by scientists and medical researchers who later published their morally questionable work in prestigious scientific

journals.<sup>165</sup> A couple years later, Beecher was appointed head of a Harvard Medical committee formed to define “irreversible coma.” This committee, which was concerned about facilitating organ transplant surgeries and was composed almost entirely of medical doctors, shows the authority physicians (and other experts) were presumed to have over defining human death, at the time.<sup>166</sup> Joshua Lederberg’s essay which initially raised the topic of controlling human evolution with experimental human cloning technologies, exhibits a similar stance on expert scientific authority and seeks to educate the public. In this public expert capacity, Lederberg had been writing a “Science and Society” column for *The Washington Post* when he returned to the topic of human cloning in 1967 with a short piece titled “Unpredictable Variety Still Rules Human Reproduction.”<sup>167</sup> This time, Lederberg’s jocular public educational approach to presenting human cloning as a means of future human genetic advancement provoked a medical doctor, named Leon Kass, to write a letter of rebuttal to *The Washington Post* editor. Thus, Kass’s public response to Lederberg’s human cloning comments would draw the attention of ethicists and others who quickly welcomed a medical expert with similar views<sup>168</sup> and thus the “human cloning” issue prompted Leon Kass’s involvement with an emerging public discourse.

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<sup>165</sup> Beecher (June 16, 1966).

<sup>166</sup> Lock (2002:89). The “Ad hoc Committee of Harvard Medical School to Examine the Definition of Brain Death” was composed of ten medical doctors, one lawyer, one historian, and one theologian.

<sup>167</sup> Lederberg (Sept. 30, 1967).

<sup>168</sup> See Kolata (1998).

## Human Cloning and the Beginnings of the Bioethics Movement

While Leon Kass's initial objections to Lederberg's human cloning talk would eventually take on an almost uncanny renewed relevance nearly forty years later when Kass was appointed chair of *The President's Council on Bioethics* in 2001 by then President George W. Bush, in the seventies Christian theologians and ethicists also responded in an immediate public capacity. Paul Ramsey, a theologian and Harvard University ethicist, delivered a paper on Lederberg treatment of human cloning in a conference on "Ethics in Medicine and Technology" not long after Lederberg's first human-cloning related article was republished in *The Bulletin of Atomic Scientists*.<sup>169</sup> In a book-length version of his conference presentation, Ramsey separates the human cloning issue from those of eugenics and human evolution. Ramsey makes a number of arguments – many that stay in a secular vein. However, his essay against human cloning, Ramsey – as many would at this time – uses the language of going against "God's nature and creation" to express his objections to cloning. Ramsey's separation of the discussion of human cloning from his response and to Lederberg's views about genetic engineering and the future human manipulation or control of human evolution would continue with the noble laureate, James Watson's subsequent public discussion of human cloning.

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<sup>169</sup> Ramsey's remarks were first given under the auspices of the Institute of Religion at the Texas Medical Center and Rice University in late March 1968 and then published in a collection edited by Kenneth Vaux in 1970.

Watson, known for his work on discovering the double-helix structure of DNA, published an essay in *The Atlantic* in 1972 raising the issue of human cloning again. In his essay, “Moving Toward the Clonal Man: Is This What We Want?”, Watson focuses solely on human cloning and thus, unlike Lederberg’s previous publications, cloning is separated from genetic engineering. Watson gives the issue of human cloning a global scope by suggesting that international efforts of cooperation must be made if the creation of human clones is to be stopped. He suggests, “A blanket declaration of the worldwide illegality of human cloning might be one result of a serious effort to ask the world in which direction it wished to move.... If we do not think about it now, the possibility of our having a free choice will one day suddenly be gone.”<sup>170</sup> Thus, human cloning is described as an imminent threat that must be dealt with internationally.

Willard Gaylin, a key figure in the early bioethics movement, adopted and adapted the human cloning controversy as a way of introducing bioethics to a larger audience. In 1972, Gaylin wrote a provocatively titled but, nevertheless, informative article - “We have the Awful Knowledge to Make Exact Copies of Human Beings”- which was published in the *New York Times Magazine*; he hoped to draw greater

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<sup>170</sup> Watson (1972:90).

attention to bioethics and the new “Hastings Institute for biotechnology and public policy” which he had founded with Daniel Callahan in 1969.<sup>171</sup>

Figure 11. Willard Gaylin’s 1972 *New York Times Magazine* article title.



In this article, Gaylin readily admits that cloning is not so much a pressing problem but rather a metaphoric device which helps focus attention on “less dramatic forms of genetic engineering.”<sup>172</sup> Nevertheless, Gaylin’s interwove various iconic images – including the cloning of Hitler and Mozart – to mobilize readers into a participatory investment in and an emotional awareness of bioethics. With all of its multi-faceted resonances, Gaylin believed human cloning could more easily transition into becoming a useful symbol for a number of bioethical issues and concerns. And the ease with which human cloning would repeatedly resurface in both scientific and

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<sup>171</sup> Leon Kauss – who became interested in bioethics in response to Lederberg’s off-the-cuff suggestion that humans could be cloned – joined the *Hasting Institute* shortly thereafter.

<sup>172</sup> Gaylin (March 5, 1972).

popular culture in the 20<sup>th</sup> century U.S. would suggest Gaylin had accurately identified an area of public concern and fascination.

### **Human Cloning as an Assault on Human Evolution**

In 1978, the still largely fanciful issue of human cloning reached outrageous new heights or, depending on your perspective, fell to treacherously deep lows. A freelance journalist named David Rorvik wrote a reportedly firsthand account of an American millionaire's hitherto "secret story" of self-cloning. The resulting book, *In His Image: The Cloning of a Man*, sufficiently blurred fact and fiction to spark such interest that journalists and scientists found themselves asked to weigh in on the feasibility of Rorvik's human cloning report.<sup>173</sup> Daily newspapers carried the news of Rorvik's millionaire cloning story and public concern prompted congressional hearings. Most American scientists, however, and almost all of the scientists who testified on the possibility human cloning before the U.S. Congress, dismissed Rorvik's assertions as overblown and thus reinforced suspicions that stories of self-making millionaires are, most often, duplicitous.<sup>174</sup>

In the end, Rorvik and his publisher, J.B. Lippincott, became the target of lawsuits and their book, *In His Image: The Cloning of a Man*, proved to be a financial

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<sup>173</sup> Rorvik (1978). For more on this book's context and impact see Kolata (1998:93-106) or Poon (2000:167-168). A year later, Landrum B. Shettles claimed that he had cloned three human embryos from adult human cells in the *American Journal of Obstetrics and Gynecology*. Shettles offered no proof and the fact that he had co-authored a book with Rorvik nine years earlier meant Shettles' human cloning claims were promptly dismissed.

<sup>174</sup> See Kolata (1998:102-105) for information on this 1978 U.S. Congressional hearing.

liability. It did, however, capture the American public's attention and, as we will see in the next chapter, appeared in South Korean newspapers, as well. Rorvik's presentation of arguments for and against human cloning as well as his detailed explanation of cloning technologies was well researched. More impressive, perhaps, was Rorvik's forecasting of the future interpretations of the human cloning. Rorvik describes the views of those who would imagine human cloning as a soulless extension of a new industrial uniformity and an individual's uniform interchangeable existence in the following passage taken from *In His Image*.

**To some weary time-travelers, cloning might be a heavy blow, heralding the irreversible approach – if not the actual realization – of the synthesized, plasticized, carbon-copied Man. To these, the new man, like the new bread – processed, refined, bleached, artificially preserved and fortified, baked to absolute uniformity and confined in a plastic skin – would be soulless.<sup>175</sup>**

This description of the idea that human cloning produces “absolute uniformity” which epitomizes “soullessness” resonates in the subsequent reproductions and even many self-consciously critical re-tellings of Rorvik's tale. As we will see below, human cloning and the subsequent afterlife of Rorvik's self-made American millionaire's story would re-present the human clone as a sign of simulation and a sort-of genocidal sameness.

*In His Image: The Cloning of a Man* interested the French theorist Jean Baudrillard who uneasily embraced the American millionaires' self-cloning story as a child of

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<sup>175</sup> Rorvik (1978: 26-27).

humanity's increasingly distracted engagement with the "virtual". In his own well-known book, *Simulacra and Simulation*, which was first published in 1981, Baudrillard makes fitting references to Rorvik's cloning story which is, indeed, an interesting example of a scientific news hoax.<sup>176</sup> However, in Baudrillard's (re)telling, "The Clone Story" quickly becomes a de-humanizing nightmare. And as if Baudrillard was reliving some twinning trauma himself, he returns to the topic of human cloning and repeats his troubling dystopian narrative with a somewhat nightmarish frequency. The "Clone Story"<sup>177</sup> is Baudrillard's first well-known human cloning essay, and it is followed by "The Hell of the Same"<sup>178</sup>, which, in turn, is followed by "The Final Solution: Cloning Beyond the Human and Inhuman."<sup>179</sup> Baudrillard's last well-known human cloning essay is appropriately dubbed - "The Clone or the Degree Xerox of the Species."<sup>180</sup>

In these essays, Baudrillard draws on the previous literary and social scientific uses of the human double which I have mentioned above. Otto Rank's discussion of immortality, narcissism, and the primitive double surfaces in Baudrillard prose and Freud's adoption and adaptation of the Doppelgänger appears as well. Stitching these and other references (*Blade Runner*, *Jurassic Park*, and Cronenberg's *Dead Ringers* to name a few) together into his yarn, Baudrillard reasserts the universalizing notion that

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<sup>176</sup> A story which Baudrillard makes all the more "phantastic" by erasing the denucleated egg, womb, and all other female parts involved in creating the (to borrow Baudrillard's words) "exact replica" of "the sole progenitor" of the clone. Baudrillard (1994:95-96). In fact, Baudrillard does note in parenthesis that "one still has to use the uterus of a woman, and a pitted ovum, but this support is ephemeral, and in any case anonymous: a female prosthesis could replace it."

<sup>177</sup> *Simulacra and Simulation* (1994:95-103).

<sup>178</sup> In *The Transparency of Evil: Essays on Extreme Phenomena* (1993:113-123).

<sup>179</sup> In *The Vital Illusion* (2000:3-30).

<sup>180</sup> In *Screened Out* (2002:196-202). Baudrillard seems to have written this clone-essay on March 17, 1997 not long after the birth of Dolly – the cloned sheep – was announced on February 22, 1997.

human desire for a double is, initially, a move towards immortality. Immortal desires expressed through human cloning are not, however, destined to be translated as the infinite continuation of an individual person's particular consciousness. Instead, Baudrillard imagines human cloning as a type of regression or de-evolution of the human species. According to Baudrillard, the "immortality" which the desire for human cloning pursues is the obliteration of all individual human consciousness and individual human difference, human sexual difference, and, ultimately, the obliteration of life and then death itself. It is, as Baudrillard so-gently quips, the "final solution" that is the destruction of the entire human species, thus, back to "Degree Xerox."

Baudrillard's adaptation of the fate of the human-double-as-clone, here, borrows more from Freud's speculations about the "Death Drive"<sup>181</sup> than Freud's own adoption and adaptation of the human double as an internalized special agency. For Freud this inner double agency is a necessary part of a "civilized" individual's psychological maturation. Moreover, it would follow that the development of (human) civilization and civilization's continuity as an immortal collective depends upon this inner super-ego double to constantly poke and badger the original person (and to colonize and possess him or her) to keep primitive narcissism at bay. In Baudrillard's "Clone Story", however, and in his other tales of human clones, the intervening shifts and paradoxical functions (the irreconcilable duplicity) presented in Freud's

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<sup>181</sup> Freud's speculations about the "Death Drive" appear in *Beyond the Pleasure Principle* which was published in 1920 – after Freud's essay on *The Uncanny* was published in 1919.

adaptation of the human double seems to disappear. For Baudrillard, the human-double-as-clone works to destroy the individual primitive narcissist, the civilized human collective, and the human species.

By drawing on Freud's speculations about the Death Drive (in what seems to be a rather un-Freudian way), Baudrillard pairs the appearance of the human-double-as-clone with de-evolution or human regression. Joshua Lederberg's fantasy was, in contrast, to use cloning to explore the widest variety of genetic possibilities and sustain this increased human genetic diversity. Lederberg imagined human cloning as a way of copying and thus perpetuating certain unique physical bodies and the useful functions of these unique human bodies. Baudrillard, however, imagines the exact opposite when he portrays human cloning as "... a state of minimal differentiation among living beings ... a pure repetition of identical beings"<sup>182</sup> For Baudrillard, the making of the (human) clone produces only sameness. In his dystopic vision, human clones de-evolve to be the same as all others and ultimately achieve immortal otherness by returning to a non-sentient materiality.

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<sup>182</sup> Baudrillard (2000:6).

## **Cloning Continued: the Premonition of a Split within Embryo Ethics**

More than ten years after Baudrillard published his initial *Clone Story* essay, human cloning reappeared as mainstream news in America. In the fall of 1993, the headline - “Scientist Clones Human Embryos, And Creates an Ethical Challenge”<sup>183</sup> – appeared on the front page of *The New York Times*. Modest anti-cloning demonstrations were held and the scientists responsible for this latest development (Robert Stillman and Jerry Hall) appeared on *Larry King Live*, a popular call-in television talk show, to answer questions. *Time* magazine made the 1993 momentary rebirth of human cloning the cover story for its early November issue.

The *Time* magazine’s human cloning cover invoked the Judo-Christian story of God’s creation of man with a clever twist added to the well-known Michelangelo Sistine Chapel ceiling scene - “The Creation of Adam.” In Michelangelo’s original, God, the Almighty Creator, reaches out from the heavens to touch Adam’s extended hand. On the *Time* magazine cover, an unknown and unseen creator stretches his hand forward and reaches towards the fingers of his Adam-like creations but instead of finding the outstretched hand of a single human arm, there are five identical arms all reaching for the life-giving touch of their creator. Below the hand of the unseen creator, a caption reads: “The first laboratory duplication of a human embryo raises the question: Where do we draw the line?”

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<sup>183</sup> Kolata (October 24, 1993).

Figure 12. *Time*'s 1993 Cover: "Cloning Humans: the first laboratory duplication of a human embryo raises the question: Where do we draw the line?"<sup>184</sup>



Thus, at least in this *Time* magazine cover, questions about the ethics of human cloning (where to draw the line) emerges, once again, from the background of a Judo-Christian story of human origins which often includes certain ideas of the uniqueness (and differences) of human lives.<sup>185</sup>

<sup>184</sup> Image available at <http://search.yahoo.com/search?p=Cloning+humans+time+magazine&ei=UTF-8&fr=chr-f-yff21> (last accessed 12/25/2015).

<sup>185</sup> In contrast, *Newsweek*, a competing weekly news magazine, adopts a very different stance by characterizing the news coverage of the recent experimental cloning results as overly hasty and inaccurate. See Adler (Nov. 8, 1993). *Newsweek* reported that Kolata's initial *New York Times* report on the event was based on an "apparent misunderstanding" and has sparked a wild current of public "hysteria." The *New York Times* did print a notice the day after Kolata's October 24, 1993 "Scientist Clones Human Embryos..." report was published. The notice informed readers that a diagram accompanying the Kolata's previous report incorrectly represented the "cloning" procedure. *Newsweek* suggests that much of the news media (as well as bioethicists and others) have prematurely jumped to questionable conclusions most

One approach to unraveling the ethics of the 1993 cloning – a strategy which foreshadows future rhetorical developments – can be seen in a *Hasting Center* report on the topic. This approach – detailed in Robert Stillman’s piece titled “The Question of Human Cloning”, was published in 1994 alongside other articles commissioned by the *Hasting Center* in an effort to present various issues, arguments, and opinions about the ethics of Stillman and Hall’s controversial 1993 human embryo cloning successes. Stillman divides or splits cloning into two distinct types.<sup>186</sup> More specifically, he contrasts the recent 1993 experimental technique (embryo splitting cloning<sup>187</sup>) with the cloning Rorvik’s described in his controversial and fictitious 1978 book. After detailing the differences, possible uses and likely ramifications of each of these two cloning types, Stillman concludes that embryo cloning technique used in the successful 1993 experiment has many potential benefits. The other kind of cloning (nucleus transfer or SCNT), however, is potentially much more dangerous and thus far only possible in frogs<sup>188</sup> and in the suggestive but imaginary realm of science-fiction fantasy. Thus Stillman concludes that one kind of cloning (embryo-splitting) should be allowed while the other (SCNT) should not.

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likely because “...one of the most sought-after coups in 20th-century journalism ... (is) the first story that can plausibly use ‘human’ and ‘clone’ in the same headline.”

<sup>186</sup> Robertson (1994).

<sup>187</sup> The so-called human cloning experiment of 1993 involved what has been dubbed “test-tube twinning” - that is purposefully prompting an embryo to divide into two identical but separate embryos in vitro (or outside the living body). In essence, a human embryo is split into two or more separate cells which then become separate individual embryos. Incidentally, these “embryo splitting” techniques have already been explored in the livestock farming industries. See Nash (Nov. 8, 1993). “Embryo splitting human cloning” can be contrasted with cloning techniques which involve removing the nucleus from another embryo’s cell or an adult’s cell and then transferring this nucleus into an emptied egg cell (CNT or Somatic CNT).

<sup>188</sup> These results had been contested. See Kolata (1998), for example.

In the end, interest in the 1993 “human cloning controversy” would taper off without any significant national legislative action. However, the line between the “two types of cloning” - like the one Stillman drew in 1994 to map-out his recommended ethical guidelines for the *Hasting Center Report* – would be retraced on occasion in news reports which would explain, for example, the “two ways to make a clone” even in the post-Dolly year of 1999.<sup>189</sup> Nonetheless, this controversy or at least, certain rhetorical moves it spawned would re-emerge with greater force four years later with the birth of the world’s most famous barnyard animal.

The next mass-mediated<sup>190</sup> (and truly international) return to future fantasies and fears of “human cloning” would unexpectedly erupt with news of the birth of *Dolly*, the cloned sheep. *Dolly* provoked anxieties and debates about human cloning on hitherto unprecedented scale. Much of the media coverage of *Dolly* drew on a human cloning subtext.<sup>191</sup> Holliman (2004) has shown that the media constantly raised questions about human cloning throughout their coverage of the *Dolly* story.<sup>192</sup> Holliman, along with others<sup>193</sup>, have documented unusually extensive and sustained international media coverage of this most famous ewe. The media ruckus surrounding *Dolly*’s birth prompted both the U.S. President (then Bill Clinton), the EU President

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<sup>189</sup> Kirkey (October 15, 1999).

<sup>190</sup> *Time* magazine did run another front page cloning story in 2001 after the ACT announcement of success in cloning a human blastocyst. ACT’s announcement – although reported in the “news” sections of scientific journals as well as covered by some newspapers - did not receive the widespread public attention of Dolly’s debut and was not considered convincing or significant by many scientists in the field.

<sup>191</sup> See Huxford (2000).

<sup>192</sup> Holliman (2004) focused on analyzing media coverage of cloning in the U.K. throughout 1996 and 1997.

<sup>193</sup> For U.S. media coverage, see Hornig Priest (2001). For news coverage of *Dolly* in Italy see Neresini (2000). For an exploration of Australian newspaper coverage see Peterson (2002).

(then Jacques Santer) among others, to instigate governmental interventions.<sup>194</sup> The Clinton administration called for a ban on cloning and countries in Europe and elsewhere began preparing laws which would make human cloning illegal. UNESCO which had been preparing the *Universal Declaration on the Human Genome and Human Rights* included an anti-human cloning passage in the declaration text. In July 1997 a member of South Korea's National Assembly submitted a bill to ban human cloning as well. Births assisted by IVF had begun in South Korea in 1985, but – like in the US – there was little regulation of the IVF industry. There was little resistance in governments to instituting a human cloning ban although a number of scientist – including several in the US – advocated human cloning for people who were unable to have children by other methods. The Raelians, a new religious group in Canada also advocated human cloning as a central part of their religious beliefs. And although these individuals were vocal and expressed their willingness to set up human cloning facilities in unregulated areas, in general, their opposition pushed governments to institute cloning bans more quickly. The situation would change, however, in 1998 when human embryonic stem cells were successfully cultivated. This development would soon lead to another “split” in human cloning language.

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<sup>194</sup> In 1997, President Clinton announced a ban on all U.S. federal funding for cloning.

## Human Cloning in the West – “the Good” and “the Bad”

The now-famous scientists (Ian Wilmut and Keith Campbell) responsible for *Dolly*, the cloned sheep, as well as many others working on animal genetics were surprised by the sudden widespread media attention focused on *Dolly* as a precursor of human cloning. Thus they attempted to downplay any direct associations between their work and human cloning.<sup>195</sup> Not long after *Dolly*'s debut a terminological divide or split began to emerge in the various interviews, commentaries, and debates surrounding human cloning – most noticeably in the U.K. Sarah Parry<sup>196</sup> describes early signs of a divide in her analysis of 1998 parliamentary debates in the United Kingdom. In this emerging parliamentary discourse, cloning is divided into two so-called “technically distinct” types, namely, “therapeutic cloning” and “reproductive cloning.” Many suggest that it is not coincidental that “(human) cloning” terminology split and two different or distinct “cloning types” took shape as new technologies enabling the cultivation of human embryonic stem cell lines became available in 1998.<sup>197</sup> Around this time, speculation about the potential value of cloned human embryonic stem cells to

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<sup>195</sup> During an interview in 1997, Wilmut and Campbell both expressed their moral opposition to cloning as a method of human reproduction but showed interest in cloning technologies which they said promised to aid in the treatment of disease. See Haran, Kitzinger, McNeil and O’Riordan (2006:32).

<sup>196</sup> Parry (2003). See also Haran, Kitzinger, McNeil and O’Riordan (2006).

<sup>197</sup> Biologist James Thomson and his team at the University of Wisconsin are credited with being the first to isolate stem cells from human embryos and grow these cells as immortal stem cell lines. The results were published in the journal *Science* in 1998. The Wisconsin team’s success went from “News of the Week” to “Breakthrough of the Year.” Vogel (1999). Thomson’s work was privately funded (by Geron) and the embryos used for his initial research had been imported from Israel. At the time of Thomson’s success, similar attempts were being made in Singapore by Ariff Bongso. See Bellomo (2006:52-57). For a nuanced account of the recent history of human embryonic stem cells (hESC) related research since 1970s see Rubin (2008). The U.S. version or claim that human embryonic stem cells were first cultivated in Wisconsin has been contested by Canadian scientists. See Somberg (2011).

medical research and the use of these cells in the development of new biotechnologies made the government regulation of “cloning technologies” an important issue.

The idea was to allow “therapeutic cloning” while strengthening a ban on “human cloning” which had already been outlawed in many countries. Thus “therapeutic cloning” was defined in contrast to “reproductive cloning” aimed at creating a “human clone” or individual human being who would mature into adulthood. “Therapeutic cloning” sought to create a cloned human embryo which could be used in scientific experiments and becomes a source of “patient-matching” human embryonic stem cells.

Kitzinger and others<sup>198</sup> have also noted that the term “therapeutic cloning” frames the technology of “somatic cell nucleus transplantation” (SCNT) and other related procedures as “therapeutic” – that is as medical treatments - rather than as highly experimental science. This so-called “therapeutic” or “good” kind of cloning is thus paired with the idea of scientific promise, humanitarianism, and commendable medical intentions while “reproductive cloning” is portrayed as highly experimental, suspicious and potentially dangerous, unnecessary, secretive or “underground” and motivated by human (especially an individual scientist’s or customer’s) arrogance and a selfish desire for immortality. Haran and Kitzinger et al write, “The widespread employment of the terms ‘therapeutic cloning’ and ‘reproductive cloning’ seems to

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<sup>198</sup> Kitzinger (2008:421). Haran, Kitzinger, McNeil and O’Riordan (2006), etc.

imply and instantiate these as distinct techno scientific procedures.”<sup>199</sup> They explain that, in fact, both “therapeutic cloning” and “reproductive cloning” refer to the exact same “cloning” procedure – namely SCNT. Most commentators agree that the distinction between “therapeutic cloning” and “reproductive cloning” played a crucial role in the U.K.’s legalization of human therapeutic cloning.<sup>200</sup>

In the U.K., the splitting (or “doubling”) of the commonly used human cloning concept into “therapeutic” and “reproductive” types facilitated the construction of a government regulatory framework for patient matching human embryonic stem cell research but also made arguments against “reproductive cloning” seem particularly important.<sup>201</sup> Observers note that regulatory frameworks – like the U.K.’s “splitting” of human cloning – prompt and legally justify both material and conceptual or ideological investments which, in turn, buttress the assertion of a “fundamental difference” between legal “good” therapeutic cloning and illegal “bad” reproductive cloning. In South Korea, the distinction between “therapeutic cloning” and “reproductive cloning” was used in Korea’s *Bioethics and Safety Act* which first took

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<sup>199</sup> Haran and Kitzinger et al (2008:31).

<sup>200</sup> Parry (2003), and Haran Haran, Kitzinger, McNeil and O’Riordan (2006). The first license granted in the U.K. to permit cloning human embryos for stem cell research was granted in 2004 although the legal authority to grant such licenses was officially instituted in 2001. For further analysis of the public discussion of human embryonic research in the U.K. see Herissone-Kelly (2005). For an analysis of the discourse about human embryos research which developed in the U.K. prior to 1997/1998 see Mulkay (1997).

<sup>201</sup> This can be seen in U.K. “therapeutic cloning” advocates strong responses to the Italian medical doctor and IVF expert Severino Antinori who – while planning to clone a human being – effusively praised the U.K. government which he contrasted with the Italian government which outlawed human cloning. U.K. “therapeutic cloning” advocates, however, were not pleased with Antinori’s praise and urged tight and clear restrictions on “reproductive cloning.”

effect in 2005.<sup>202</sup> In the U.S. legislative branch, however, the split between “therapeutic” and “reproductive” cloning was highly contentious. American legislators have objected to and rejected bills banning human “reproductive cloning” because many legislatures do not agree that “reproductive cloning” and “therapeutic cloning” can be addressed separately.

However, the former President of Stanford University, Donald Kennedy insists that “reproductive cloning” and “therapeutic cloning” are distinct. Editor-in-chief of *Science* from 2000-2008, Kennedy helped facilitate the press releases for the Hwang Woo-suk team’s cloned embryonic stem cell articles and introduced Hwang at press conferences. In the book, *Stem Cell Now*, Kennedy dismisses differences in the ethical evaluation of human embryonic stem cell research to the public’s confusion over the scientific terms of “therapeutic cloning” vs. “reproductive cloning.” He writes, “The public confusion between these two has agitated the politicians and rattled the scientific community. There is widespread fear that reproductive cloning of humans is in our future, and a few publicity seekers have claimed without supplying evidence, to have done so. No scientist I know would support such a use...”<sup>203</sup>

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<sup>202</sup> Han (2006). The Hwang team’s human embryonic research was declared exempt from the 2005 Bioethics and Safety Act protocols. A legal clause ensured that the Hwang team would be exempt because their human embryonic research had begun before the law was put into effect.

<sup>203</sup> Scott (2006: X).

## Chapter 2.

### Cloning “News” in Korea

Through the popular media this version of a clone was rapidly integrated into every major language.

Lee Silver,<sup>204</sup> popular U.S. science pundit and molecular biologist, July 2001

A few months ago, it was reported in America that a copied human-made-human (a “cloning baby”) which has never been in a mother’s womb, was made and cultivated and is now 14 months old...

*Dong-a Newspaper*<sup>205</sup> July 1978

Even a *kyul* will become a tangerine if it crosses over the North Pole.

Scholar Lee Eo Ryeong,<sup>206</sup> May 1997

... I think that “cloning offspring” started long ago. Beginning with looks and continuing on to include personality, habits and even acts: being just like your parents – like identical goldfish bread – is a natural and heartwarming human cloning.

Kim Sun-Deok,<sup>207</sup> columnist, March 1997

What *really* prompted President Clinton to respond so quickly (after Dolly was born)?

Jeong Hyeon Kwon,<sup>208</sup> March 1997

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<sup>204</sup> Silver (July 5, 2001:21).

<sup>205</sup> Staff (July 29, 1978) (몇달전에는 母胎라고는 전혀 모르는 『클로닝 아기』 라는 複製人造人間이 실험관속에서 배양되어 만들어져 14 개월째 미국에서 자라고 있다는 보도가 있었다....식물을 키우듯 培養된 人造人間도 과연 사람이랄 수 가있을까.)

<sup>206</sup> Lee, Eo Ryeong (May 26, 1997) (굴이라 할지라도 회수(淮水)의 북쪽으로 넘어가면 탕자가 된다는 말이 있지 않은가.)

<sup>207</sup> Kim, Sun Deok (March 12, 1997) (... “자식 복제”는 예로부터 이뤄져왔다는 것이 내 생각이다. 외모에서부터 성격 습관 행동거지까지 붕어빵처럼 부모를 썩 빼닮는 것도 자연스럽고 흐뭇한 인간 복제가 아니라 싶기 때문이다.)

<sup>208</sup> Jeong, Hyeon Gwon (March 4, 1997) (과연 클린턴 대통령은 어떤측면에서 이런 신속한 반응을 보였을까.)

## Dolly's Debut in Korea Newspapers

When the news that a sheep named Dolly had been cloned in Scotland first appeared in South Korea's daily newspapers, the words used to translate the event for a Korean readership were, for the most part, already part of the general public's vocabulary. The South Korean press, like the news media in many places around the world,<sup>209</sup> was quick to speculate that this unprecedented success in cloning sheep could herald the birth of the first human clone. Such speculations are not surprising since early Korean reports about Dolly drew heavily on English-language sources. The *Kyeonghyang Newspaper*, based its initial short report – titled “Success in ‘Genetic Cloning of a Sheep’ in England” – on a compilation of U.K. news reports.<sup>210</sup> The *Dong-a Daily* introduced Dolly with a dramatic declaration - “‘Human Cloning’ is Possible” – highlighted next to an article about the cloned sheep written by a special correspondent in New York.<sup>211</sup> These two South Korean newspapers could be described as more-or-less copying U.S. and U.K. newspaper coverage were it not for one key difference. Namely, the Korean dailies relegated the sheep cloning story to rather inconspicuous sections of their respective broadsheets. The *Kyeonghyang Newspaper* buried the news about Dolly on page twenty-two and the *Dong-a Daily* published its bold “‘Human Cloning’ is Possible” blurb somewhat sheepishly on the

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<sup>209</sup> Einsiedel et al (2002) draw on newspaper coverage of the Dolly announcement in twelve countries – Austria, Canada, Finland, France, Germany, Greece, Italy, the Netherlands, Poland, Sweden, Switzerland, and the UK.

<sup>210</sup> Staff (February 25, 1997).

<sup>211</sup> Lee, Gyu Min (February 25, 1997).

bottom half of page forty-seven. If we were to gauge the relative importance or prominence of “the Dolly story” in South Korea by comparing Korean daily newspaper coverage with the newspaper coverage of “the Dolly drama” in eleven European countries as well as the U.S. and Canada, Korean interest would fall somewhere in between that of Sweden and Finland - nations which Einsiedel et al describe as having missed or downplayed the significance of Dolly’s birth.<sup>212</sup>

As indicated above in Chapter one, the significance of Dolly – a sheep who reportedly liked to ham it up<sup>213</sup> – was simultaneously created and expressed by her photographic multiplication and distribution through newspapers and television sets around the world. Einsiedel et al call “the Dolly story” the first simultaneous and global new story about biotechnology.<sup>214</sup> And certain common components which shaped this biotech curiosity were presented by the South Korean press as well. Photographs of the sheep, charts or illustrated diagrams explaining somatic cell nucleus transfer (SCNT) technology, expert commentaries,<sup>215</sup> and the like were presented in similar ways world-wide. However, despite the fact that many of these early Dolly news reports in South Korea were more-or-less similar to their Western European and North American counterparts, this first adult mammal cloning was also,

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<sup>212</sup> Einsiedel et al (2002:319).

<sup>213</sup> There are, in fact, many news reports which make remarks about Dolly’s lack of bashfulness and willingness to be photographed by large groups of reporters.

<sup>214</sup> Einsiedel et al (2002).

<sup>215</sup> Both South Korean newspaper reports and the British press cite a British MD turned businessman, futurist, and inspirational speaker, Patrick Dixon, who published *The Genetic Revolution* in 1993, and again in 1995.

understandably, less urgent and less dramatic in Korean newspapers than many places elsewhere.

In this chapter, I explore the reception of “cloning news” in Korea and consider the degree to which this “global biotech story” was, in fact, cloned. I follow the introduction and development of the modern scientific notion that human beings can be manufactured or cloned while paying particular attention to the social and political contexts in Korea through which these “imported” cloning stories unfold. I begin with the debut of Westinghouse Electric’s American “man-made-man” (*in-jo-in*, 人造人) in late 1920s and early 1930s Japanese colonial period Korean language newspapers. Next, I examine an essay written by the well-known Korean Buddhist modernizer, Han Yong-un (韓龍雲, 1879-1944) who openly explores the future possibilities of what would now be call the “bio-engineering” or future “synthetic biology” of making human beings. I consider Han Yong-un’s fascinating expression of an ambivalent yet generally optimistic stance towards “bio-engineering” in times of the more overt political, economic, and racialized violence of imperialism. Then, as a counterpoint to Han Yong-un’s essay, I also discuss the use of a distinctly Christian cosmogony which appears in a later 1930s Korean language newspaper discussion of “man-made-men.” I proceed forward to cover the introduction and treatment of American science journalist, David Rorvik’s (see Chapter one, pages 91-92) human cloning claims in South Korea newspapers and analyze subsequent newspaper reports

and discussions of human cloning with special attention to their domestic and international post-colonial and Cold War embeddedness.

### “Man-Making-Man” (人造人間) in Colonial Korea

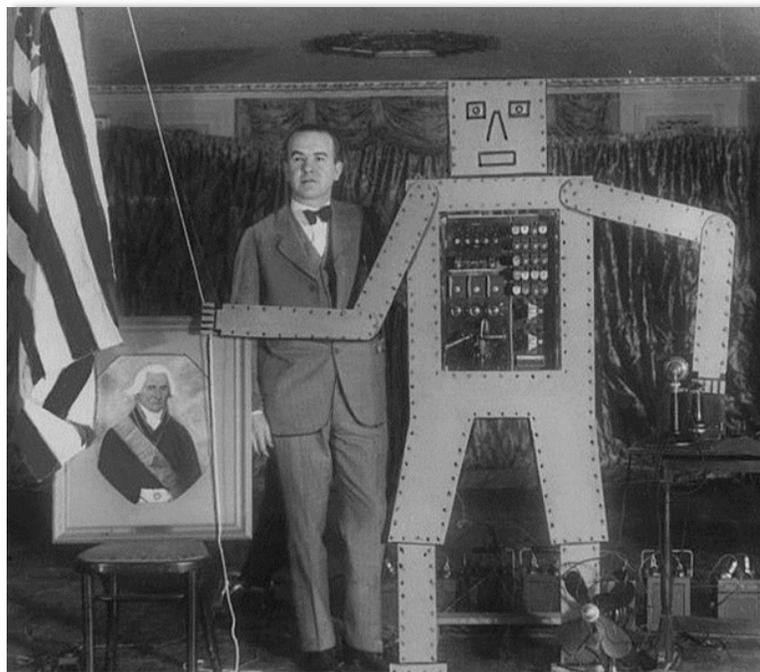
New understandings and interpretations of the possibilities of biological life became increasingly influential in East Asia as Western Imperialism and science spread to China, Japan, and Korea around turn of the twentieth century. In colonial Korea, Korean language newspapers began publishing tidbits of “miscellaneous news” or “gossip” about new “man-made-men” (*in-jo-in*, 人造人) appearing in America. These early twentieth century Korean newspaper reports tell of metal humanoid robots made by Westinghouse Electric which could respond to telephone tone prompts and thus could, theoretically at least, be ordered to perform certain tasks over the phone. News of Westinghouse Electric’s “man-made-man”– a large boxy robot first created in 1927 and named *Televox* – was carried in the Sunday edition of the *Dong-a Daily* in September 1929.<sup>216</sup> A short miscellaneous blurb extols the marvels *Telleppeokssu* (텔레백쓰, a Korean phonetic translation of *Televox*) who could, at least according to the *Dong-a Daily* report, do many different things like direct street traffic, trim a man’s

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<sup>216</sup> Staff (September 9, 1929). The Westinghouse *Televox* was the first of a series of robots, which could respond to tonal commands. Westinghouse displayed various versions of *Televox* in fairs around the U.S. Similar Robot-like machines were also being made in Japan at this time although I haven’t found any mention of the Japanese-made humanoid robots in *Dong-ah Daily* newspapers at the time. The photo of an early *Televox* as well as pictures of the 1928 Japanese-made *Gakutensoku* (學天則) and Mitsui Yasutaro’s 1930s robot can be found at <http://cyberneticzoo.com/> last accessed 5/22/2014.

beard, and even go to church on Sunday to listen the sermon.<sup>217</sup> In colonial period Korean language newspapers, these brief miscellaneous or gossip column descriptions of the Westinghouse *Televox* - descriptions which invariably introduced other Westinghouse Electric products as well – become a marvelous if misleading portal into a yet unseen and unimaginable vision of American life.

Figure 13. *Televox* and his creator R.J. Wensley, a Westinghouse Electric and Manufacturing Company engineer, posing next to an American flag around 1928.<sup>218</sup> *Televox*'s left hand is on a phone through which he can receive orders.



<sup>217</sup> *Ibid.* “정말 사람과 가티안즈라면 안기도하고 電話로 부르면 대답도하고 日曜日에 教會에 說教들으러 가기도 하고 길거리에 나서서 交通整理도 하고 잘 드는 面刀로 수염도 깎아주는 등 대량 百가지일을 할 수 있다.”

<sup>218</sup> Photo from - <http://cyberneticzoo.com/robots/1927-televox-wensley-american/> (last accessed 1/5/2015).

A few months after *Telleppeokssu* had been introduced to *Dong-a Daily* readers as a marvelous if briefly amusing curiosity, talk of “man-made-men” resurfaced again in this daily newspaper in a more serious but nonetheless optimistic vein. In a *Dong-a Daily* column about a future in which electricity will be available to all, Oh Gi-seok invokes a future with a “complete (or perfect) man-made-man” (*wonjeon-ban* 完全한 *in-jo-in* 人造人) as he anticipates significant advances in human health and longevity.<sup>219</sup> Although Oh does not believe that an individual person’s life span can be extended indefinitely, he predicts that, overall, human life-spans will be lengthened considerably.<sup>220</sup> Then, Oh Gi-seok observes:

**These days the issue of a man-made-man is causing quite a bit of commotion. And since my predictions mentioned above, aren’t really all that far off, soon we will be able to create the energy of life – that which is called the soul. I thus expect with anticipation that a complete man-made-man will appear in the near future.**<sup>221</sup>

Oh ends his article on this subtle upbeat note that a “perfect man-made-man” can and most likely will be created in the not too distance future. Moreover, his move to redefine the “soul” (*yeonghon*, 靈魂) as the “energy of life” (*saengmyeong* 生命 *ui enelgi*) suggests that an ultimate commensurability and even perhaps a more reductionist

<sup>219</sup> Oh, Gi-seok (December 21, 1929).

<sup>220</sup> *Ibid.* “우리가 世上에 處하여서 不老長生이라고 하는 永遠의 生命은 바랄수없으며 딸아서 不可能하다고 하지만 年齡을 卽生命의 時間을 前보담 훨씬 延長시키는 것은 確實히 實現될 것으로 吾人은 맞고 主張한다.” (I have inserted spaces into the Korean language quotes above (and below) to make them resemble present-day Korean orthographic practice and thus more comfortable for twenty-first century readers.)

<sup>221</sup> *Ibid.* “딸아서 今日에 人造人이라고 하는 問題가 多大히 世上을 騷動시키고 있다. 그러면 以上の 것으로 推測하여 멀지안해서 靈魂이란 卽生命의 에넬기를 創造할 수 잇는 것이다. 그러면 멀지안은 將來에 至하여 完全한 人造人이 出現할것은 期待한다(終).

unity of “matter” and “biological life.” Oh Gi-seok seems to point towards more recent 21<sup>st</sup> Century developments in synthetic biology in which life – and even that which has been called the soul – can be created wholly or completely from non-sentient materials or non-living objects. Another suggestive tale of the material assembly of human-like beings can be found among the writings of Buddhist modernizer, Han Yong-un.

### **Making Competing Nations: Han Yong-un’s Aborted Cloning Technologies**

A literary and historical figure readily identified by most, if not all, South Koreans, Han Yong-un (萬海 韓龍雲, 1879-1944) is best known in Buddhist circles for his advocacy of Buddhist modernism.<sup>222</sup> For the last eleven years of his life, Han resided in a house he built in 1933 and dubbed *Sim-u-jang* (尋牛莊) or the *House for Chasing Cows (Ox)* - a reference to the *Seon* or Zen trope that finding enlightenment is like chasing and taming an Ox.. Han composed a number of miscellaneous writings and essays during his time at *Sim-u-jang*, which were later published in his collected works

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<sup>222</sup> Han’s well-known, *Treatise on the Reformation of Korean Buddhism* (朝鮮佛教維新論) which was first published in 1914, is still invoked in present-day South Korean Buddhist discussions of current Buddhist reform efforts. However, many of the proposed changes Han detailed in his *Treatise* had little impact on every-day South Korean Buddhist practices during Han’s lifetime. Academic interest in Han Yong-un emerged in South Korea in the 1960s and initially focused on his literary works before expanding to include Han’s religious and social activities. In recent decades, Han has become “the face” of early modern Korean Buddhism - a survey of Korean history textbooks conducted by Han, Sang-gil (2011) shows that Korean High School history lessons on “modern Korean Buddhism” draw almost entirely upon material related to or about Han Yong-un. Thus despite being one of many Buddhist reformers in Korean in early modern times, Han has become “the representative” of early Korean Buddhist modernism. A single volume selection of Han Yong-un’s writings has been translated into English by Tikhonov and Miller (2008). See also Park (2009) for an extended discussion of Han Yong-un’s life and Buddhist activities.

under the title *Shim-u-jang manpil* (尋牛莊漫筆) or *Notes from the House for Chasing Cows(Ox)*. Among these assorted notes and essays, there is a short but fascinating piece Han wrote - presumably sometime between his 54<sup>th</sup> and 65<sup>th</sup> year of life - which is simply titled “Man-made-Man”.<sup>223</sup> In this late essay, Han foreshadows certain thematic preoccupations as well as the ambivalence that unfolded decades later in South Korean human cloning discourse of the late twentieth and early twenty-first centuries.

Like much of this latter day Korean “human cloning” talk, Han’s early 20th century discussion of “man-made-man” is prompted by news from “the West.” In the opening paragraph of “Man-made-Man”, Han observes that newspapers have recently revealed that “... research into creating a “man-made-man” has been underway in the West for some time.”<sup>224</sup> Most likely, Korean and Japanese language newspaper blurbs about “man-made-men” (like the marvels of Westinghouse Electric’s *Televox*, as described above) and even, perhaps, more literary discussions of Aldous Huxley’s new novel, *Brave New World*,<sup>225</sup> had attracted Han’s attention. Either way, Han Yong-un

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<sup>223</sup> Han (1980:205-208).

<sup>224</sup> Han (1980:205) (만근 (輓近)에 흔히 신문지를 통하여 보면, 서양에서는 인조인을 연구한 지가 오래고 제작한 것도 어느 정도까지 성공하여서 인조인이 말도 하고 기게도 부린다...).

<sup>225</sup> Aldous Huxley’s *Brave New World* was first published in 1932 and translated into Japanese by 1933 as *Migoto na Shinseikai* (「みことな□□□」 渡邊二三郎訳) and again in the 1960s under its current Japanese-language title, *Subarashii Shinseikai* (「すばらしい□□□」 □□□□ 訳). As would be expected, Han Yong-un could read Japanese and may have encountered the Japanese language translation of *Brave New World* although he makes no references to Huxley’s book in his “Man-made-Man” essay. Nonetheless, as a poet and novelist Han is likely to have been more informed of recent developments in “world” literature than most. The *Dong-a Daily* included Aldous Huxley’s name in lists of famous English novelists, which were published inside the broadsheet in the 1930s. A Korean language

believes that human kind can<sup>226</sup> eventually learn how to assemble a living “man-made-man” even though technology thus far has only produced “intricate and complex machines which act like puppets.”<sup>227</sup>

This view resembles that of Oh Gi-seok, the *Dong-a Daily* newspaper columnist who predicted in 1929 (see above) that, in the future, people will be able to make the “energy-of-life” and thus create a living and complete human being.<sup>228</sup> However, unlike Oh’s *Dong-a Daily* column, Han’s essay does not mention anything like the energy-of-life which serves as a stand-in for something like a soul.<sup>229</sup> Instead, Han describes the appearance of life as guaranteed or inevitable given that certain necessary material components meet certain karmic conditions which combine these materials together in the right way:

**All the things in the universe are made up of atoms or particles and even before these many things in the universe were even formed they had already existed somewhere else. When an opportunity arises – in other words, when karmic conditions are met – the atoms or particles, which will become that thing, combine together with just the right qualities and in just the right quantities to constitute or become that thing. It is like this for life as well. Something doesn’t just come into existence out of nothing. Before life becomes “life”, materials, with the right qualities and in the right quantities to constitute life, already exist in the universe someplace all scattered about. If**

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edition of the *Brave New World* was published in 1960 under the title – *Meotjin Sinsekye* (「멋진 新世界」權世口 訳) in South Korea.

<sup>226</sup> Han (1980:206). “그러한 교제적(交際的) 수사(修辭)를 떼어 버리고 단순한 학리적으로 말한다면, 확실히 가능성이 있다고 할 것이다.”

<sup>227</sup> Han (1980:205). “...아직 괴뢰에 지나지 못하는 것으로 인조인이라고 할 수가 없으나, 그 연구가 점점 진보되어서 생명까지 만들 수가 있다면 완전한 인조인이 생길는지 모른다.”

<sup>228</sup> Oh, Gi-seok (December 21, 1929).

<sup>229</sup> Han (1980:205).

**these materials are combined together in the proper way then life will always appear.**<sup>230</sup>

Thus as Han explains above, the combination of certain materials – in the right quantities and with the right qualities – will always give rise to life.

Thus, the most immediate question, Han poses in his “man-made-man” musings, is neither whether humankind can ever possibly create a “perfect man-made-being” nor whether such a “man-made-being” would upset the universe and bring disarray and chaos, but instead when and how humankind will develop the knowledge, skills, and fine tools needed to assemble a “man-made-being”.<sup>231</sup> In other words, in Han’s “man-made-man” essay, queries about “man-made-man” promptly turn into practical questions about the development of human intelligence and human skill in manipulating tiny particles or atoms. He does not linger for long – or not at all, at least initially - on any abstract theoretical anxieties, about the ontological implications or cosmic questions, the appearance (and continued existence) of a “man-made-man” could bring. Instead, Han is quick to accept the scientific or rational (*hangnijeok*,

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<sup>230</sup> Han (1980:206). 왜 그러냐 하면, 우주 안에 있는 물건은 무엇이든지 그 물건을 형성하기 전에도 그 물건을 형성할 만한 원자 또는 분자가 어느 위치에 든지 존재하는 것이다. 그리하다가 어느 기회 즉 인연을 만나면 그 물건이 될 만한 원자 또는 분자가 적당한 질과 양으로 화합이 되어서 마침내 그 물건이 되는 것이다. 생명도 그러하여서 무에서 유가 되는 것은 아니다. 생명이라는 것도 『생명』 그것이 되기 전에는, 그 생명이 될만한 재료의 질과 양이 우주의 어느 위치에 든지 분산하여 있을 뿐인즉, 그것을 적당하게 회합(會合)시킨다면 반드시 생명이 될 것이다.

<sup>231</sup> Han (1980:206). Han’s description of the all the “atoms and particles” of the universe – that is the basic components that can be assembled into various things (including living beings) or disassembled and “scattered all about” – resembles Heidegger’s notion of “(human) standing reserve” only without Heidegger’s accompanying negativity and apparent fear of monotonizing futures.

學理的) possibility of “man-made-man” and thus readily turns to technological concerns like the development of higher-power microscopes and other such tools.

Han Yong-un does not seem greatly troubled or disturbed by the possibility - or rather, as Han believes, the strong probability – that a “man-made-man” will appear in the perhaps not too distant future. Indeed, Han has assured readers that, when we learn to manipulate minuscule materiality and combine those particular particles together, “...life will always appear.”<sup>232</sup> Moreover, Han’s “man-made-man” essay in *Notes from the House for Chasing Cows (Ox) Collection* suggests that the crafting of a living “man-made-man” will signal great progress in human knowledge and skill. Thus Han Yong-un’s approach to the appearance of “man-made-man” carries a different tone than the public human cloning discourse which has repeatedly surfaced - and sometimes even boiled over into panic - in American and Western Europe.

To be sure, the “man-made-man” (*in-jo-in*, 人造人) Han Yong-un imagined in the early 20<sup>th</sup> Century was not the same as the “human clones” or so-called “exact genetic replicas” appearing in the English-language press during the latter half of the 20<sup>th</sup> Century in “the West.” However, given Han’s imaginative description of the new technology which will create “man-made-men” in the future, these “man-made-men” could very well be “exact replicas” of already living individual human beings. In fact, the new technology, that Han imagines, is even more likely to produce an exact

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<sup>232</sup> Han (1980:206).

material replica of living persons because Han's imaginary technology does not require a period of gestation inside a woman's womb and subsequent growth or maturation process. Unlike the "human cloning" techniques (SCNT for example) of the seventies, eighties, and nineties, Han's imaginary future technology can produce adult "man-made-men" immediately.

Given this, admittedly still imaginary, technological power to produce fully grown "man-made-men", it seems even more striking that, unlike his later day Western counterparts, Han Yong-un seems rather calm and nonchalant. He does not immediately attempt to mark or distinguish his new "man-made-men" from other people. He does not hasten to remind his readers that these "man-made-men" are only imaginary figures of a distant future. In fact, Han argues against any attempt to erect an absolute distinction or an unreachable qualitative difference between "man-made-men" (*in-jo-in*, 人造人) and what he dubs, by default, "natural-man" (*ja-yen-in*, 自然人). Instead, Han challenges the notion that "man-made-men" are somehow substantially different from "natural men." Han writes, "Even natural persons are, to some extent, man-made-men. This is because a person cannot be made if there aren't other persons around to make them."<sup>233</sup> Thus, Han Yong-un readily extends the

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<sup>233</sup> Han (1980:206). (자연인이라는 것도 어느 정도까지는 인조인이다. 사람이 아니면 사람을 만들 수가 없는 까닭이다. (다만 사람 만드는 전부의 기교를 인위적으로 하지 못할 뿐이다.)

Buddhist notion of the fundamental equality (*pyeongdeungseong*, 平等性) of all sentient beings (*il-chejungsaeng*, 一切衆生) to his imaginary “man-made-men”.

Furthermore, in his essay “man-made-man”, Han Yong-un also extends and thus transfers or projects his understanding of basic human desires, human emotions and affect, and basic human privileges and protections towards his newly imagined “man-made-men”. He reasons that newly created “man-made-persons” should not be sold or disassembled because, despite being made by others, these living beings would be recognized as legal persons. Han explains, “If there is no difference, at all, between a man-made-man and a natural man in mind, body, vitality, and volition (*ui-yok*, 意慾) ... and thus by law individual (man-made-men) are persons, then to annul (or disassemble) a man-made-man would be to commit the crime of murder.”<sup>234</sup> Han, thus assumes that in the future “man-made-persons” will have the same protections as “natural-man.”

Many of these assumptions about the future of “man-made-man” can be explained as originating in Han Yong-un’s understanding and interpretation of Buddhist doctrine. For example, as noted above, Han see the emergence of “life” as corresponding – in an almost mechanistic and highly predictable way – with the aggregation or assembly of certain material conditions and consequences which he

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<sup>234</sup> Han (1980:207). “아무리 인조인이라 할지라도 육체, 정신, 생명, 의욕, 무엇이든지 조금도 자연인과 다름이 없은즉, 개인으로서도 해소를 당하고자 할 리가 없고, 법률상으로도 완전한 인격이 될 것인즉, 인조인을 해소하는 것은 곧 살인죄를 범하게 되는 것이다.”

describes as “karmic conditioning” (*inyeon* 因緣 *ul man-namyeon...*).<sup>235</sup> Han’s hesitancy to draw absolute ontological distinctions between different forms of being – for example, between “man-made-man” and “natural man” reflects a general Buddhist cosmology. Moreover, the Buddhist doctrine of *anatman* or “no-self” (*mu-a*, 無我) as well as Mahayana notions of the equality of “mind” or “Buddha nature” (*yeoraejang* 如來藏 or *bulsang sasang* 佛性思想) become highly relevant here. Without an eternal or immortal self, human beings are not seen as unique and irreducibly one-of-a-kind beings but rather a momentary or impermanent and always changing complex expression of karmic conditionings and consequences. Moreover, if no immortal or essential “self” (*a*, 我) or “human-self” exists, then “man-made-man” would not likely be considered fundamentally different from “natural man”. This logic resembles the Buddhist treatment of non-human animals and other sentient beings (*jungsaeng*, 衆生) which appear or manifest interchangeably depending on the complex workings of karmic laws. Moreover, all sentient beings are subject to transmigration and their intentions towards and interactions with other sentient beings influences their particular form of rebirth. As Han Yong-un argues in his “man-made-man” essay, the appearance of “natural men” is also a condition and a consequence of other persons. Human beings can and do already create other people and each other but, as Han

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<sup>235</sup> Han (1980:206). See footnote #229 for a full hangul citation. This more mechanistic Buddhist view differs from the traditional Christian idea that God breathed life into the first man, Adam, and played a role in the subsequent unfolding of human history – particularly the birth of sons, Isaac, for example.

notes, the only difference is that humankind currently lacks the skill to artificially perfect or complete this “man-making.”<sup>236</sup> Thus, it follows that any difference in form between “natural man” and “man-made-man” are relatively minor momentary manifestations. This approach is considerably different from that of Jean Baudrillard, for example.

Han Yong-un devotes most of the second half of his essay to answering this question. He decides that any new human-creating technology must be available to everyone since it is wrong to grant an exclusive monopoly to any one particular person, group, or company. Then, he imagines, “When man-made-men are first constructed, everyone – perhaps out of mere curiosity or perhaps out of a desire to improve the technology – will just have to make a human being. Men, women, children, youth, the elderly, the androgynous, the handicapped and everyone else will make as many men and women as they want.”<sup>237</sup> And, as time passes, Han predicts people will continue to make more and more “man-made-humans”. Moreover, in time, the new “man-made-persons” will marry other “man-made-persons” and their population will expand. Han adds that, as long as these “man-made-humans” are at least as intelligent as “natural humans” they will also begin making their own “man-made-humans”.

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<sup>236</sup> Han (1980:206) 다만 사람 만드는 전부의 기교를 인위적으로 하지 못할 뿐이다.

<sup>237</sup> Han (1980:207). 누구든지 처음으로 인조인을 완성한다면 호기심으로든지 기술의 선양(宣揚)으로든지 하나만 만들고 말리는 없는 것이고 남자도 여자도 소년도 청년도 노년도 혹은 중성도 불구자도 자기의 미치는 데까지는 남녀를 만들것이다.

However, Han freezes the ambiguously unfolding being or always-deferred-becoming of his imaginary “man-made-man” and thus fixes or sets a “human identity” by splitting (human) being into two competing “races” or “nations.” Although he retains the terms “man-made-man” and “natural man” for convenience it is clear that the distinction of “making” has already collapsed – Han notes that “man-made-man” will marry each other and thus presumably procreate as “natural man” as well as make more “man-made-man” themselves. Thus, the “split” between the races which Han imagines is by no means dependent on a material or biological difference. Instead the divide between the competing nations of “man-made-man”(sic) and “natural man” (sic) arises from economic (material) desires which have become enmeshed with the psychological politics of self-consciousness and self-identification as is seen in racialized politics and racialized identifications.<sup>238</sup>

In other words, Han imagines that trouble will arise. He imagines mass unemployment and famine due to the excessively large population of “man-made-humans” who must eat and acquire the basic necessities of life like all other human beings. Then, Han explains, “as survival becomes a competition, the natural humans and the new man-made-humans will start to hate each other and conflict will arise.”<sup>239</sup> At first the “man-made-humans” will be outnumbered and thus they will be

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<sup>238</sup> I am speaking here from the perspective of an imaginary “ground zero” – that is through the logic of an “originary” division – that Han Yong-un describes in his essay rather than explaining a particular historical “invention” of “race” or “racialized groups.”

<sup>239</sup> Han (2008:207) (생존 경쟁상 자연인과 인조인 사이에는 증오와 갈등이 생길 것이다.)

subservient to their makers but Han predicts that all of the “man-made-humans” will be of the same “kind” or “race” (*dongjong*, 同種). This new “race” or “tribe” of human beings will continue to mass produce themselves as well as develop superior “man-made-humans” to outdo and compete against the remaining “natural men.” Han predicts that when an inevitable war for earth’s increasingly scarce resources erupts between the two “types” or “tribes” of people, the “natural people” will, naturally, be defeated by the superior “man-made-humans.” To conclude this troubling tale of future warfare and “natural human” kind’s subjugation and possible extinction, Han asks: “Isn’t it foolish that “natural people” would create the “man-made-people” who, in the end, destroy their creators? Wouldn’t it be better to invest the energy spent on learning how to make “man-made-humans” into developing technologies to produce “man-made-food” instead?”<sup>240</sup>

This rhetorical question brings Han Yong-un’s short narrative about the future of “man-made-men” to a close. Han’s dystopian tale, about the haunting power of “artificial” technologies for human(oid)-(re)production combined with “tribal” or “racial” and, perhaps, “status/class” competition for scarce resources, can be read like an allegorical critique of imperialist expansion. Han may very well have been jotting down this fictional forecast of a grim future for both “natural humans” and “man-made-humans” during a time of increasing wartime mobilization as Imperial Japan,

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<sup>240</sup> Han (1980:208) 그러면 자연인이 스스로 인조인을 만들어서 도리어 그들에게 멸망할 것이니 얼마나 어리석은 노릇인가? 그러면 인조인을 연구하는 정력을 옮겨서 인조 식료를 연구하는 것이 좋을 것이다.

which included the Korean peninsula, entered into the second Sino-Japanese War and then, World War II.<sup>241</sup> Perhaps Han fantasied that the newly-(re)produced “man-made-subjects” of Japan’s imperial expansion would, during these times of limited resources and food, would fight back and prevail. But, we must wonder, what new betrayal will the next generation of “artificially” created “man-made-humans” - those (re)produced by the “man-made-men” (that is, the man-made-man’s-made-men) – bring?

While worth considering, it nevertheless seems unlikely that Han Yong-un’s dystopic tale of the future of “man-made-man” (a tale which is nestled inside Han’s longer “Man-made-man” essay) can be summarily reduced to a simple allegory. Taking into considering the larger admittedly wandering but yet clearly overarching framing of Han’s essay, it seems safe to assume that Han is, for the most part, genuinely contemplating the technology of “man-made-man”. Once Han has finished his futuristic story with his concluding point that it is better for humanity to develop “man-made-food” than “man-made-man”, he abruptly changes his tone and moves forward to the past. Despite his criticism of the human desire to create “man-made-men”, Han proceeds to locate the ultimate origin of all man-making technology in the East. To do this, however, Han must skip over the Buddhist Tripitaka and introduce, instead, a Daoist text.

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<sup>241</sup> Perhaps the “man-made-humans” can be likened to Japan’s newly made imperial subjects who Han imagines as gaining enough numbers and strength to rise up against their masters.

With this paradoxical plot twist, Han Yong-un proceeds to subvert the technological claims of “the West” by finding the original well-designed “man-made-man” in early Zhou Dynasty China. Han writes, “Most believe that (the endeavor to create) a man-made-man began in the West but, in fact, it actually started in the East.”<sup>242</sup> Next, Han retells a story about an expert craftsman who created a “wooden automated man” (*mok-in*, 木人) with great and exquisite skill during the reign the Zhou Dynasty’s fifth king (King Mu, 956-918 BCE).<sup>243</sup> Han explains that this account of an early East Asian “man-made-man” comes from *The Book of Lieh Tzu* (*yeoljagi*, 列子記), a third century B.C.E. “Daoist” text. Han deciphers and translates a brief passage<sup>244</sup> – which he identifies as an excerpt of *The Book of Lieh Tzu* – into the Korean language for his readers. However, the short passage which Han Yong-un translated – or rather his interpretation or “framing” of the meaning of this particular passage – is somewhat different from standard accounts.

Lionel Giles’s 1912 English translation of the “wooden automated man” passage excerpted from *The Book of Lieh Tzu* provides a useful basis of comparison. Below is a slightly abbreviated version of Giles complete translation of the “wooden automated man” story. Giles writes:

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<sup>242</sup> Han (1980:208) (그런데 인조인은 서양의 것으로만 알지마는 실로는 동양에서 비롯한 것이다.)

<sup>243</sup> The Zhou Dynasty of China is also known as *Ju-Nara* (周나라) in Korean or *Zhou Chao* (周朝).

<sup>244</sup> Han (1980:208) cites the following *Liezji* (列子記) passage - 周穆王時 巧人有偃師子 爲木人 能歌舞 王與盛姬觀之 舞既終 木人瞬目 以手招王右左 王怒欲殺 偃師懼壞之 皆丹墨膠漆之所爲也.

King Mu of Chou made a tour of inspection in the west.... On his return journey, before arriving in China, a certain artificer was presented to him by the name Yen Shih. King Mu received him in audience, and asked what he could do. "I will do anything," replied Yen Shih, "that your Majesty may please to command. But there is a piece of work, already finished, that I should like to submit first to your Majesty's inspection." "Bring it with you tomorrow," said the King, "and we will look at it together."

So Yen Shih called again the next day... "Who is that man accompanying you?" asked the King. "That, Sire, is my own handiwork. He can sing and he can act." The King stared at the figure in astonishment. It walked with rapid strides, moving its head up and down, so that anyone would have taken it for a live human being. The artificer touched its chin, and it began singing, perfectly in tune. He touched its hand, and it started posturing, keeping perfect time. It went through any number of movements that fancy might happen to dictate. The King, looking on with his favorite concubine and the other inmates of his harem, could hardly persuade himself that it was not real.

As the performance was drawing to an end, the automaton winked his eye and made sundry advances to the ladies in attendance on the King. This, however, threw the King into a passion, and he would have put Yen Shih to death on the spot had not the latter, in mortal terror, instantly pulled the automaton to pieces to let him see what it really was. And, lo! it turned out to be merely a conglomeration of leather, wood, glue and paint, variously colored white, black, red and blue. Examining it closely, the King found all the internal organs complete - ...all of them artificial. Not a part but was fashioned with the utmost nicety and skill; and when it was put together again, the figure presented the same appearance as when first brought in....

Now, the King was delighted. Drawing a deep breath, he exclaimed: "Can it be that human skill is really on a par with that of the Creator?" And forthwith he gave an order for two extra chariots, in which he took home with him the artificer and his handiwork.<sup>245</sup>

This story (which, incidentally, also appears in Joseph Needham's *Science and Civilization in China* series<sup>246</sup>) exhibits some basic similarities to Han Yong-un's

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<sup>245</sup> Giles (1912:90-92).

<sup>246</sup> Needham (1986:53).

futuristic tale about the fate of humans who have created many “man-made-men.” Namely, both Han Yong-un’s story and the story of the “man-of-wood”, which has been attributed to Lieh Tzu, imagine that “man-made-man” (in Han’s tale a group of man-made-men” and in Lieh Tzu’s scenario, a single cheeky “man-made-man”) will somehow bring potential trouble, disaster, and even the threat of death back to his human creator. And in these stories of Han and Lieh Tzu, we find a hint of Rank’s “dangerous double” and, perhaps, even something akin to twenty and twenty-first century human cloning fears.

Nevertheless, there are clearly subtle differences between these “East Asian” “man-made-men” stories and their “Western” counterparts. Both Lieh Tzu and Han Yong-un do not imagine an “evil” or “ghostly” human figure whose mere presence guarantees their human original’s death, as is commonly seen in the appearance of the Doppelgänger in German folklore, and with the ominous existence of a spectral Fetch in Irish tales, as well as with the debut of a dangerous double in various examples of Romanticist literature. Instead, as in the case of Han Yong-un’s “science-fiction” story, there are various intervening factors and conditions. For Han, individual “man-made-men” pose no apparent threat to their creators – instead it is human drive towards excessive production and the lack of control and self-regulation which inevitably pits “man-made-men” against “natural men” in a scramble for resources. And in *The Book of Lieh Tzu* anecdote about King Mu and the “man-made-of-wood”, it is the jealous

anger of King Mu at the immodest wooden man's flirtations with the King's concubines that puts Yen Shih's (the wooden-man's creator's) life at risk. At least in these two stories, the turn which changes the "one-who-creates" into the "one-who-dies" is mediated by various factors - either of which is expressly about an immediate fear or terror of being seamlessly replaced by an identical "copy" or "double" of the self. Rather the destructive return of the "man-made-man" seems to occur via other extenuating circumstances or related affairs although these situations may also (or even inevitably) involve an excessive expression of man's more "selfish" desires.

Han Yong-un, however, introduces an fascinating twist in his (re)contextualization of *The Book of Lieh Tzu's* tale of the "wooden automated man". Namely, rather than employing a "duplicate" or "replica" (i.e. "man-made-man") to challenge (or even destroy) the "primacy" of an "original" or hitherto "singular" being (i.e. a "natural man") as is often seen in the "Western" examples of human doubles,<sup>247</sup> Han (re)presents and thus (re)makes a "man-made-man" (or "human replica") to "stake" or "erect" a claim for an original and highly advanced technology previously developed in the "East". Moreover, it is the, ironic, "singularity" or "uniqueness" of this "original" Eastern replica, which attaches and binds this "superior Eastern technology" together with, what could be interpreted as, a "higher Eastern morality." To accomplish this deft move, Han must paradoxically turn the "replica" – that is the

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<sup>247</sup> This difference is, of course, partly due to a difference between the "man-made-man" which Han describes and the "unknown identical twin" or "spectral yet personal double" which is imagined in the West as the "Doppelgänger." And yet this difference appears as instructive in and of itself and does not entirely discredit the point I make above.

wooden “man-made-man” – into a “singular one-of-a-kind being”. Thus, Han alters or rewrites the plot and outcome of *The Book of Lieh Tzu* “man-made-automaton” story so that the “marvelous man-of-wood” is disassembled and destroyed forever – in other words, the “man-made-man” meets “death” without any possibility of return.

Han Yong-un gives another variation or different interpretation of the elements in *The Book of Lieh Tzu*’s “man-of-wood” narrative. Deciphering a brief passage from a third century B.C.E. Daoist text, Han contends that the ancient Chinese “man-of-wood” was crafted with much more exquisite detail and skill than any of the present-day ‘man-made-men.’ Indeed, the ancient text says that this “man-of-wood” could even sing and dance. King Mu and his concubines watch the “man-of-wood” dance but when the performance is finished the “man-of-wood” winks his eyes and rudely summons King Mu with his hands.<sup>248</sup> King Mu becomes enraged and fearing for his life, the expert craftsman who made the “man-of-wood” immediately destroys his masterpiece.<sup>249</sup> Han Yong-un concludes this story with the observation that –

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<sup>248</sup> Here, Han Yong-un’s interpretation differs from that of Lionel Giles. Giles’ interpretation suggests that the “man-of-wood” winks and beckons to King Mu’s concubines while Han (1980:208) writes that wooden man winks and waves at King Mu, himself. This difference in interpretation revolves around the phrase 以手招王右左. Giles’ version of this phrase seems more accurate (王右左 referring to the women on the right and left of the king instead of, as Han Young-un suggests, the king himself). This difference in interpretation changes the meaning of the anecdote considerably. In Giles version the King is angered by the automata’s attempt to seduce his concubines while Han Yong-un interpretes the wooden-man’s infraction as one of being overly familiar and demanding thus rude to the King.

<sup>249</sup> Han (1980:208). Here, Han Yong-un’s interpretation differs from that of Lionel Giles. Giles’ interpretation suggests that the “man-of-wood” winks and beckons to King Mu’s concubines while Han writes that wooden man winks and waves at King Mu, himself. This difference in interpretation revolves around the phrase 以手招王右左. Giles’ version of this phrase seems more accurate (王右左 referring to the women on the right and left of the king instead of, as Han Young-un suggests, the king himself). This difference in interpretation changes the meaning of the anecdote considerably. In Giles version the King is angered by the automata’s attempt to seduce his concubines while Han Yong-un interprets the wooden-man’s infraction as one of being overly familiar and demanding thus rude to the King.

considering the high level of skill and craftsmanship displayed in the creation of the “man-of-wood” – it is somewhat unfortunate that Easterners (*dongyang-in*, 東洋人) did not continue creating “man-made-men” and develop this technology further.<sup>250</sup>

### “Man-made-Man” (人造人間) Blurbs and Christian Terms in Colonial Korea

Another brief but more general discussion of “man-made-man” can be found in the *Dong-a Daily* newspaper, roughly ten years later. Simply titled “About Man-made-Man” (*in-jo-in iyagi*, 人造人 이야기), this 1936 *Dong-a Daily* piece begins with a summary of the Biblical account of the creation of man:

**The idea of artificially creating a human being has most likely been around, gestating in the human imagination (*ma-um*, 마음) since the early days. They say the omnipotent (monotheistic) god (*yu-ilshin*, 唯一神), “Jehovah”, made - in his own form - the first person, “Adam”, and blew breath into him. After that, it has been believed that those under the divine providence of God should not engage in such great works of creation.<sup>251</sup>**

This introductory paragraph, presents the story of a monotheistic god’s creation of “Adam” (in the god’s own form and with his own breath) as an early, indeed the earliest founding episode of God-man relations, after which human kind believed it should not engage in god-like creative works, like fashioning another “Adam.” Such

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<sup>250</sup> Han (1980:208). 다만 동양인은 그것을 계승 확충하지 못한 것이 단점이다.

<sup>251</sup> Haeng, Yeo-in (March 26, 1936). (사람이 사람을 人爲的으로 創造해보겠다는 것 아마 일찍부터 사람의 마음 속에 孕胎된 생각의 하나이리라. 그러나 唯一神 “여호와”는 흙으로써 自己의 形狀과 같이 만들어가지고 거기다 입김을 불어넣어 最初의 사람 “아담”을 내었다 하지만 사람은 그 以後 神의 攝理 아래에 있어서가 아니고는 이 偉大한 創造의 事業을 제맘대로 할 수 없는 것이 생각하여왔다.)

associations between a monotheistic creator god – often assumed to be a Judo-Christian God - and a prohibition or warning against “man-making-man” will reappear three decades later in South Korean newspaper reports on the “human cloning” claims of the 1970s. In the late 1930s, however, the “man-made-men”, debuting in colonial Korea’s Korean-language newspapers, were decidedly inorganic.<sup>252</sup> The 1936 *Dong-a Daily* account “About Man-made-Man” concludes with the observation that the “humanization of machines” (機械의 人間化) and the “mechanization of humans” (人間の 機械化) is a simply an aspect of “modern civilization” (近代文明) but creating life, if not impossible, belongs to a very distant future.<sup>253</sup>

### **From “Man-made-Man” (人造人間) to “Human Cloning” (複製人間)**

News about a book, David Rorvik’s *In His Image: the cloning of a man*, in that a science-journalist gives his “first-hand account” of the cloning of a American business man, appeared in South Korean newspapers, not long after it appeared in the American and British press. The mysterious cloning of an American millionaire seemed to be a titillating and curiously entertaining story, despite its lack of any substantive impact on

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<sup>252</sup> I have not found references to Adolf Huxley’s 1932 *Brave New World* in Korean-language newspapers at this time although the book is mentioned in later 1997 discussions of human cloning with the advent of Dolly.

<sup>253</sup> Haeng, Yeo-in (March 26, 1936). (그러나 이 機械의 人間化는 人間の 機械化와 아울러 近代文明의 一面일뿐이오 生命의 創造가 그 秘鍵이 우리의 손에 잡힐 可能性이 있다손치드라도 그 實現은 實로, 그러타 實로 遙遠한 將來에 屬하는 일이다.)

South Koreans at the time. President Park Chung-hee continued to control the South Korean state in 1978, when Rorvik's "human cloning" news first appeared and, in accord with Park's state-directed development policies, income from exports was high. The economic growth rate remained relatively high despite the 1970s oil crises and observers report the emergence of what seemed to be a middle-class in South Korea, people with some disposable income who were, by in large, university-educated workers.<sup>254</sup>

Unlike in the U.S., where an emerging group of "bio-ethics experts" found that encouraging a mass-mediated debate on human cloning was a useful and relatively effective way of directing public attention to certain issues, the "softer" coverage of human cloning in South Korean newspapers in the late 1970s, took on an imaginative playfulness which was, no doubt, facilitated in part by the rather removed "international" source of "human-cloning" talk. International travel was largely inaccessible for most South Koreans, at the time, and often required special state approval.<sup>255</sup> The news of an adventurous and mysterious American millionaire's secret endeavor to clone himself, would seem both titillating and peculiar to many Korean

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<sup>254</sup> The Bank of Korea reported a 10% overall economic growth rate for 1977 and 11% for 1978. See Oh (1999:62) for a listing of various South Korean economic indicators from 1953-1996. However, the impact this growth had on household incomes and consumption should not be over-estimated. Nelson (2000) notes that expenditures on food consumed 40% of the average household budget in South Korea in the 1970s. Five years later (in 1975), the percent of household income spent on food had actually risen to almost 50% due to severe labor repression and the effects of the oil crises. Thus it should not be assumed that South Korea's economic growth in the seventies necessarily translated into disposable middle-class incomes. See Nelson (2000). While there is debate, economists nevertheless, trace the beginnings of a South Korean middle-class to the mid or late 1970s.

<sup>255</sup> International travel, without prior government approval for all citizens - including college students - was phased in in South Korea in the mid/late 1980s.

newspaper readers.<sup>256</sup> Moreover, at the time, America was often imagined as a great land of wealth, opportunity, democracy, and modern technology in South Korea. And there was relatively little open public criticism of to the fact that America’s political, economic, and military involvement in South Korea was, in fact, serving U.S. interests often at the expense of South Korean democracy. Namhee Lee notes anticommunism and pro-Americanism were so wedded together that a widely shared public perception equated anti-Americanism with communism.<sup>257</sup> Thus anti-American sentiment did not fully erupt in South Korea until the mid-1980s, and, for many in South Korea throughout the 1970s and even beyond, America remained place of wonder beyond reproach. Such fantastic utopian-like visions of America and American life, also colored the description of American science and technology in the South Korean press. This is evident in the 1920s and 1930s news accounts of American “man-made-men” in Korean-language daily’s published during the Japanese-colonial period, as well as South Korean newspaper’s coverage of “modern technology” and “human cloning” during the late 1970s.

Less than a day after David Rorvik and his publisher, J.B. Lippincott Co., held a promotional press conference, “pre-announcing” the publication of a “first-hand

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<sup>256</sup> Perhaps, particularly so, given the mostly enthusiastic response of the South Korean public (particularly married women) to the state’s “family planning” (that is, population reduction and control) policies of the sixties and seventies. The question of the impact of state-directed family planning on the reception of “cloning news” in the late 1970s is difficult to answer but assuming that pressure for married women to have children would primarily come from a married couple’s paternal grandparents, “cloning” could be assumed to be illogical and strange to most married women, if not to men. See DiMoia (2013:109-144) for a discussion of some of the complexities involved in the state’s family planning policies from the early 1960s to the mid-1970s.

<sup>257</sup> See Lee (2007:114-116).

account” of human cloning, the *Kyeonghyang Newspaper* ran a short report about the book in the daily paper. Inside a small panel devoted to “Overseas Topics” (海外 토픽), the *Kyeong Hyang Newspaper* report – “American Scientist claims he created a living being from a single cell, the “Man-made-Man” is now 14 months old” – mistakenly explains that the “cloned” boy, was created from just *one* single cell, and was born inside a test-tube.<sup>258</sup> In the report, the (admittedly ambiguous) English word “cloning” does not appear and is, instead, translated as *Yeong-yang Sun-kye* (*youngyang sungye*, 營養純系) or “cultivating a pure line” (which is, in turn, described as the process by which a individual is copied via the genetic information of a single cell).<sup>259</sup> From this description, it is easy to see that the reporter has misunderstood the technique of somatic cell nucleus transfer (SCNT) and completely omitted the required human egg, extracted from a woman. Even more notable, however, is the impression that this *Kyeonghyang* report gives, that an American millionaire’s copied “man-made-man” developed inside a test-tube and was, indeed, born from the, presumably, glass lips of that tube.

A sprinkle of gossip-columns, reports, and even brief articles which mention “human cloning” followed this somewhat misleading but unobtrusive *Kyeonghyang Newspaper* report. Most South Korean newspaper tidbits printed about human cloning

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<sup>258</sup> Staff (March 4, 1978). “시험관에서 탄생한 한남아가 현재 14 개월째 건강하게 자라고 있다고 주장하는 책이 곧 미국에서 발간될 것으로 3 일 알려져 미국과학계에 비상한 관심과 소동을 불러일으키고 있다고.”

<sup>259</sup> Staff (March 4, 1978). “한 단일 세포로부터 유전학적으로 복제된 개체가 탄생하는 과정이다.”

in the late seventies are found in brief “gossip” columns or small sections of amusing conversation which fill blank left-over space (『橫說豎說』・『餘滴』). These sections offer brief comments on recent events, dry humor and puns, the occasional literary allusion, and otherwise present titillating ideas, curiosities, predictions, and chilling sketches of the future of humankind. The early *Kyeonghyang Newspaper* report suggesting a millionaire’s clone was born from the mouth of a test-tube, was picked up and repeated, or perhaps coincidentally re-invented, and printed in the marginal spaces of other South Korean newspapers. A *Dong-a Daily* “miscellanea section” boldly declares: “A few months ago, it was reported that a copied “man-made-man” (複製人造人間), that is a “cloning baby” (“클로닝 아기”) who has never been in a woman’s womb, was made and cultivated in a test-tube and is now 14 months old and being raised in America.”<sup>260</sup> This particular *Dong-a Daily* piece also conjures up a mob of mass-produced people with blank expressionless faces. The “miscellanea section” reader is told that the mob was copied endlessly from the same mold and is destroying everything encountered because “they are figurines made to fight.”<sup>261</sup> Imagined as knowing no fear, these emotionless and expressionless mob members are explicitly

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<sup>260</sup> Staff (July 29, 1978). (몇달전에는 母胎라고는 전혀 모르는 “클로닝 아기” 라는 複製人造人間이 실험관속에서 배양되어 만들어져 14 개월째 미국에서 자라고 있다는 보도가 있었다.)

<sup>261</sup> Staff (July 29, 1978). (싸움만을 위해 태어난 人形이다.)

described as “people not born from the womb of a woman.”<sup>262</sup> And while this would seem to be only natural considering the fact that the “man-made-men” mob presented, so ominously, in this *Dong-a Daily* “miscellanea section” is described as having been “produced by sexless generation and multiplying technology”<sup>263</sup>, nevertheless, the repeated focus on “cloning” as a process which occurs outside of a woman’s body, still stands out. I will return to the emphasis placed on this early assumption that “human cloning” occurs outside a woman’s body and discuss the ill-effects associated with this kind of “externalized procreation”, which are articulated in South Korean newspapers, later on in this chapter. Here, I draw your attention to the way in which the late 1970s South Korean “human cloning” discourse unfolds in a largely fantastic and imaginary realm and is associated with American life and technology.

“Human cloning” is mentioned in a 1978 “gossip column” of the *Kyeonghyang Newspaper* which opens with a picture of “the future” of an American household – a domestic scene which imagines great luxury and leisure for the American housewife. Perhaps a translation or maybe a re-writing of a futuristic American household appliance exhibition or showroom advertisement pamphlet, this Korean language text describes an imaginary scenario set, not only in a distant future time, but also in, what

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<sup>262</sup> Staff (July 29, 1978). 그들은 여자의 뱃속에서 태어난 사람은 아니다.

<sup>263</sup> Staff (July 29, 1978). 그들은 無性生殖 (클로닝)과 増殖技術에 의한 人造人間인 것이다.

would have been to newspaper readers, a largely imaginary American place. The newspaper column begins as follows:

**They say that within five years, a computer housemaid will appear in the kitchens of American families. The rapid development of the electronics industry will make this possible. When a housewife opens her eyes in the morning, all she will have to do is push the button on the menu pad installed below her head while lying in bed. Then, after fifteen minutes, when she moves to the dining table, a feast with everything she desires will appear before her – as though she had Aladdin’s magic lamp.**<sup>264</sup>

This feminized domestic scene, as well as a brief blurb about a robotic sales assistant at the Sears Department Store in Chicago, is subsequently described as “human life on the vanguard of automation.”<sup>265</sup> In the rapidly industrializing, 1970s South Korean context where disposable “middle-class” incomes had barely begun to emerge under a dictatorship focused on export-led growth and the repression of domestic wages and labor union groups, this description would seem fantastically foreign. It is a dream of consumerism without a shadow - human labor and laborers are literally erased in this picture, like with a quick rub of Aladdin’s magic lamp.<sup>266</sup>

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<sup>264</sup> Staff (July 31, 1978). 미국가정의 부엌에는 향후 5년내에 “컴퓨터 家政婦”라는 것이 등장하리라 한다. 電子산업의 급진적 발전이 그것을 가능케한다는 것이다. 아침에 눈을 뜬 주부가 할일이란 침대에 누운채 머리맡에 설치된 메뉴판의 버튼을 누르는 일뿐이라고. 15분쯤 뒤에 자리를 식탁으로 옮기기만 하면 마치 “알라딘의 妖術 램프” 처럼 원하는 盛饌이 눈앞에 펼쳐지게 된다는 얘기가.

<sup>265</sup> *Ibid.* The text reads: “When this happens, humankind will be living on the vanguard of automation.” 이쯤되면 인류는 바야흐로 오토메이션 時代의 尖端을 살게되는 셈이다.

<sup>266</sup> There is a “worker-other” explicitly erased from this futuristic description – a black housemaid (黑人가정부). The text “optimistically” explains that a mechanized housemaid can be purchased for the amount it would cost to hire a “black housemaid” for one year. In such a scenario, one imagines South Korean factory workers – whose labor became

This South Korean/American “gossip column” scenario provides a striking example of what Daniel Miller has dubbed a “global dictator” – that is, the “First World housewife.” Miller writes, “The quintessence of power in the modern world lies objectified in the image of the First World Housewife.”<sup>267</sup> Such a family-focused female image would resonant in South Korea but with somewhat different tones as, during the colonial period and on up through South Korea’s rapid industrialization, a mother’s endless work and self-sacrifice for her family and children was a pervasive troupe (as well as an underlying material factor in many cases) and, later, a heroic national narrative. (We will see an example of this later, in Chapter 5, in the story of stem-cell scientist, Hwang Woo-suk’s, childhood.) By the late 1980s and early 1990s, an emerging public discourse on the “excessive luxury consumption” (*gwasobi*, 過消費) of South Korean women, was playing out via the South Korean media. As Laura Nelson shows, this discourse made men’s consumer practices largely invisible.<sup>268</sup> A retrospective glimmer of this (en)gendered (in)visibility of desire and consumption can be seen in this 1978 gossip column’s “future-of-automation” scenario, as well. That is, the newspaper blurb suggests that sometime the future “(w)hen the year is

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products exported to America and Japan in the 1970s – would make an assembly the machine maids sold in America and thus “replace” the “black housemaid.” How and how much newspaper “gossip column” readers identified with this scenario is difficult to tell. No doubt the fantastic image – perhaps even of lying in an automated “bed” – would have captured the imagination.

<sup>267</sup> Miller (1995:34).

<sup>268</sup> Nelson (2000:143). I believe the gendered division of labor, in South Korea, exhibits a clear Confucian influence, although this influence plays out in complex and contradictory ways for married women in modern South Korea, serving as both a source of prestige and power as well as a limitation.

somewhere in the 2000s, perhaps a lonely man can put a coin in the side of the street and a beautiful female cloned human being will suddenly appear.”<sup>269</sup>

The “lonely man’s” desire, here, is foregrounded by a brief discussion of the loneliness which may accompany an automated future life. It is this emerging symptom of modernity which is, then in turn, satisfied by the beautiful cloned female. Thus, modernity’s alienation or “displacement” of masculine labor causes a certain (hetero)sexual desire which can then be satisfied through the “consumption” of the cloned woman. The future housewife, however, is “freed” by an automated future to live a life of “conspicuous luxury” (i.e. leisure) – she is freed from “household” labor or work which, presumably, she would be performing for others, regardless, but here appears as the excessive consumption of luxury. It seems that both for the housewife and the cloned female, work is performed while lying in bed, so to speak, and in one scenario it is an embarrassing immoral excess consumption of leisure and in the other, it is an embarrassment of “self-value” as well. Needless to say, industrialization - especially South Korea’s - displaced both women and men. Nevertheless, in this “American vanguard” scenario, women’s “excessive” desire is expressed via the satisfied consumptive acts of family members and men’s is portrayed as compensatory and directly sexualized. Towards the end of this *Kyeonghyang Newspaper’s* futuristic

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<sup>269</sup> Staff (July 31, 1978). “앞으로는 또 어떤것이 나올지모른다 서기 2 천년대쯤엔 외로운 홀아비가길에서 鑄貨를 넣으면 미모의 여성複製人間이 불쑥 나타날지도 모를 일이다.”

scenario, anxiety about the erosion of jobs and the future economy does, eventually, surface. And, the text makes it clear that the ultimate, “lesson” to be taken from this “gossip column” is that a future of increasing automation is inevitable. Thus, readers should think about preparing themselves to survive in this changing American-lead automated economy of the future by being “creative” and developing skills that machines cannot replicate.

Imaginative speculation about the future possibilities of human cloning, genetic engineering, and the (re)productive futures of humanities continued on for almost six months after the *Kyeonghyang Newspaper* ran an article announcing that David Rorvik’s book on the cloning of an American millionaire, was, in fact fabricated.<sup>270</sup> The news of this human cloning hoax was published in the “IT/Science section” of the daily paper, with a clever drawing of Rorvik, awash in dollar bills and wondering with a sly smile – “Can cloning really make a millionaire?” Thus, Rorvik and “Billy, the (American) clone” became a funny fleeting fiction in South Korean newspapers but, the idea of “human cloning” (as well as its Sino-Korean translation, 複製人間) proved to be a lasting force in South Korean discourse.

In addition to the wider circulation of this new Sino-Korean cloning word, certain expressions became more familiar with the discussion of Rorvik’s book (as well as the emergence of genetic engineering, and IVF news). Phrases like - “human

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<sup>270</sup> Staff (July 3, 1978).

beings, just as given by god”<sup>271</sup> or “...human life, which was once only created by god”<sup>272</sup> or “the creation of living beings, which had once only been the work of god”<sup>273</sup> – were circulated in news articles and gossip columns, in a general “non-religious” context. Anthropomorphized powerful creator gods were not a particularly noteworthy part of Korean cosmogony before the introduction of Roman Catholicism<sup>274</sup> when, in the 18<sup>th</sup> and early 19<sup>th</sup> Century certain, more marginalized, Confucian scholars assimilated the Catholic idea of a ultimate deity to a more anthropomorphized Confucian notion of heaven.<sup>275</sup> Protestantism began expanding rapidly in South Korea in the 1970s and 1980s and thus the Christian population grew quickly during these two decades and came to represent a significant portion of South Korea’s overall population.<sup>276</sup> By 1970 Korean Protestants made up seven percent of the total South Korean population and this number grew to thirteen percent by 1979, a year after Rorvik (and *J.B. Lippincott Co.*) announced the “birth” of Billy, the clone.<sup>277</sup> The total percentage of Christians (Catholics and Protestants) in South Korea at the

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<sup>271</sup> Staff (July 29, 1978). “神이 주신 그대로의 人間. ”

<sup>272</sup> Staff (July 29, 1978). “神만이 창조할 수 있다던 인간의 생명이 사람의 손에 의해 마음대로 조작되려는 현실은 실로 충격이 아닐 수 없다.)

<sup>273</sup> Staff (March 11, 1978). “神만의 役事였던 생명체의 창조를 이제는 인간도 할수있게 되어가고 있으니 무서운 세상이다.”

<sup>274</sup> It can be argued that Christianity came to the Korean peninsula earlier but for practical purposes I only refer to the late 18th early 19th centuries here.

<sup>275</sup> A number of new religions, which developed around this time, adopted deistic ideas due, in part, to Catholicism’s influence. “Eastern Learning” or Donghak (東學) is one of the most influential examples. See Kallander (2013).

<sup>276</sup> See Lee, Timothy (2010).

<sup>277</sup> Lee, Timothy (2010:85).

time is estimated to be around twenty to twenty two percent.<sup>278</sup> These numbers, though substantial enough on their own, do not, nevertheless fully reflect the influence of Christian thought and language on Korean peninsula – influence(s) which can be seen in the expressions used in South Korean newspapers’ coverage of human cloning – both in “miscellanea” or “gossip” blurbs and in “science news” or “world news” sections of the daily papers. This influence comes, in part, from America’s extended engagement in South Korea during the Cold War, as well as American Christian missionary engagements in Korea during the Japanese colonial period, and the adoption and reworking of Christian ideas and practices by Korean groups and individual’s - both Christian and non-Christian. And while the impact of this influence cannot be denied, it should also not be over-emphasized, as language, like that of the “god” encountered in South Korean human cloning discourse, may be readily assimilated into more Confucian geographies (heaven) or Buddhist causalities (karmic seeds), unless something more - like, for example, the future of South Korea’s patient-matching stem cell research - is at stake.

In its final 1970s reference to human cloning, the *Kyeonghyang Newspaper* ran a brief announcement that Rovik’s book, *In His Image: The Cloning of A Man*, had been translated into Korean and was available for purchase under the title *Cloned Man*

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<sup>278</sup> See Baker (2010) or Kendall (2009) for a sense of some of the complexities of measuring “religious populations” in Korea.

(複製人間). In what is most likely a description provided by the translated book's South Korean publisher, the newspaper blurb reads:

The Chinese characters are *Cloned Man* (複製人間). Not just a medical issue, test-tube babies embody the spiritual conflict and competitive spirit of many scientists and scholars. Rorvik's story is about a way of creating a new individual from a single somatic cell, sexlessly, without combining egg or sperm. Genetic engineering continues to leap ahead of the ordinary human imagination...<sup>279</sup>

### North Korean “Human Clones” on South Korean T.V.

News of the American millionaire's cloning endeavor appeared in South Korean newspapers roughly a year before a South Korean businessman, the owner of a garment manufacturer, Y.H. Trading Company, fled to America with his company's assets. This prompted protests by the Trading Company's female garment workers who were, subsequently, beaten by police. The “Y.H. Incident” is remembered as the start of a series of protests and brutal state crackdowns which lead up to the event that precipitated President Park Chung-hee's assassination (by the head of the Korea CIA) in 1979.<sup>280</sup> Despite President Park's increasingly brutal governance, the Park assassination is remembered by many, who were school-aged children at the time, as a shockingly sad moment – schools were closed and students and teachers sent home in tears.

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<sup>279</sup> Staff (December 4, 1978). (시험관야기란 의학적인 문세만이 아니라 여러 학자들의 정신적 갈등과 경쟁의식을 담고 있었다. 로비크”의 이야기는 난자와 정자의 결합이 아닌 단일 개체의 體細胞에서 無性的으로 새로운 개체를 생성해 내는 방법이다.유전공학은 아직도 일반의 상상을 뛰어 넘고 있는데...).

<sup>280</sup> See Oh (1999:70-74).

Not long after Park's assassination, a takeover was successful orchestrated inside the military by General Chun Doo-hwan, who then worked to extend his power and become the next South Korean President, despite massive public protests.<sup>281</sup> In May 1980, General Chun declared Martial law and the legislature was dissolved, the universities closed, and opposition leaders arrested. Protests in the city of Kwangju, located in Southwest Korea (a region largely ignored during South Korea's development directed by Park Chung-hee), escalated - the military was driven out and citizen's councils governed the city independently for nearly a week. Throughout General Chun's grab for power, the U.S. Carter administration decided not to intervene and a South Korea Army division was sent to suppress Kwangju. Needless to say, any news or TV footage of the South Korean Army slaughtering self-governing citizens in Kwangju was blocked in South Korea and the U.S. television news reported that North Korean communists and communist sympathizers had staged a rebellion and taken over the city.

Throughout the 1970s in South Korea, the number of television sets owned by the general public had increased. By 1979, thirteen percent<sup>282</sup> more South Korean households owned a TV than in 1970. Televisions could also be viewed in some restaurants, stores, or other common areas. About a month prior to General Chun's

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<sup>281</sup> Here I am referring to the 12 • 12 military insurgency (coup d'etat of December 12<sup>th</sup>) and subsequent incidents and protests. Cummings (1997:377) reports that by "mid-May tens of thousands of students and common people had flooded Korea's cities, with daily demonstrations of at least fifty thousand in Seoul."

<sup>282</sup> This figure is from Lee, Namhee (2007:151).

military crackdown on Kwangju and around the time that another but much smaller miners' uprising in Sabuk (舍北, a small town near the eastern coast) was appearing in South Korean daily newspapers<sup>283</sup>, South Korean readers were also informed that an American-made movie, *The Clone Master*, would soon appear on T.V. sets across the nation, over the upcoming weekend.<sup>284</sup> A Paramount production made in 1978, *The Clone Master* (directed by Don Medford) follows two scientists working in a secret lab who believe they are being supported by U.S. government to develop human cloning. When the scientists discover that, their funding source is a mysterious “international consortium” instead of the American government, they destroy the lab and all of the human cloning data and flee with twelve or thirteen clones. Scattered around the world these clones share the personal memories and the scientific knowledge of the scientist-model who created them and are linked together and with this scientist telepathically.

A few weeks after *The Clone Master* was broadcast on South Korean television General Chun Doo-hwan declared Martial Law and tightened his control of the South Korean media. Nevertheless, rumors and information about the violent military suppression in Kwangju (and the large civilian death toll) travelled through informal channels. After Chun was inaugurated as president in 1981, he continued to brutally

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<sup>283</sup> Newspapers were reporting a negotiated resolution to the 4-5 day Sabuk “incident” on April 4, 1980. See Staff-2,2,3,4 (April 24, 1980).

<sup>284</sup> Staff (April 25, 1980). Notices also appeared in the *Dong-a Daily* and *Kyeonghyang Newspapers*. The Korean language title given to the film is simply *Cloned Humans* (複製人間).

repress political dissent and labor unrest. Meanwhile, university student organized pro-democracy, pro-labor rights, and (particularly after the Kwangju Uprising) anti-American protests were building strength and experience. To supplement President Chun Doo-hwan (1979-1988) repressive approach, the Korean CIA (or ANSP) forced newspapers to include at least one flattering photos of President Chun Doo-hwan in every daily paper every day.<sup>285</sup> President Chun was accused of trying to “slavishly mimic” President Park Chung-hee and attempting to weaken public opposition with the help of “the 3S-policy” – strategically distracting the South Korean public with three “S”s, namely, “screens” (T.V.), “sports” (soccer, and founding of the pro-baseball league in 1981), and “sex (pornography, which became more accessible with the advent of video players).” And national television continued to be a source of “anticommunist consciousness” and played a role in promoting campaigns to collect “defense funds” (防衛誠金).<sup>286</sup>

Into this ferment, the possibility of human cloning surfaced, again, on South Korean television in late 1980, but this time in a “more serious” scientific context. The American 1972 documentary, *Future Shock*, was broadcast on *Munhwa Broadcasting Corporation* (MBC).<sup>287</sup> Based on the Alvin Toffler book (from which it took its name) *Future Shock* opens with an idyllic scene of a man and woman – visible only in silhouette – strolling side by side, together, in a natural landscape of spring trees and

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<sup>285</sup> Cummings (1997:380).

<sup>286</sup> Moon, Seungsook (2005).

<sup>287</sup> Staff (November 11, 1980).

soft green grass. The background music, however, ominously slips into a minor key and Orson Welles, the narrator, tells the viewer that *Future Shock* is about “the premature arrival of the future.” In the closing scenes of *Future Shock*, the faces of the silhouetted couple strolling in their “Garden of Eden,” are finally exposed as having robotic features made of metal. Among its various awe-invoking and “shocking” predictions about life in the future, *Future Shock* introduces a Doctor A. Neyfakh, who was the head of the Soviet Academy of Sciences’ Institute of Developmental Biology’s Research Lab. Neyfakh is known for having predicted a “genetic equivalent of an arms race” between opposing world powers.<sup>288</sup> A day or two before *Future Shock* was broadcast, General Chun ended Martial Law. With a forced merger and consolidation of the press, Chun placed the press under tighter state control.<sup>289</sup> Despite these and other measures, a strong current of student and labor organized dissent continued and can be seen in the 1985 Daewoo Auto workers strike in April and student occupation of the Seoul U.S. Information Services (USIS) Building in May.<sup>290</sup>

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<sup>288</sup> A. Neyfakh is said to have believed that experiments into genetic engineering must proceed because, in his words, “...the advance of science is and ought to be unstoppable.”

<sup>289</sup> The ‘press consolidation and merger’ (言論統廢合) measure was enacted on Nov. 14, 1980 and placed MBC under tighter control of the state by transferring 70% of its stock to KBS (Korea Broadcasting System) a public broadcast company. This and the 1980 Basic Press Law legalized complete state supervision of the South Korean media. Lee (2007:121).

<sup>290</sup> Lee, Namhee (2007:122-127) observes that the 1985 May occupation of the USIS in Seoul was well organized by students to appeal to the South Korean public and unlike earlier actions on USIS facilities in South Korea - like the 1982 Busan USIS arson incident - was nonviolent.

Later in September 1985, after the first and only meeting (until the year 2000) of a few of the families that had been divided by the peninsula's post-war partition and the formation of separate states in 1948, journalists and commentators invoked images of “human clones” when describing the event. Family reunions were conducted in both Seoul and the North Korean capital of Pyongyang. North Korean performance groups visited Seoul for public performances which were televised and broadcast throughout South Korea. A few days after the reunions and publically mediated performance events had concluded, the *Kyeonghyang Newspaper* printed an interview with a MBC TV reporter, Kim Min-ho, who had travelled to Pyongyang to record the various family-reunion meetings and public events, held in North Korea. The interview article, printed under the headline – “I Saw Lifeless ‘Human Clones’ ” – tells of Kim Min-ho's experiences in Pyongyang and his impressions of life (or “lifelessness”) in North Korea.<sup>291</sup> Kim, who says he was constantly looking for opportunities to see “the real North Korea” so South Koreans could see the “unembellished situation” describes the streets of the North Korean capital city as follows:

**The Pyongyang streets were full of robots. Cloned human beings, I mean. People didn't have any individuality and were without any awareness. My eyes would tear up, especially when the young children would speak like machines, and I felt sad. The children were truly pitiful.**<sup>292</sup>

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<sup>291</sup> Jang, Yun Yeong (September 25, 1985).

<sup>292</sup> *Ibid.* (평양은 로봇들의 거리였어요. 複製人間 말입니다. 의식이 없는, 개성이 없는 사람들만 있더군요. 특히 어린아이들이 기계적인 말들을 늘어놓을때는 눈물이 핑도는 아픔을 느꼈어요. 아이들이 불쌍했어요.)

On the other hand, Seoul the South Korean capital, is described as being in a state of “Pyeongyang Shock” after watching the North Korean performance troupes visit Seoul and make comments on South Korean T.V.<sup>293</sup> The camera-man reporter, Kim Min-ho, lauded for his “exceptional journalistic consciousness”, is also praised for providing South Koreans with a “true anti-communist education – which was more effective than thousands of textbooks and numerous eloquent lectures.”<sup>294</sup> With his camera in hand, Kim Min-ho is described as “fearlessly firing off questions like speeding bullets” – questions which “completely removed the false fabrications of communism.”<sup>295</sup> Presumably, this “false-ness” or “inauthenticity” is exposed by the sight of “lifeless cloned human beings” on T.V.

### **Korea’s Democratization and America’s Ban on Human Cloning**

Sunhyuk Kim has argued that President Chun Doo-hwan’s brutal repression of political dissent during the first two or three years of his reign was followed by a

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<sup>293</sup> Jang, Yun Yeong (September 25, 1985). In fact, “Pyeongyang Shock” is said to be “pouring (bubbling up) out of the TV” when the North Korean performance troupes and North Korean families seeking reunions, visited Seoul in 1985. Jang (September 25, 1985:5) writes, “While the group of North Korean visitors were in Seoul, “Pyeongyang Shock” seemed to bubble up (pour out) of the TV and echoed in the cries of surprise and in the glistening eyes – eyes full of curiosity and tears - of those who watched the North Korean troupes performance on TV. Even today “Pyeongyang Shock” continues to ripple through the capital (Seoul) in large (shock) waves.” (북한 고향방문단이 서울에 머무는 동안 “오머니”하는 목멘소리에 함께 눈물을 흘리고 때로는 호기심어린 눈으로 그들의 공연모습을 화면으로 지켜보고있을 때 TV에서 쏟아져나온 “평양 충격”이 지금 장안에 엄청난 파장을 일으키고 있다.)

<sup>294</sup> Jang, Yun Yeong (September 25, 1985). (그의 남다른 의욕과 기자정신이 수만권의 교과서보다, 달변의 강의보다 더욱 실감있고 효과적인 반공 교육을 시켜주었다.)

<sup>295</sup> Jang, Yun Yeong (September 25, 1985). (겁없이 들이댄 카메라는 북한사회의 실체를 있는 그대로 바로볼수 있게했고 속사포처럼 던지는 그의 질문에 공산주의의 허구는 여지없이 벗겨져버렸다.)

period of abatement and this shift in tactics – contrary to Chun’s intentions – encouraged and strengthened the formation of civil resistance and later, an active civil society.<sup>296</sup> Chun relied on U.S. recognition and support for his regime and asserted its close ties with U.S. in the South Korean media. Critics of Chun’s regime and university students largely believed that the U.S. had supported the military massacre in Kwangju and suspected American complicity in Chun’s military takeover.<sup>297</sup> Then, in the latter half of the 1980s, U.S. applied pressured on South Korea to reduce agricultural trade barriers and change its export-oriented monetary policies. After 1987 South Korea’s trade surplus with the U.S. decreased rapidly and by 1991 South Korea carried a trade deficit with the U.S. These and other factors, like low-wage competition Southeast Asia and China, led to a reduction in the high economic growth rates South Korean had experienced for many years.<sup>298</sup>

Massive protests in June 1987 led to concessions by Chun Doo-hwan’s regime. And during and after the transition to democracy, South Korean civil society played an increasingly active role in politics and policy making. The first, civilian president since 1961, Kim Young-sam (1993-1998) was elected at a time when it was increasingly clear that the export-oriented low-wage industrial economy of South Korea was undergoing a transformation. When China devalued its currency in 1993 and again in

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<sup>296</sup> Kim, Sunhyuk (2007).

<sup>297</sup> Lee, Namhee (2000:121). Lee cites a *Hankyoreh Newspaper* survey of 700 university students - 95% of whom believed the U.S. was “deeply involved” in the Kwangju massacre.

<sup>298</sup> Kang (2000:76-101).

1994 many South Korean goods could not compete.<sup>299</sup> President Kim Young-sam (YS) announced a new policy of *Segyehwa* ( 세계화 ) or “Globalization” which Kang (2000) observes provided some rhetorical cover for opening South Korean domestic markets in response to U.S. pressure.<sup>300</sup> Kang also suggests that President Kim Young-sam’s push for South Korea membership in the OECD (South Korea joined in 1996) helped wrap economic liberalization (and related domestic economic losses) in international prestige and advancement. However, the large South Korean conglomerates (or *chaebols*) - which had been both built-up and kept-in-check by Park Chung-hee and subsequent military-trained “strong-men” presidents – grew increasingly powerful and took on unstable debt as the YS administration continued to deregulate banks and loosened state control over industry in the name of globalization.<sup>301</sup> Moreover, the dependency of South Korean politicians on large conglomerates for campaign funding and other, often illegal, financial support made reform difficult.

With the increased deregulation of the financial sector and no centralized authority (like a military dictator) to keep them in line, South Korea’s conglomerates took on too much debt and international investors began losing confidence. In late January 1997, Hanbo Steel declared bankruptcy and members of the Kim administration and President Kim Young-sam’s second son were implicated in a

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<sup>299</sup> *Ibid.*

<sup>300</sup> *Ibid.*

<sup>301</sup> Oh (1999).

related bribery scandal - the bribes were used to secure large loans for Hanbo Steel.<sup>302</sup> Reports on the unfolding political bribery scandals (as well as legal proceedings against former dictator Chun Doo-hwan and others) combined with anxiety surrounding the precarious place of the South Korean economy provided an, admittedly overwhelming, backdrop for news about a cloned sheep. Truth be told, an early news report on Dolly - “Success in ‘Genetic Cloning of a Sheep’ – appearing on page twenty-two of the February 25, 1997 daily edition of the *Kyeonghyang Newspaper*, was given considerably less ink and space than a neighboring - presumably more relevant and indeed quite shocking – story on page twenty-three about a “human rights dispute” over a hidden camera, installed by a manager of a public bath as an anti-theft measure, which was “stealing looks at bare bodies.”<sup>303</sup>

Thus, as explained previously, in the opening of this chapter, early South Korean newspaper coverage, of the first sheep cloned from an adult mammal (sheep) cell, largely mirrored English language news media coverage. South Korean newspaper reports on Dolly were not considered as “news-worthy” as similar reports printed in U.S. and U.K. newspapers and thus “cloning” articles are not announced with flashy headlines or presented with attention-grabbing graphics although pictures of a fluffy photogenic sheep, like Dolly, do seem to exert a certain “international” appeal. However, in addition to the higher likelihood that “Dolly stories” will be

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<sup>302</sup> *Ibid.*

<sup>303</sup> Park, Deok Yeong (February 25, 1997:23).

buried inside or positioned further back in South Korean newspapers than in their American daily counterparts (*The New York Times*, for example), other differences begin to emerge.

South Korean newspaper reports and articles, about the first successful mammal (sheep) cloning and the future possibility of human cloning, generally mention and briefly discuss the future possibilities of genetically engineering human beings before this issue is raised in English-language Dolly related articles, if English language reports raise this issue at all.<sup>304</sup> This subtle difference could easily be explained by the efforts made by American scientists (particularly James Watson), American bioethicists (particularly Willard Gaylin), and (to a lesser degree) journalists in the 1970s introduction of “human cloning” to the American public to distinguish between “cloning” and “genetic engineering.” And while this difference is not always carefully re-inscribed in even American media human cloning news, it is a central and often implicit “fact” found in certain serious human cloning articles published in U.S. magazines and newspapers. In contrast, South Korean newspaper coverage of human cloning at times moves back and forth between references to “genetic technologies” (like “gene cloning” for purposes of “genetic modification”) and “human cloning” (characterized as a “cellular” not “genetic” technology in serious American media discourse).

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<sup>304</sup> I believe it is true especially in the early newspaper reports on Dolly.

For example, the daily left-leaning Korean newspaper, *Hankyoreh Newspaper*, published an article (on February 26, 1997) about the emerging debates on human cloning, which makes repeated references to “gene cloning” without clearly distinguishing this “genetic technology” from “human cloning.” This *Hankyoreh Newspaper* article<sup>305</sup> – published soon after American President Bill Clinton (1993-2001) called for an U.S. Advisory Commission report on human cloning – focuses primarily on the possibility that genetically engineered human beings may appear, even though the article’s headline and general news context seems more focused on human cloning discourse. Indeed, this *Hankyoreh* article covers a confusingly wide range of technologies, in a relatively short space. As if to wrap up the discussion, the article’s closing paragraph reads:

**Some argue that in times when competition becomes fiercer and fiercer, if a parent uses this technology to give birth to a superior child or if some country starts encouraging the application of this technology as a strategic way of increasing their national competitiveness then - even if it is prohibited by law – the laws prohibiting it will quickly collapse. Thus, we are facing, here and now, a situation in which we must decide whether humanity will or will not be allowed to use this technology.**<sup>306</sup>

As is clear in the above excerpt, the discussion of genetically engineering human beings is explored in a *Hankyoreh* article which seems, on first glance, like a report on

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<sup>305</sup> Lee, Tae Hoe (February 26, 1997).

<sup>306</sup> Lee, Tae Hoe (February 26, 1997). (설사 법적으로 이를 금지한다고 해도 날로 치열해 지는 경쟁속에서 살아가는 상황에서 만약 어떤 부모가 이 기술을 이용해 우등아를 낳고, 어떤 국가가 국가경쟁력 향상을 위해 정책적으로 이를 장려하기 시작한다면 그 법적규제는 결국 한순간에 무너지기 시작할 것이란 주장이다. 결국 인류는 바로 지금 이 기술을 쓸 것인지 말 것인지에 대한 선택의 기로 서있다.)

emerging international discourse about enacting a human cloning ban. Indeed the “international news event”, which prompted a wave of “international” news articles (and most likely this *Hankyoreh Newspaper* article as well) around this time<sup>307</sup>, was President Clinton’s public announcement that he had ordered the U.S. *National Bioethics Advisory Commission* (NBAC) to complete a human cloning report in record time.

Other South Korean newspaper reports, published within a day or two of the *Hankyoreh Newspaper* article discussed above, tell readers which countries (Germany, for example) currently have laws prohibiting human cloning as well as countries (U.K., Denmark, and Spain) where bills and other measures banning human cloning are currently being prepared.<sup>308</sup> The *Dong-a Daily* special correspondent in New York (Lee Kyumin) reported that public pressure for establishing laws against human cloning in America was rising as the news about Dolly spread.<sup>309</sup> When news of Dolly and accompanying reports on laws prohibiting “human cloning” abroad appeared in South Korean newspapers, there was already a, admittedly limited, context of biotechnological legislation, already in place. In 1983, during President Chun Doo-hwan’s dictatorship, the Korean National Assembly (or what was left of it) has passed

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<sup>307</sup> Einsiedel et al (2002:321-322) observes that U.S. President Clinton’s announcement set off a wave of reports and news articles in various places.

<sup>308</sup> Lee, Kyu Min (February 25, 1997).

<sup>309</sup> *Ibid.* (특해 미국에서는 이같은 소식이 전해지면서 관련법의 제정을 촉구하는 여론이 강하게 일고 있다.)

the *Genetic Engineering Promotion Law* also known as the *Biotechnology Promotion Law*.<sup>310</sup> Interest in biotech business ventures had expanded rapidly in the U.S. after late 1980 when the early biotech venture, Genentech went public.<sup>311</sup> Later in the 1980s, changes in the American regulations surrounding patents as well as the loosening of rules and guidelines for genetic engineering research (measures which had previously been discussed and established mostly among scientists themselves and thus were more protected from the lime-light of media-ated public discourse than human cloning was) also fueled biotech business ventures.<sup>312</sup> As the name suggests, the 1983 South Korean *Biotechnology Promotion Law* focused on encouraging biotech businesses in Korea rather than bioethical issues. Thus, in 1997, a bill which stopped government funds from being used in human cloning research and established a South Korean *National Bioethics Advisory Commission* (NBAC) was introduced to the Korean National Assembly. This first attempt at legislating bioethics would fail and be followed by many other attempts. For now, it is useful to note that, early attempts were made to “update” South Korea bio-tech legislation and to create a “bioethical infrastructure” in the wake of the news about Dolly and ongoing debates about “human cloning”, but there was also considerable early disagreement on how to balance biotech business and scientific interests with bioethical regulations and how to evaluate the

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<sup>310</sup> For a very concise summary in English of South Korean governments biotech laws and programs up to the year 2003, see Han Sung-goo, Yoo Young Je, and Rho Wha-hoon (2003).

<sup>311</sup> Alexander (2003).

<sup>312</sup> Wright (1994).

future promise and economic value, if any, of human cloning related technology. Moreover the reasons behind the intense “international” reaction and move to immediately ban human cloning, was not always entirely clear to some people – including South Korean newspaper journalists. In an editorial column for *Maeil Business Newspaper*, Jeong Hyeon Kwon expresses his suspicions about recent developments around human cloning technology in the United States. More specifically, Jeong questions the motivations behind President Bill Clinton’s sudden interest in human cloning in his newspaper editorial, “The War over Human Cloning.”<sup>313</sup> Published not long after U.S. President Clinton publically announced that he had ordered the American *National Bioethics Advisory Commission* to produce a report on human cloning, Jeong’s essay suggests that much more than moral and ethical questions about human cloning are driving American actions. While he does not entirely reject the possibility that Clinton’s swift call for an investigation was prompted by ethical interests, Jeong believes, nevertheless, that other concerns played a more powerful role. He explains, “I think that it (Clinton’s interest in cloning) is more likely due to an overly sensitive reaction of the economically powerful nations who are infatuated with attaining technological supremacy and intend to manipulate the direction of cloning technology so that this technology develops along the lines of

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<sup>313</sup> Jeong, Hyeon Kwon (March 4, 1997).

their own country's concerns.”<sup>314</sup> Jeong suspects that the American *National Bioethics Advisory Commissions* report on cloning is being prepared so that the U.S. can set the standards of cloning technology and then force “international ethical guidelines” (*segye yulli-an*, 世界倫理案) or other such obstacles to technological development in the world.<sup>315</sup>

The timing or sequence of the various cloning-related news events plays a key role in the Maeil Business Newspaper journalist Jeong Hyeon Kwon's suspicions about the U.S. Presidential actions. One such “suspicious” sequence of news events involves an announcement made public just nine days after the news about Dolly flooded the media. This announcement was another “scientific first”; that is the successful cloning and birth of twin monkeys at the U.S. Oregon Regional Primate Research Center (ORPRC). In their study of cloning in the news media, Einsiedel et al (2002) have reported that this Oregon “monkey cloning” news was carried by nearly every newspaper they examined. Furthermore, Einsiedel et al observe that much of the news coverage of the Oregon “monkey cloning” failed to clearly distinguish or even, in some cases, mention the difference between the technique used in Dolly's cloning (performed with an adult sheep cell) and the ORPRC “monkey cloning”

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<sup>314</sup> Jeong, Hyeon Kwon (March 4, 1997). (그러나 필자는 이보다는 기술지상주의에 심취해 있는 경제대국들의 과민반응과 복제기술의 방향을 자국을 축으로 설정하려는 의도로 해석하고 싶다.)

<sup>315</sup> *Ibid.* (한마디로 복제기술의 윤리성과 법률 기준을 자국 중심으로 마련해 놓고 이를 전세계에 대한 기술장벽 또는 세계윤리안으로 강요할 수 있다는 것이다.)

which was essentially an embryo-splitting procedure, a technique which had, in fact, already been successfully performed on human embryos in 1983 (see chapter two).<sup>316</sup> Einsiedel et al have noted that news coverage of the twin cloned monkeys in Oregon invariably emphasizes the similarities between monkeys and human beings (indeed both are classified as primates, but apes are believed to be closer to human beings than monkeys) and concludes that human cloning is imminent. These observations hold true for the South Korean newspaper coverage of the Oregon monkey-twinning as well. In other words, even though South Korean newspapers did, on the whole, cursorily distinguish between the “cloning technique” used to twin the monkeys and the procedure used to make Dolly, the overarching “message” of the Korean newspaper coverage was the similar to that found in newspaper coverage elsewhere, namely, readers were told that since monkeys have been successfully cloned, human beings can certainly be cloned too.<sup>317</sup> Take for instance, a report on “monkey-cloning” printed on the front-page of the Maeil Business Newspaper that opens with the following observation: “...monkeys, which belong to a species most similar biologically (sic) to human beings, have been successfully cloned for the first time.

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<sup>316</sup> Einsiedel, et al (2002:324-325). I should note here (as covered in the previous chapter) the 1983 human embryo splitting was performed on embryos which could not mature thus the monkey-embryo cloning example can, technically be distinguished from the previous human-embryo splitting experiments, by the fact that the twin monkeys were gestated in the womb and born alive.

<sup>317</sup> A more exhaustive look at the South Korean newspaper coverage of the monkey cloning event is needed but this characterization holds true for all the articles I have seen.

This raises the likelihood, that human beings will be cloned, one notch higher.”<sup>318</sup> On the same day, Dong-a *Daily* also reported that: “...a monkey – which is the closest animal to a human being (sic) – has been cloned... as this news suggests, that humankind has already drawn one step closer to cloning human beings.”<sup>319</sup> It seems clear that newspaper coverage of the Oregon “monkey cloning” – in America, Europe, and South Korea at least - was framed in words that feed an ongoing interest in “human cloning discourse.”

Talk of “monkey-cloning” and the missing links that the “international” press has so-quickly drawn between “copying monkeys” and “copying man” - this is not the detail which deepens *Maeil Business Newspaper* journalist Jeong Hyeon Kwon’s suspicions about American intentions. Rather it is the sequence of the unfolding “cloning news” events that interests Jeong and thus raises an editorial red flag in the “The War over Human Cloning” column. In Jeong’s reading of President Clinton’s intentions for “human cloning technology”, the sequential ordering of events is key. By determining “the first” or “the originating” cloning event – an event which allows all subsequent “news events” to have an order and occupy a (sequential) place, Jeong is able to “sequence” and thus “make sense” of Bill Clinton’s actions. The problem,

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<sup>318</sup> Staff (March 3, 1997). (생물학적으로 인간과 가장 가까운 종인 원숭이의 복제에 최초로 성공, 인간 복제의 가능성이 한층 높아졌다고 미국의 워싱턴 포스트지가 2 일보도 했다.)

<sup>319</sup> Lee Jae Ho (March 3, 1997) (인간과 가장 가까운 원숭이의 복제 소식은 지난 달 발표된 복제양 (羊) 성공에 이어 인류가 마음먹기에 따라서는 인간도 복제 할 수 있는 단계로 이미 접어들었음을 시사하는 것이어서 충격적이다.)

however, is that the “first” or the “originating event” can only be found in “the second” or “the subsequent” events and never definitively or in its complete entirety. This paradox – a paradox which seems particularly resonate and complex in discussions of cloning - makes the intentional “founding” or “locating” of “origins” problematic. Thus, “the beginning” is often revealed unintentionally and it is, perhaps, this lack of intentionality in the original that allows the “motivations” and “intentions” of the subsequent events to be made manifest.

In “The War over Human Cloning” editorial, Jeong Hyeon Kwon “finds” and “identifies” the largely unintended revelation that American scientists had, in fact, been “cloning monkeys” prior to the successful “cloning” of Dolly in the U.K. This is revealed (according to Jeong’s interpretation) when the Oregon Primate Research Center announces, post-Dolly, its successes in “cloning monkeys.” Indeed, South Korean newspapers have reported, following their American counterparts (like *The Washington Post*<sup>320</sup>) that “twin monkeys” had been cloned in August 1996. Jeong takes this report of American’s earlier monkey cloning successes, as a sign that the American President’s recent move, to order a *NBAC* investigation of the ethical and technological ramifications of “cloning technology”, is disingenuous. Jeong argues that if President Clinton were genuinely concerned about the ethics of cloning

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<sup>320</sup> The *Maeil Business Newspaper* lead article – “Monkeys were cloned in America in August last year” - reporting on American monkey cloning on March 3, 1997 on *Maeil Business Newspaper’s* daily edition’s front page, directly sites *The Washington Post* as its source. See Staff (March 3, 1997).

technology, then he would have already asked for an investigation last year in August when Oregon primate researchers first “cloned” monkeys. Jeong writes, “(American intentions) ...can be seen in the fact that the Americans only ordered a report on the ethical and legal questions (of cloning) after England announced that a cloned sheep had been born, when the Americans had already perfected their monkey cloning techniques in the previous year.”<sup>321</sup> This American reordering of the sequence of events – a reordering which Jeong Hyeon Kwon sees as a strategy to concentrate technology and power in America – reminds Jeong of American strategies during the Cold War. <sup>322</sup> Jeong predicts that America will continue to employ these tactics - like establishing ethical/legal standards for cloning technologies and then forcing these standards upon other countries - to assure American dominance in cloning technology. Ultimately, Jeong explains – “I predict that America will eliminate all of these ethical standards and proceed to intensify their development of cloning technologies.”<sup>323</sup>

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<sup>321</sup> Jeong Hyeon Kwon (March 4, 1997). (미국이 원숭이 복제기술을 지난 해 이미 완성해 놓고도 영국에서 복제 양 탄생발표가 나오자마자 이를 발표한 점그리고 이에 대한 윤리·법률검토안을 작성토록 지시 한데서이를 엿볼 수 있다.)

<sup>322</sup> Jeong, Hyeon Kwon (March 4, 1997) writes - “The timing of the (American) announcement (on cloning) brings to mind the battle over technology and information between the United States and the Soviet Union during the Cold War over a manned-space ship.” (발표시점을 놓고 볼 때 냉전시대 유인우주선 발사를 놓고 미국과 소련이 벌였던 숨가쁜 기술정보전을 연상시킨다.)

<sup>323</sup> Jeong, Hyeon Kwon (March 4, 1997). (최근 일련의 상황을 놓고 볼때 미국은 앞으로 이 분야에서 기술적인 주도권 확보에 집착할 가능성이 농후하며 윤리적인 입장을 배제하고 후속 복제기술 개발에 열을 올릴 것으로 생각된다.』

## Surveying the Human Cloning Subject in South Korea's Neo-liberal Times

In early March 1997, the influential *Dong-a Daily* and the *Kyeonghyang Newspaper* both relayed the results of a CNN survey of American citizens' views on human cloning to their South Korean newspaper readers under the titles "A CNN Survey says 74% of American Citizens Against Cloning" (*Dong-a Daily*) and "The World Village is Shaken by 'Bio-Copying' " (*Kyeonghyang Newspaper*).<sup>324</sup> This was a few days after the *Kyeonghyang Newspaper* (in late February) had printed a short brief in the "Topics Abroad/International" section of their daily newspaper, which relayed the results of a *USA Today* online survey of Americans who confessed to wanting to clone Michael Jordon, Mother Theresa and Ronald Regan, if given the choice.<sup>325</sup> These South Korean newspaper reports briefly summarizing American news-media outlets "democratic" citizen survey results were, thus, made available to Korean newspaper readers who – either intentionally or unintentionally - flipped through several pages of pulp paper and ink to investigate.

A few days later, however, human cloning would make the front page with the appearance of a short but well positioned article – a single column nestled in the prime real estate of the "above the fold" near-right-hand-side section of the front page of *Maeil Business Newspaper*. This brief human cloning piece published on March

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<sup>324</sup> Staff (March 4, 1997:12). Bak, In Gyu (March 4, 1997:7).

<sup>325</sup> Staff (February 27, 1997:7). In this *Kyeonghyang Newspaper* brief – which is titled, "People We Hope to Clone – Jordon Popular" – some results from an ABC telephone survey are reprinted, namely that 87% of Americans think human cloning should be illegal whereas 53% of Americans believe animal cloning should be allowed.

8, 1997 begins: “As concerns about human cloning increase around the world, a survey shows that if human cloning becomes a reality, South Koreans want to clone the former president, Park Chung-hee.”<sup>326</sup> The size of the font used in the *Maeil Business Newspaper* headline underscores the article’s focal point that “Former President Park is Ranked First” on South Korean citizens’ list of people worth cloning. Lower down on the list we find the Korean independence leader Kim Ku, the Great King Sejong who oversaw the fifteenth century invention of hangul - the phonetic script of Korean language, the Joseon Dynasty Admiral (a favorite of former President Park) Yi Sun-sin who created the armored tank-like turtle-boat and the independence activist An Jung-geun, who assassinated Ito Hirobumi, the former Japanese Resident-General of the soon-to-be-annexed Korean peninsula.

But beyond this list of strong inspiring Korean men whom “the nation” has named as “figures-worth-cloning,” *Maeil Business Newspaper*’s short report, which is based on a South Korean public opinion survey, does not say much about the topic of human cloning. Newspaper readers are informed that twenty-three percent of the one thousand adults surveyed replied, simply, “I don’t know” when asked who they wanted to clone and another thirty-six percent of respondents answered - “There is nobody I want to clone.” Thus, rather than explicitly articulating the South Korean public’s views on human cloning, the *Maeil Business Newspaper* “human cloning”

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<sup>326</sup> Kim, Yeongjin (March 8, 1997). (전 세계적으로 인간 복제에 관한 우려가 높아지고 있는 가운데 한국인들은 인간 복제가 현실화된다면 박정희 (朴正熙) 前대통령을 가장 복제하고 싶어하는 것으로 조사됐다.)

column points towards a public preference (and perhaps nostalgia) for Park Chung-hee (1963-1979), a military commander and President of South Korea who led the country's rapid export-oriented industrialization while repressing dissent and resorting to state-of-emergency military measures and dictatorship. The legacy of former President Park has continued to be a contentious political issue into the present-day, especially with the recent election of his daughter, Park Geun-hye, as South Korea's eighteenth president (term: 2013-2018). Needless to say, news, like the *Maeil Business Newspaper's* front page blurb, that former President Park Chung-hee was chosen by the public as "most worthy" of human cloning, would raise both ire and applause in March 1997 as South Koreans thought about the upcoming Presidential election in December 1997 which would be only the third presidential election after South Korea's 1987 democratization.<sup>327</sup>

Ten days after *Maeil Business Newspaper* included the front page headline that "Former President Park is Ranked First as the Person We Want to Clone", three other national daily papers published the findings of a survey of Korea University students' "attitudes about human cloning."<sup>328</sup> All of three national daily newspaper (*Dong-a Daily*, *Kyeonghyang Newspaper*, and *Hankyoreh Newspaper*) reports on student's attitudes were based on a small "subjective" survey of only 180 university students conducted by Korea University's school newspaper. In contrast to the earlier *Maeil Business*

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<sup>327</sup> Former President Park Chung-hee's daughter, Park Geun-hye was elected a Grand National Party Assembly-person (mp) representing the Daegu area in 1998.

<sup>328</sup> Kim, Jeong Su (March 18, 1997). Cha, Se Hyeon (March 18, 1997). Jang, Nam Gu (March 18, 1997).

*Newspaper* report, the student survey ranked the Korean independence leader Kim Ku as first on the “should-be-cloned” list. Mother Theresa was second and followed by former President Park Chung-hee in third place. When asked who should not be cloned, the university students placed the contemporary South Korean President, Kim Young-sam (YS) right at the top of the list, just before Adolf Hitler.<sup>329</sup>

It is not difficult to surmise that this kind of daily newspaper coverage of “ordinary” South Korean citizens’ views on “cloning” in 1997, was, in fact, more a venue for discussing South Korean electoral politics and a continued debate about the democratic nation’s past and future rather than measuring or magnifying the public’s feelings about the fantasy of human cloning.” Here, in these survey reports, the appearance of the photogenic cloned sheep (Dolly) served a public exchange which was about the upcoming presidential election, how to understand the legacy of South Korea’s dictator-directed industrialization and rapid economic success in a “new democracy” with a floundering economy, and manage a voting public marked by generational differences. Instead of focusing attitudes about human cloning,<sup>330</sup> the *Dong-a Daily’s* reporter wonders why university students - known for protesting against

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<sup>329</sup> The leader of North Korea (DPRK) Kim Il Seong as well as the second son of President Kim Young-sam (Kim Hyeonchul) who was under investigation for corruption, also appeared on the “shouldn’t be cloned” list. See Kim, Jeong Su (March 18, 1997:47).

<sup>330</sup> The 1997 *Dong-a Daily* article reporting on the Korea University Newspaper survey of students’ “attitudes towards human cloning”, notes that roughly an equal number of university students wanted to clone themselves as those who did not want to clone themselves. If student’s “self-cloning” answers were included in the survey’s rankings, “self-cloning” would occupy the 3<sup>rd</sup> or 4<sup>th</sup> rank on both the “should-clone” and “shouldn’t-clone” list. The student’s “self-cloning” attitudes are briefly described as reflecting university students’ conflicted “love of their own selves.” (학생들이 『자기 자신』을 『복제해선 안 될 인물』과 『복제하고 싶은 인물』의 3 위와 4 위로 선정, 자신에 대한 애증이 엇갈리고 있음을 나타냈다.)

military dictators - would want to “resurrect” a dictator like former President Park?

In the *Dong-a Daily* “human-cloning survey” report, the quick (and perhaps too easy) answer given by university students, themselves, was that the “recent chaotic economic situation” (the Asian Financial Crisis) had prompted a “desire for strong leadership.”<sup>331</sup> As if supporting this claim, a dark oval cloud hanging above a sketch of a joyous jumping Dolly, carries the headline: “University Graduates Have No Where to Go – only 27 graduates out of 100 find jobs.” Thus, in 1997, when human cloning anxieties helped make the world’s first “simultaneous” and “global” biotech news, in South Korea dim economic prospects and the growing dissatisfaction with President Kim Young-sam (YS) (as seen clearly in the university students’ “human cloning” survey), deeply colored that news. In fact, a subsequent public opinion survey conducted by *Dong-a Daily* soon thereafter concluded that YS was popular among only 4% of the respondents while former (and deceased) President Park Chung-hee had a 76% approval rating.<sup>332</sup> Thus Kim Young-sam, who was the first civilian president since Park Chung-hee took power in 1961, and President Kim’s corruption-plagued administration, was struggling while the dead-dictator rose up in

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<sup>331</sup> This explanation was initially voiced by the Korea University newspaper and repeated in the *Dong-a Daily* report as follows: (개발독재의 상징』으로 학생들에게는 인기가 없을 것으로 여겨졌던 박 前대통령이 뜻밖의 『지지』를 받은 것에 여겨졌던 것에 대해 고대 신문측은 『최근 혼란한 경제 상황에 따라 강력한 리더십을 원하는 것』이라고 분석했다.)

<sup>332</sup> Oh (1999:209).

popularity – a phenomenon some called, “the Park Chung-hee syndrome.”<sup>333</sup>

In 1997-1998, the Asian financial crisis hit South Korea hard and gave impetus and urgency to a search for new sources of wealth for economic recovery and growth. Faced with the crisis and the International Monetary Fund’s or the IMF’s demands, then South Korea President Kim Dae-jung’s administration (1998-2003) extended individual consumer credit and started a program of wide scale economic reform and restructuring.<sup>334</sup> Thus, the period of the Asian financial crisis – known as the “IMF Era” – is often said to mark South Korea’s entry into (global) neoliberalism or the being of South Korea’s “neoliberal era” (*sinjayu-ju-ui sidae*, 新自由主義 時代).<sup>335</sup> Around this time, as credit card debt suicides became a recognizable “Korean” symptom of the “grassroots” penetration of liberal global finance, the news of the English Scientist Ian Wilmut’s sheep *Dolly*, the first cloned mammal, was trumpeted as “the first truly simultaneous and international” biotech news story.<sup>336</sup> At the time, however, it would have been difficult for most people in Seoul to imagine at this “simultaneous world of global biotech” would bring Ian Wilmut to Seoul where the famous sheep-creating-scientist would join together with the decidedly more charismatic South Korean scientist, Hwang Woo-suk, in ceremoniously launching a

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<sup>333</sup> *Ibid.* Oh writes that with the Presidency of Kim Young-sam (YS), the large South Korean conglomerates (or *chaebols*) - which had been both built-up and kept-in-check by Park Chung-Hee and subsequent military-trained “strong-men” presidents – grew increasingly powerful and took on unstable debt as the YS administration continued to deregulate banks and loosened state control over industry in the name of globalization

<sup>334</sup> For an English language account, see Bridges (2000).

<sup>335</sup> See Song (2009) and Shin (2013).

<sup>336</sup> See Chapter two of this dissertation.

Korean *World Stem Cell Hub* in 2005.

The biotechnology was identified, by the Kim Dae-jung administration, as one of the six technology sectors<sup>337</sup> to be promoted in the 2002 “National Basic Plan for Science and Technology.” However, the Kim Dae-jung administration successfully focused its efforts more on developing information technology (IT) and South Korea’s IT industry expanded at an average annual rate of around 19% starting in 1997, the year the IMF crisis began, up until the year 2005.<sup>338</sup> In particular, the Kim Dae-jung administration is remembered for programs expanding home-computer ownership and broadband internet access. Although a government plan for the creation of the Korean Information Infrastructure (KII) had already been made in 1995 (during Kim Young-sam Presidency, 1993-1998), Kim Dae-jung aggressively promoted low-cost desktop home computer purchases and large preferential loans were made to private firms installing and servicing high-speed broadband internet services. Soon South Korea would be dubbed “the most wired nation” in the world.<sup>339</sup>

President Kim Dae-jung (DJ)’s strategic investment in broadband and internet infrastructure was aimed at more than just bolstering the economy and expanding

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<sup>337</sup> See Kim, Tae Ho (2008). The Kim Dae-jung administrations 6Ts are as follows: Information Technology (IT), Biotechnology (BT), Nanotechnology (NT), Environmental Technology (ET), Space Technology (ST) and Cultural Technology (CT).

<sup>338</sup> “South Korea: State aid pays dividends in broadband” (Published Jan. 2, 2003 last updated 2012) from *Oxford Analytica Daily Brief Ltd* UK: Oxford. In 2005, information technology is said to have accounted for 13% of South Korea’s GDP and 30% of its total exports.

<sup>339</sup> Song, Jung-A (Oct 11, 2006). Watts (Dec. 5, 2001) writes that in three years South Korea has “transformed itself into the world’s most wired nation” in *The Guardian*. Watts Ahonen and O’Reilly (2007) report that, as of 2006, South Korea has the highest broadband penetration rate per capita in the world (51%). In 2005, the International Telecommunication Union (ITU) ranked South Korea first in broadband penetration. See *Asia Pacific Telecom* (June 2005).

South Korea's demand for a domestic IT service market which could, in turn, fuel new venture start-ups. Under the DJ administration, all South Korean government ministries and agencies developed websites to communicate with the public and handle public relations.<sup>340</sup> Kim Dae-jung had sought support and a continued cooperative relationship with NGOs and civil groups. These civil organizations, which had grown rapidly after South Korea democratized in 1987, increasingly expanded their membership base and mobilized support and political influence via the internet.<sup>341</sup> The DJ administration was, thus, able to counter long-established newspapers and other print media outlets which adopted an oppositional stance towards DJ Presidency, by encouraging online forums, alternative venues, and internet news sources. By 2001, approximately three years after President Kim Dae-jung took office, an International Telecommunication Union (ITU) survey ranked South Korean internet use the highest in the world.<sup>342</sup> The increasing number of relatively young South Korean citizens using the internet, as well as the accompanying development of South Korea's robust civil society and the emergence of a powerful network for "cyber-activism" would set the stage for the South Korean public's early understanding of and later mobilizations around Hwang Woo-suk's stem cell research project.

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<sup>340</sup> See Jho (2009:352).

<sup>341</sup> Jho (2009:358) reports that the Ministry of Public Affairs and Security spent 7 million USD on supporting NGO activities in the year 2000 alone. For an idea of which organizations were supported by the Kim Dae-jung administration see Jho (2009).

<sup>342</sup> This is relative to population size. See *World Telecommunications Indicators Database*, 2003.

### Chapter 3.

#### A Korean Evangelist goes to America

The United States is being left farther behind every day,  
this morning by South Korea.

Pennsylvania State Senator Arlen Specter<sup>343</sup>

I presented our results in a very objective fashion to the politically appointed presidential bioethics council, and at the end, I realized they didn't care about the science or the medicine. They wanted to know my personal religious beliefs...

Irving Weissman, first to patent a human blood stem cell<sup>344</sup>

We will be sitting here with the best scientists in the world watching things on television.

Vice-President of Research at Advanced Cell Technology, Michigan State University Professor, Dr. Jose B. Cibelli<sup>345</sup>

Scientists, money, and ideas flow easily across borders, and the clear beneficiaries are up-and-coming biotech centers in East Asia. In particular, China, Korea, and Singapore sense a golden opportunity to fill the void left elsewhere by Christian beliefs....

Princeton University Molecular Biologist Lee Silver<sup>346</sup>

When criticized for his many public appearances and focus on public relations activities, Hwang replied he is “an evangelist for biotechnology.”

*New York Times* Journalist, Choe Sanghun<sup>347</sup>

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<sup>343</sup> Fox (2007:420).

<sup>344</sup> Weissman first identified the human blood stem cell in 1992 and built the company Systemix. See Fox (2007:415).

<sup>345</sup> Pollack (February 13, 2004).

<sup>346</sup> Silver (2006:137).

<sup>347</sup> Choe, Sang-hun (Jan. 11, 2006).

## Introducing Korean Buddhism to the American Science News Media

“I am a Buddhist, and I have no philosophical problem with cloning,” Hwang Woo-suk<sup>348</sup> told journalists on February 16, 2004 while he and his co-researcher Moon Shin Yong sat in the Seattle Space Needle and drank Cokes five hundred feet high above what was once the U.S. Science Pavilion during the 1962 World’s Fair. Just a few days earlier at a meeting of the prestigious *American Association for the Advancement of Science*,<sup>349</sup> Hwang and Moon had made an announcement that would – in a later *New York Times* report - be likened to throwing a “giant ethical bomb” into the world of science. Now, however, these renowned Korean scientists relaxed above the clouds and snapped pictures with the journalists waiting for interviews. When asked about his religious affiliations, Hwang reportedly replied, “I am a Buddhist, and I have no philosophical problem with cloning. And as you know the basis of Buddhism is that life is recycled through reincarnation. In some ways, I think, therapeutic cloning restarts the cycle of life.”<sup>350</sup>

Hwang’s words and other pithy lines were picked up and circulated by various English language media outlets. In an online news story titled “Buddhism at one with stem cell research”, Hwang’s research partner Moon Shin Yong is said to have told *ABC Online Science* that “cloning is a different way of thinking about the recycling of

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<sup>348</sup> Dreifus (2004).

<sup>349</sup> AAAS. For one description of this event see Fox (2007:176-179).

<sup>350</sup> Dreifus (February 17, 2004).

life. It's a Buddhist way of thinking."<sup>351</sup> Later, a report from the European Molecular Biology Organization (EMBO) would repeat Moon's comments under the subtitle "Buddhism's view on human cloning."<sup>352</sup> Extending this "cloning is...a Buddhist way of thinking" meme even further, the online education service *Enotes.com* repeats this "cloning recycles life" mantra and attributes it to Mr. Moon, while informing its subscribing students that Buddhism is "the only one of the world's great religions that appears to embrace all forms of human cloning."<sup>353</sup> Moon, who is a medical doctor with experience in IVF (and, incidentally, a Methodist), appears to have acquired a virtually replicating Buddhist expertise while sitting up high among Seattle's clouds and speaking in that often public but peculiarly sensitive media space reserved for a scientist's personal (religious) views.

But despite Hwang and Moon's enthusiastically Buddhist embrace of cloning, their previous "explosive" 2004 stem cell announcement (namely, that they had cloned a human embryo from an adult cell and extracted stem cells from this "cloned" embryo) included an appeal to ban all human reproductive cloning. As Moon Shin Yong later told reporters, "Professor Hwang and I have called for a ban on reproductive cloning. We urge every nation to prepare a law as soon as possible to

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<sup>351</sup> Horstman (2004).

<sup>352</sup> Frazzetto (2004). Frazzetto suggests Moon's comments (on cloning as a way of recycling life) were made at the *American Association for the Advancement of Science* venue whereas Dreifus describes these identical words as being spoken during an interview with Moon at the Space Needle a few days later.

<sup>353</sup> This claim is made in "The Ethics of Human Cloning" - an online article which broadly summarizes Jewish, Christian, Hindu, Muslim and Buddhist views on human cloning.

prevent human cloning.”<sup>354</sup> Hence, the South Korean scientists’ more informal but oft repeated assertion of “Buddhist pro-cloning views” is seems puzzling considering their call for an immediate ban on human reproductive cloning. Why would Hwang and Moon continue to broadcast their own Buddhist pro-cloning views to the English-language press after clearly calling for a ban?

### **The Power of Oriental *No-daji* – Stem Cell Gold**

Korean’s opening to Western modernity invariably included the rush, by various foreign nations and trading companies, to secure the rights to developing the peninsula’s natural resources. One of these natural resources was gold. A new hybrid term is said to have developed out of the various efforts to locate and extract gold in Korea. People say that English-language signs with the words – “NO TOUCH” – were placed around areas where gold had been found, to keep others away. However, it did not take long before the economic meaning of “no touch” signs became apparent. Thus, the Korean transliteration of the phrase “no touch” - *no-daji* (노다지) – came to signify a rich vein of gold or other precious metals. The English-language imperative of “do not touch” was transformed into a Korean loan word of *no-daji* that

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<sup>354</sup> Dreifus (February 17, 2004). The irony being that the U.S. did not have laws against human reproductive cloning at the time but South Korea did.

meant a bonanza or windfall of wealth.<sup>355</sup> Thus, in a way, the appearance of the word *no-daji* and the economics of this hybrid word's meaning are created in-between two languages, points to productive and sometimes deliberate mutual misunderstandings and the profits promised or at least anticipated, in exploiting differences in language, knowledge, and markets locations as well as the rewards found in extractable mediums, materials, and abstract-able actions.

There is little doubt that part of the promise and visceral news potential of Hwang Woo-suk's work to create cloned human embryonic stem cells was generated by the Hwang team's perceived and real access to materials (namely, human eggs but research funding as well) which was more tightly controlled or even severely restricted in Europe and U.S.A. Even within domestic science circles, Hwang was granted freedom from government oversight – as well as specific policy exemptions - that other South Korean stem cell research teams did not enjoy.<sup>356</sup> The restrictions and various prohibitions imposed on human embryonic stem cell research elsewhere thus made this kind of research more attractive and promising in South Korea.

The interest and energy which prohibitions and restrictions can excite was certainly not limited to South Korea. The Hwang team's reportedly ground-breaking research was (as seen above) officially announced in Seattle and published in the U.S.

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<sup>355</sup> Lee Hui Seung (1994: 720). A Korean language dictionary defines *no-daji* (노다지) as follows: 노다지 1) (광) 광물이 막 쏟아져 나오는 광맥. 보난자 (Bonanza) 2) 한군데서 이익이 많이 쏟아져 나오는 곳. 또, 그러한 일. 노다지판.

<sup>356</sup> See Kim Keun-bae (2007) and others for more detailed information on Hwang's special research exemptions.

based science journal, *Science*. While the news of the Hwang team's successes may have discouraged some researchers, it also provided a platform for many who were quick to point to scientific advances in Korea to spur on heavy investment in similar research in the U.S.A. The well-publicized successes of South Korean research were invoked in appeals and arguments for removing restrictions on similar research in the U.S. Donald Kennedy, who was the editor and chief of *Science* when Hwang Woo-suk published his reported success with "patient-matching" human embryonic stem cells, was quoted in the *New York Times* as testifying - "I think there is no question that the degree of restriction imposed now on stem cell research in the U.S. has in fact given other nations some significant advantages."<sup>357</sup> Jose B. Cibelli, who was mentioned as a co-author in one of Hwang Woo-suk's publications and had worked for the Massachusetts-based biotech company, Advanced Cell Technology<sup>358</sup>, was also quoted in the *New York Times* as saying: "Some researchers hope that new work will galvanize support for similar research in the United States.... They argue that the fact that this work was done in South Korea shows that the United States is in danger of falling behind other countries in what could become a major new medical field."<sup>359</sup>

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<sup>357</sup> Pollack, Andrew (February 13, 2004).

<sup>358</sup> Michael West, Jose Cibelli and others at Advanced Cell Technology (ACT) had announced in 2001 that they had successfully cloned a human blastocyst. See page 68 above.

<sup>359</sup> Pollack, Andrew (February 13, 2004).

In her book, *Good Science: The Ethical Choreography of Stem Cell Research*, Charis Thompson<sup>360</sup> - who conducted ethnographic research within the California Institute for Regenerative Medicine or CIRM - notes that much attention was given to concerns that U.S. stem cell research would fall behind research in Asia. In particular, Thompson writes of a “brain-drain imaginary” in which anxieties about an exodus of skilled scientists played out in the media despite the fact that research work done in the U.S. often involved cooperation with international partners and scientists abroad. In addition to the leveraging the “latent power” and “anxieties” surrounding U.S. scientific research restrictions and federal funding bans (like George W. Bush’s stem cell research funding policy) to stimulate even greater investment in and funding of American science, research restrictions are leveraged for various political purposes, as well.<sup>361</sup> Nonetheless, as Thompson has observed, much of the anxiety and rhetoric about the U.S. falling behind other nation-states in stem cell research, in particular, and science and technology, in general, is directed towards a broadly generalized and blurry Asian imaginary.

Lee Silver, a Princeton molecular biologist, has been particularly successful in attracting the attention of the U.S. media while offering exceedingly broad explanations for the growth of science in Asia. In a 2005 television interview with Ted Koppel on

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<sup>360</sup> See Thompson (2013) particularly chapter four.

<sup>361</sup> Jensen (2008:124) notes that John Kerry raised the issue of federal funding for human embryonic stem cell research during his keynote address to the 2004 Democratic National Convention when he was running against George W. Bush for the American Presidency

*Nightline*, Silver suggests South Korean – in other words, the Hwang team’s – cloned human embryonic stem cell success is founded upon Asian attitudes:

**Silver:** It’s very clear that even though the United States spends far more than any other country – and Europe also spends a lot of money – the most, the two most important advances in embryos, stem cells, and cloning have come out of South Korea. So clearly if the United States puts too many restrictions on this research, funds and people are going to go elsewhere.

**Ted Koppel:** And then what?

**Silver:** Well, then the research will be conducted basically in Asia where people don’t have as much of a problem with this research as Westerns tend to have....<sup>362</sup>

In this *Nightline* excerpt, the discursive power of “Oriental *No-daji*” - for both an American scientists like Lee Silver and for Hwang Woo-suk’s “patient-matching” stem cell research – begins to glitter like gold.

### **Replacing “Occidental Monotheism” with “Oriental Spirituality”**

The mysterious and seductive frontiers of science, these days, are often combined with what may be called a “pro-science (or scientist) orientalism.” This more recent referencing of an older “orientalism” adapts some aspects of previous discourses highlighting an eastern (philosophical) rationality and adds the new and seductively just-out-of-touch promises of globalization’s Golden *No-daji* opportunities fueled by the titillation and imagined abundance of the Eastern Frontier. A “pro-science

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<sup>362</sup> *Nightline* (May 24, 2005).

occidentalism” appears as well - imagined in South Korea as a gravitational pull of immense scale grounded in the logic of the West supplemented by lavish resources bestowed on scientists who are already accustomed to living within a land of material wealth. This occidental tide pulls in other geographic bodies and topographical metaphors – like, for example, the comparison between the expansive “continental consciousness” of North America (and sometimes China as well) and the narrow, intricate, and craggy mountain terrain of a more enclosed and yet more precarious peninsular life. The constellations of such overlapping geographies of “science complexes” are interactive and intimately characterized by longings for the other’s “something more” which is mostly obtuse and imaginary. Nonetheless, these moving lines of contrasting desires carry political import and may momentarily align despite contrary ends.

During the sixties and seventies in the U.S. - especially with the burgeoning interest in “Eastern” philosophies and religions - certain comparisons between “East” and “West” came to be articulated in public discussions of scientific progress and “bio-ethics.” One example, of a prolific “Western” scientist who embraced a form of “pro-science orientalism” is the molecular biologist G.S. Stent (1924-2008). Although Stent’s work and writings<sup>363</sup> vary, he was clearly influenced by his tenure at the

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<sup>363</sup> In addition to publishing his scientific work in journals aimed at experts in his field, G. S. Stent authored a widely used introductory textbook on Molecular Genetics (*Molecular Genetics; an Introductory Narrative*) which was first published in 1971 and translated into Italian, Russian, Spanish, and Japanese. Stent’s essays on the philosophy of science appeared in many different venues (both scientific and philosophical journals, Hastings Center Reports, etc.) and later in life, Stent

University of California, Berkeley, during the sixties and seventies.<sup>364</sup> Moreover, Stent had an ongoing interest in the philosophy of science, and it is not surprising that he began to ponder (and hence partly creating or narrating) the relationship between “Eastern philosophy” and science. Stent’s turn to Eastern philosophical alternatives aligned with the interests of certain Japanese groups and in 1981 Stent co-authored *Truth and Satori: the Metaphysics of Science and Eastern Philosophy*<sup>365</sup> - a Japanese language book with M. Ogawa. But, as many as seven years prior to this trans-pacific collaboration, Stent had already been suspecting that a near “insurmountable contradiction” in Western philosophy was obstructing scientific work and progress in the West. Fortunately, at least according to Stent, the situation could be possibly be rectified by stepping outside the Western tradition and adopting a foreign philosophy of “another great civilization.”

Stent makes this “moving” (in a most literal sense) suggestion in his 1974 essay, “Molecular biology and metaphysics”<sup>366</sup> which was published in the prestigious journal *Nature*. Stent seems determined in this essay, to present evidence for his argument that the Western belief in God (as well as other “Western” versions of monism) and the

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(1998) published a personal memoir, *Nazis, Women, and Molecular Biology: Memoirs of a Lucky Self-hater*. It should be noted that Stent also looked to non-Eastern others while thinking about the future of the West. In *The Coming of the Golden Age: A View of the End of Progress*, Stent (1969) looked to Polynesian for help in understanding the upcoming “golden age” and the “end of progress.”

<sup>364</sup> Stent first came to Berkeley in 1952 and remained at the University of California for most of his life thereafter. (<http://bancroft.berkeley.edu/Exhibits/Biotech/stent.html> last accessed on 6/29/2013). *The Coming of the Golden Age: A View of the End of Progress* - which developed from a series of lectures given at Berkeley - makes repeated reference to Berkeley students’ activities and interests there.

<sup>365</sup> Stent, G.; Ogawa, M. (1981). 眞理と悟り: 科学の形而上學と東洋哲學.

<sup>366</sup> The article I am referring to here is Stent (1974) “Molecular biology and metaphysics”.

related “Western ethical system” has inherent contradictions which have become more noticeable recently with new discoveries in the expanding field of biology.<sup>367</sup> Stent, who was born a German Jew and fled the Nazis by immigrating to Chicago at the age of fifteen,<sup>368</sup> finds a possible answer to this increasingly prominent and insurmountable “Western” (and “Judeo-Christian”) metaphysical and moral conundrum, by turning to “Eastern philosophical-ethical systems” – namely, “the two complementary philosophical-ethical systems of Taoism and Confucianism which have governed life in the Middle Kingdom.”<sup>369</sup> But before we consider how Stent finds hope for the future in Chinese religions, we will examine an example he presents to illustrate how contemporary progress in molecular biology has exacerbated the West’s long-standing metaphysical conundrum and threatened an ethical architecture built upon the rock of a singular almighty God. Antipathy towards human cloning is a key example Stent mobilizes to demonstrate the West’s metaphysical deadlock. It is both interesting and instructive that an aversion to human cloning manifests a particularly “Western” impasse in Stent’s 1974 account.

In his 1974 *Nature* essay, Stent follows what could be dubbed the ‘spirit of science’ in its flight from a restrictive Western environment to a receptive Eastern other. In contrast to Watson’s more straight-forward argument, Stent wields wide

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<sup>367</sup> For instance, Stent (1974:780) writes, “The achievements of contemporary biology have helped to bring to light the moral contradictions inherent in the Western ethical system.”

<sup>368</sup> Stent (1998:159).

<sup>369</sup> Stent (1974: 781).

metaphors (God, Nature, etc.) snatched from the mouths of other contemporary scientists (including Watson's research partner Francis Crick<sup>370</sup>) to support his rather circuitous argument. Pointing to Judaism's and Christianity's focus on a singular omnipotent God as well as Western atheism's reliance on an all-encompassing idea of "Nature", Stent argues that Western thought has an underlying monistic thrust. This monism, however, is only one part of the contemporary Western conundrum. Stent identifies modern mind-body dualism, as the force which has come into conflict with the West's long-standing commitment to a singular and ultimate Truth. To make matters worse, the Cartesian split between the body and the mind cannot easily be discarded because it is the foundation of modern Western ethics.

Stent locates the Western aversion to human cloning in the discomforting rub between the West's faith in an ultimate oneness and its need for a clear divide between the human body and the everlasting soul. As Stent explains it, even though human cloning may offer some considerable benefits,<sup>371</sup> cloning technology has few, if any, supporters in the West. Stent does not pause to suggest that the West's aversion to human cloning may be related to recent memories of the atrocities of Nazi science, eugenic programs and genocide.<sup>372</sup> Instead, he links the "horror" invoked by

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<sup>370</sup> Stent (1974:779) writes, "... (Francis) Crick probably makes the verbal substitution of a personified 'Nature' for 'God' only to avoid giving the impression that he is a Christian."

<sup>371</sup> For example, Stent (1974:781) writes "... (human cloning) will soon make it feasible to abandon the old-fashioned genetic roulette of sexual reproduction and start populating the Earth with identical replicas of carefully chosen, ideal human genotypes."

<sup>372</sup> Stent does discuss the Nazi use of eugenic programs in *The Coming of the Golden Age: A View of the End of Progress* (1969:12-15) but he does not directly link human cloning with racist eugenic laws. Stent (1969:13) writes that "eugenics

human cloning in the West to “...the generally shared belief in the uniqueness of the soul.”<sup>373</sup> Stent faults “Western monism” (Judaism, Christianity, etc.) for making it impossible for Westerners to fathom, let alone accept, the possibility that people with genetically identical bodies could still possess unique souls. Presumably, a critical distinction between souls would collapse (like dominos do) without a supplementary difference between bodies – a divide which buttresses the upright soul. Without this support, an individual’s sense of their own discrete inner self and by extension the meaningfulness of the whole modern (post-Descartes) Western ethical system would crumble into contagious chaos. Fortunately, at least for the more ordinary modern Westerner, this mass confusion is avoided (or at least contained and civilized) by a collective intuitive aversion or silence which protects the crucial Western taboo against human cloning.<sup>374</sup>

It is not surprising that Stent believes that the, by definition monolithic, metaphysical-ethical-emotional-apparatus of “Western civilization” – the mighty social collective system which prohibits human cloning - is impossible to overcome within its own hermetic boundaries. However, the prohibition on human cloning is, for Stent

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proved to have an irresistible appeal to political cranks and racial bigots” (while denouncing Nazi Germany’s racist eugenics policies and criticizing U.S. moves to require forced-sterilization of persons, often poor and African American. Yet, he seems to believe that “eugenics” may still play a part in the creation of a future “Golden Age.” Thus, he is decidedly more open to human cloning, which he describes as the “artificial regeneration of the whole individual from one of his body cells.” Stent (1969:14).

<sup>373</sup> Stent (1974:781) writes, “The reason for this horror is the generally shared belief in the uniqueness of the soul. Even though the soul is incorporeal, it is supposed to fit the body, and hence it is not conceivable that a unique soul inhabits each of thousands of identical bodies.”

<sup>374</sup> Stent (1974:781) writes, “As far as I know, no one has actually come forward to advocate the institution of this programme, even though from a eugenic point of view, it offers tremendous possibilities. Evidently, the idea of cloning humans is morally and aesthetically completely unacceptable.”

at least, deeply ironic. Not unlike the protective mark bestowed on Cain upon his expulsion from Eden, the “Western” prohibition on human cloning protects against the collapse of Western ethics and murder (the war on all by all) and thus maintains a connection between humanity and God while firmly shutting the door to human life perfected (living with God in the garden). “To oppose human cloning,” Stent writes “... is to betray the Western dream of the City of God.”<sup>375</sup> Stent reasons that only a world of people with the most angelic characteristics could ever hope to build a truly utopian society. Such a perfect society cannot be built or even maintained if its members are made by sexual methods which create unpredictable and imperfect offspring. At long last, the promise of human cloning places the “City of God” within human reach but the West’s aversion and ethical dis-ease stays the hands of science. Stent concludes, “What is wanted is the impossible: a perfect society made up of a motley collection of imperfect, unique souls, warts and all.”<sup>376</sup> And, once again, human progress in the West has run up against contradiction and conflict.

Needless to say, Stent predicts that a suitable solution to this ongoing conflict in “Western metaphysics” is not easily found within the “Western tradition.” Instead, the West attempts to contain the sparks of this ongoing conflict with aversion and a public taboo against human cloning and all other such potentially dangerous and inflammatory acts. Stent, however, boldly suggests that if the West were to abandon

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<sup>375</sup> Stent (1974:781).

<sup>376</sup> *Ibid.*

its belief in God, the conflicts and contradictions that have plagued Western lives for centuries, could (pouf) disappear.<sup>377</sup> Thus Stent (who was influenced at the time by the well-known analytic philosopher Isaiah Berlin) suggests that the West reject God, the Almighty, and such other versions of religious “monism” and embrace a more pluralistic and accepting “Eastern paganism.”<sup>378</sup>

Stent justifies this proposition by providing more details about the advantages of a Pagan-based ethical system. “In the Pagan system,” he writes, “there are no ultimate values, no intrinsic rights or wrongs, only communal purpose and so moral judgments here are relative rather than absolute.”<sup>379</sup> In line with this faith in value pluralism, Stent urges the West to adopt not one but two new religious-ethical systems: Confucianism and Taoism. Stent insists that “neither Confucianism nor Taoism invokes God or Eternal Reason... nor do they posit the existence of Natural Law or ultimate values (sic).”<sup>380</sup> Moreover, Stent reassures his readers that both Confucianism and Taoism have a respectable track-record having served the Chinese for many

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<sup>377</sup> As we have seen, scientists like Dr. Zavos and Dr. Seed (who were active twenty years later in the late 1990s and early twenty first century) would disagree with Stent’s call to discard monotheism. In fact, both Zavos and Seed found it necessary to make some reference (which was generally more effective when understated) to their personal faith in God, while explaining and justifying their human cloning plans to the press and the public. In contrast to Stent (1974), none of the early twenty first century cloning advocates mention the possible eugenic benefits of cloning. In fact, even before Stent published his essay, eugenic laws and regulations were widely criticized but forced sterilizations were carried out in the U.S. through the 1970s. When Zavos, Seed, Antinori, and Boisselier were advocating human cloning in the late 1990s and early twenty-first century, the language of individual “reproductive rights” became an effective rationale. With the success and spread of IVF technologies (after 1978), and the trend for U.S. based bioethics to emphasize “autonomy” and liberal language of individual rights, “reproductive rights” became a powerful banner for denouncing previous forced-sterilization state eugenic programs, infertile couples seeking IVF, IVF clinics seeking customers, and groups advocating a woman’s right to choose to terminate an unwanted pregnancy.

<sup>378</sup> Stent (1974:779-780) borrows his idea of “pagan” from Isaiah Berlin and seems to be advocating a Berlin-esque notion of “value pluralism.”

<sup>379</sup> Stent (1974:780).

<sup>380</sup> Stent (1974:781).

centuries and “Chinese attitudes” are already exerting an influence on the West. Writing just a few (less than two years) after Nixon’s visit to China and within a bubble of hope and enthusiasm for the new Sino-American relationship (which would alter global – that is Soviet and U.S.A. - “Cold War” dynamics), Stent concludes that Chinese Confucianism has even helped ameliorate the Cold War conflict between the overly ideological United States and Soviet Union by focusing attention instead on the importance of “harmony” in international relations. All in all, Stent expresses much optimism for what he predicts will be the increasing Sinification of the West.

Although Stent piles praise upon Confucianism and Taoism, he is more skeptical of Buddhism – particularly the early Western adopters he dubs the “Zen Beatniks” - and other religious hybrids traced back to India, like “transcendental meditation.”<sup>381</sup> Thus Stent does not come anywhere close to predicting the camaraderie between South Korea’s Zen Buddhism and a new early twenty-first century version of “human (embryo) cloning.”<sup>382</sup> Nonetheless, Stent’s description of Taoism as a transcendental philosophy “whose main relevance is for the inner life rather than for social relations”<sup>383</sup> may just as well refer to Zen Buddhist soteriology. And, as might be expected, Stent’s characterization of Confucianism is decidedly un-

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<sup>381</sup> In addition to the “Zen Beatniks”, Stent (1974:781) mentions the “New Left Maoists, transcendental meditation freaks and other far-out members of the Counterculture.” He seems to believe Confucianism and Taoism are less extreme and thus are more compatible with the (Western) middle-class interests like environmentalism.

<sup>382</sup> When he wrote this 1974 essay, Stent seems to be completely unaware of the ongoing construction of an elite East-West discourse on the compatibility of Buddhism and science which has been recently explored by scholars like Donald Lopez (2008, 2012).

<sup>383</sup> Stent (1974:781).

Confucian, especially in its “Neo-Confucian” development. Indeed, the fact that Stent can describe Confucianism and Taoism as “pagan” suggests a grasping indiscriminate “other openness” which is based on a grossly over determined concept of monotheism and a privileging of the possibilities attributed to (or projected onto) distinctly foreign East Asian traditions which promise to transcend the limitations of their Western Judo-Christian counterparts. Not unlike the way Nixon’s celebrated (re)opening of an “unknown” China to the “Free World” was seen as catalyzing new and unexpected transformations in a global history, so too the (re)discovery and adoption of Eastern “paganism” would set the stage for a transformation in Western attitudes towards the life sciences. Indeed, Stent’s suggestions are writ in broad strokes and paint the Eastern other with the suggestive tones of Western wish-fulfillment and wonder. But Stent’s essay is also a subtle warning. If the West does not move forward the East will take its (privileged) place. Stent is, nevertheless, optimistic and promises his readers that it is not too late; he assures his readers that “the West may still remain free to... join the East in a pagan One World.”<sup>384</sup>

Roughly thirty years later, another voice – that of another Jewish-American molecular biologist - would update Gunter Stent’s 1974 arguments for a later generation, but this time in a more public and amplified tone. Lee Silver became an

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<sup>384</sup> Stent (1974:781). Soon after, Stent appears to have adopted more universalizing Structuralist notions (through Saussure and Levi Strauss) which locate conflict and contradiction as an *a priori* attribute of the human thought. See Stent’s essay “The Poverty of Scientism and the Promise of Structuralist Ethics” published in *The Hastings Center Report* in 1976. In this article, Eastern philosophy no longer provides “the answer” for Stent (and thus a solution to the West’s metaphysical contradictions) but instead becomes another manifestation or example of the inherently binary architecture of human thought.

interpreter of biotechnology for the American public in the mass media outpouring that followed the announcement of Dolly's birth.<sup>385</sup> Silver's well-timed book - *Remaking Eden: How Genetic Engineering and Cloning Will Transform the American Family*<sup>386</sup> - was first published in 1997 not long after Silver appeared on a number of talk shows to discuss cloning post-Dolly and other advances in biotechnology. In the years that followed, Silver became an increasingly familiar presence in English-language mediated discussions of the future of biotechnology, emerging bioethical controversies and the relationship between religion and science.

Aimed at a general audience, Silver's 2006 book - *Challenging Nature: The Clash of Science and Spirituality at the New Frontiers of Life* - tackles the fraught relationship between science (biology) and religion ("monotheistic religions") with lively and readable prose. A good story-teller, Silver nevertheless approaches this topic with a narrow focus; he is interested in refuting the objections people raise against recent developments in biotechnology. As a self-proclaimed scientist "by training and temperament"<sup>387</sup> - Silver frames his discussion early on in the following terms: "The problem is that biotechnology directly challenges the most deeply rooted religious and spiritual claims of limits to human knowledge and power over the natural world."<sup>388</sup>

Thus, Silver begins with conflict - that is the clash between 'religious/spiritual beliefs'

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<sup>385</sup> Kolata (1998:35).

<sup>386</sup> Silver (1998).

<sup>387</sup> Silver (2006:ix).

<sup>388</sup> Silver (2006:x).

and the advance of biology and biotechnology. This approach differs from that of his predecessor, Stent who was writing in early 1970s when the now routine criticisms of scientific and medical practices were just beginning to be institutionalized (in the U.S.). Stent approaches ‘philosophical-religious’ systems in a broader, more socially embedded and with less immediately contentious language. Yet despite the near thirty year gap in between Silver’s books and Stent’s 1974 *Nature* essay, both of these molecular biologists share certain illuminating interests.

Silver and Stent both identify most opposition to the advance of molecular biology and biotechnology as springing from a single source – that is an often outdated and inarticulate belief - which have remained embedded in the ‘Western monotheistic context.’ Silver links this belief which he describes as “spiritual” or “religious” to individual emotional and psychological needs, while Stent – influenced by his interest in continental philosophy – points to an underlying “Western” philosophical-religious commitment to monism which has been sustained by monotheistic religions over the centuries and now, more recently, come into conflict with scientific progress.<sup>389</sup> Both Silver and Stent focus primarily on the rub between “monotheistic religions” and biotechnology, although Stent limits himself to the

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<sup>389</sup> For Silver “religion” is often composed of unverifiable claims which fill (universal) psychological needs while Stent seeks to excavate a logical and universalizing aspect of “Western” human thought which he suggests should be replaced by another philosophical-religious system.

“Judeo-Christian” tradition while Silver mentions Islam as well and any other religions that depend upon an all-powerful and transcendent creator God.<sup>390</sup>

In addition to their focus on faith in a transcendent and omnipotent God, both Stent and Silver point to the status of individual spirits or souls in religious thought as a factor influencing the public’s acceptance or rejection of scientific knowledge. For example, both Stent and Silver highlight the eternal and unchanging quality of human souls in “Judeo-Christian” traditions as a large stumbling stone for the widespread acceptance of biotech advances, like human cloning. Silver argues that the general public’s confused over-identification of an individual person’s unique inalienable soul with that same individual’s DNA sequence is one reason why the general public objects to human cloning and genetic engineering.<sup>391</sup> Similarly, Stent faults Westerns, who are accustomed to monistic principles and monotheistic faiths, for overlooking or misunderstanding the distinction between the human body and the human soul as a reason for the aversion to cloning in the West. Moreover, both Stent and Silver agree that beliefs about souls and spirits (as well as religions and spiritualities) in the West differ from those in the East.

After describing a visit to a Japanese laboratory in 2001, Silver reflects: “...I could see the enormous gap that exists between the forbidden domain of the Christian soul, a concept that subtly permeates all of western culture, and the open

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<sup>390</sup> Silver (2006:27-28).

<sup>391</sup> See Silver (1998:275-276). Silver argues against this soul-DNA identification with the explanation that the “essence of human life lies within the human mind, not within inert molecules of DNA.

fluidity of eastern spirits....”<sup>392</sup> Curious about the future import of his present-day observations, Silver asks a simple question - will religious differences like this “gap” between Eastern and Western souls translate into another, possibly “enormous” difference between the willingness of people in the East and the West to accept and adopt biotechnology? Earlier on in his discussion, Silver already admitted that he has little hope that “most western religious leaders” will respect the divide between science and religion.<sup>393</sup> But, what amount of hope does Silver have for the religions and the religious leaders of “the rest”?

Stent, with what now seems like wild, or at very least glib abandon, proposed that the West adopt an “Eastern philosophical-religious-ethical system” for the sake of the future of science in the West, not to mention the future of global harmony in an ideologically-divided and dangerous cold war world.<sup>394</sup> Stent was clearly drawing upon his experiences in the “counter-cultural” bathwater of Berkeley in nineteen seventies’ California. Silver, writing and thinking in different times, nonetheless also introduces a “key difference” between western spiritual beliefs and eastern religions. Furthermore, Silver argues that this difference in western and eastern religious traditions continues to impact “non-religious” people as well as the general public’s response to science and technology, even in modern secular times. And as testimony

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<sup>392</sup> Silver (2006:337).

<sup>393</sup> Silver (2006:30).

<sup>394</sup> As well as being a way of assuring the adoption of Isaiah Berlin’s (Western) philosophy of embracing “plural values” which is Stent’s rather perplexing move to project a lack in the self onto an “already there” part of the other.

to his time and, perhaps, his professed “scientific temperament” as well, Silver bases a fair amount of his understanding of Eastern religious and spiritual traditions on experiences he directly collected during close to a year spent on a 2001 “backpacking expedition” in South and Southeast Asia and other trips to various East Asian locals as well.<sup>395</sup> Silver embraces the epithet of “amateur-anthropologist”<sup>396</sup> and, indeed, some of his ideas about spiritual beliefs read much like earlier anthropological musings on the evolutionary development of religious thought.<sup>397</sup>

In 1974 Stent praised the two major religions (Taoism and Confucianism) native to China however Silver, writing in the early twenty-first century, selects a religious tradition shaped of a Chinese rival, namely, India. And in contrast to Stent who was ostensibly inspired by Chinese civilization’s tolerance for “plural values” (which were, of course, ironically “founded” - or at least articulated – in Isaiah Berlin’s modern philosophical writings and later “proven” by Nixon’s successful visit), Silver was sensitive – as many defenders of science and science education have recently been – to the religious controversies swirling around the epistemological status of human evolution in contemporary American public schools. Thus, by choosing to focus on the Asian religion(s) of Hinduism, Silver is able to draw attention to a weighty and respectable “world religion” - one which is different from “Western religions” on the

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<sup>395</sup> Silver (2006:xiii).

<sup>396</sup> Silver (2006:xiv).

<sup>397</sup> For example, Silver(2006:34) speaks of “the oldest type of spiritual belief” (as something akin to a ‘life-engendering spirit’) and states that this belief is “still the most widespread throughout the world.”

topic of controversy (evolution) in the right way. Silver explains: “Although the concept of gradual human evolution fundamentally contradicts Christianity and other religions influenced by the Old Testament, it is remarkably consistent with the Hindu spiritual roots of cultures in east, south and southeast Asia.”<sup>398</sup>

Interestingly, Silver describes the difference between the evolution-embracing Hindus and the evolution-rejecting Christians as being grounded in diverging views of souls and spirits. This, no doubt, reflects Silver’s view of the primacy of a belief in spirits/souls in the evolution of homo sapiens’ religious thought. In fact, Silver pinpoints a belief in the unchanging or static qualities of God-created human souls as a source of problems for the advancement of scientific thought. This emphasis on the eternal and unalienable quality of individual human souls also appears in Stent’s 1974 explanation that people, in the (Monistic) West, generally insisted that unique individual human souls be indivisibly linked (or bound) to a single unique human bodies. Stent’s “plural-value embracing” Chinese do not insist on such (Western) mandated singularities thus, like Silver’s evolution-embracing Hindu followers, they are more flexible and open to the newly formulated theories of molecular biology. Silver - explaining the Hindu belief in more malleable spirits - writes: “Whereas in Judeo-Christian-Islamic belief souls remain static forever from the moment God creates them, in Hindu belief spirits self-evolve gradually into ever more sophisticated

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<sup>398</sup> Silver (2006:96).

beings, with no sharp lines between species, no ontological discontinuities, and no cultural problems with Darwinian ideas.”<sup>399</sup> Thus Silver highlights a new old religion with ancient pre-scientific spiritual beliefs which (amazingly) do not contradict and even in some ways mirror, more recent scientific theories (like evolution). Hinduism, here, plays the role of the Eastern “Scientific and Spiritual Other” which – like Stent’s “Chinese paganism” in the 1970s – demonstrates (for the monotheistic Western audience) an ancient philosophical-religious lineage of world-class stature that resonates with new scientific knowledge and thus serves as an exemplary model for the inflexible and troublesome soul of monotheistic orthodoxy.

Silver is clearly interested in extending the scope and range of science-friendly religious alternatives to western monotheism far beyond Hinduism and thus his descriptions of “eastern spiritual traditions” comes much closer to Stent’s nineteen seventies ideal of “Chinese paganism” than better-informed early twenty-first century readers might suspect. And this includes readers who would be quick to moan knowingly, or even laugh at Stent’s vision of “Chinese paganism” – especially considering Stent’s choice of religious terminology. Yet, Silver’s 2006 description of “eastern religions” follows a general outline similar to that of Stent’s and creates of a reversed or inverted image of “western monotheism” as well. Thus in addition (and related) to the “key difference” between Hindu and Christian conceptions of spirits

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<sup>399</sup> *Ibid.*

and souls, Silver repeatedly asserts eastern religion's freedom from prohibitions and warnings against infringing on God's sacred domain. Silver explains: "Eastern spiritual traditions are diverse, but they all share certain characteristics that differ from western monotheism.... There is no concept of a single God who creates and rules alone from above. If no master of the universe exists, the injunction not to "play God" makes no sense."<sup>400</sup> Thus while acknowledging some of the subtle variations which embellish a new early twenty-first century "multi-cultural" and "global" milieu, Silver also asserts a fundamental "religious" difference or divide, which is the (eastern) lack of a (western) sacred prohibition. (It is upon these cultural and religious differences that the "universal practices" of an ecumenical science can be spread around the world.)

The western prohibition Silver refers to could be described as a sort or sacred taboo or an off-limits and untouchable area that is for the most part coterminous with "God's domain" but can also be identified in more secular or "Post-Christian"<sup>401</sup> translations by terms like "Nature", "the Natural way" and "Mother Nature." When articulated through spatial metaphors, this taboo is mapped with lines like "it is wrong to tread in God's domain."<sup>402</sup> Or, as Silver explains, the western religious prohibition may surface in a more subtle and even unconscious (but nonetheless spiritual) saying

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<sup>400</sup> Silver (2006:138).

<sup>401</sup> This is Silver's terminology.

<sup>402</sup> Silver (1998:274) writes, "And as we have all been taught, it is wrong to tread in God's domain."

like the common place phrase “Mother Nature knows best.”<sup>403</sup> This taboo - the “no-touch” prohibition at the core of Silver’s understanding of western monotheism – encircles the human soul. Thus, the inalienable status of the soul (the human spirit in the west) is religiously “predetermined” because, as Silver writes, “the soul is clearly in God’s domain.”<sup>404</sup> Both Stent and Silver lament western monotheism’s singular view of the human soul.

The problem this “static” or “stalled” soul poses for the modern practices of the biological sciences – as both Stent’s (1974), and Silver’s (2006) writings imply<sup>405</sup> – is that of the confusing or contagious conundrum of contact of the body and soul. As previously mentioned, Stent argues that Westerners cannot maintain a clear distinction between the human body and the human soul and thus human cloning becomes taboo. Similarly, Silver observes that Westerners assume that the genetic engineering of the human body - even with the limits of early twenty-first century technology – will irreparably alter the human soul. After observing that certain manipulations of the human body (like orthodontics or plastic surgery) are thought to leave the soul intact, Silver protests against the “western belief” that genetically altering the human body

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<sup>403</sup> Silver (2006:xii - xiii). Silver writes: “A sense of spirituality, whether overt, covert, or subconscious, can endow seemingly simple words – like *organic*, *natural*, *species*, *human being*, and *life* itself – with meanings entirely different from those used in scientific discourse.” Silver describes such “disguised” words and discourse as being either “applied consciously to conceal a political goal based on religious doctrine” or unconsciously “hidden in layers of self-deception.”

<sup>404</sup> Silver (1998:276).

<sup>405</sup> This seems to appear in Descartes’s work as well.

“... impinges on the essence of life itself - the soul.”<sup>406</sup> Thus, according to Silver, the genetic engineering of the human body is often considered wrong by the standards of “western culture” since the west has deep roots in Christian monotheism which prohibits scientists from “playing God” and touching the sacred space of humanities’ God-given soul.<sup>407</sup>

Silver points to the various restrictions placed on human embryo research in America as well as the European public’s uproar against genetically modified crops and food. He reports that, while the western world has been stymied by religious taboos, Asian countries have not shied away from the full benefits of such technologies.<sup>408</sup> Instead of bowing down to God - the Master’s – commands, Asian spirituality (as seen in the example of reincarnation) gives beings the freedom to create their own future with the endless flexibility of spirits always on the move. Silver describes this open-ended “eastern spirituality” in contrast to the taboos “deeply ingrained in all western cultures.”<sup>409</sup>

**In contrast, the deep roots of eastern spirituality, found across Asia, confer *no* master creator or master plan on the universe. Instead, each spiritual being is considered to be responsible for its own future, which continues through endless rounds of reincarnation. In this cultural milieu, the charge “playing**

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<sup>406</sup> Silver (1998:276). Silver writes: “Although all other intrusions into the body may work around the edges, genetic engineering, it seems, impinges on the essence of life itself- the soul. And the soul is clearly in God’s domain.”

<sup>407</sup> Silver (2006:138) writes: “Christianity imprinted western culture with the monotheistic concept of a single master God who not only created all of nature but continues to play a role in the conception of each new human body with a new human soul. When the human body dies, the associated soul leaves this world forever to go to heaven, immediately or at a later time. In either case, the soul remains intact as a unified unchanging, eternal entity. In this worldview, it is wrong for scientists to ... “play God.”

<sup>408</sup> Silver (2006:337) writes: “As Europeans fret over GM crops, and Americans fret over the use of embryos in research, Asian countries have few qualms about reaping the benefits of the most powerful technology ever invented.”

<sup>409</sup> Silver (2006:xii).

**God” has *no* meaning or suasion, and biotechnology is not summarily rejected as it is in the West.<sup>410</sup>**

Here, Silver’s description of “eastern spirituality” as instilling a sense of an individual’s responsibility for their own future stands out as what seems to be a mirror image of (neo)liberal American values. It is as if the entrepreneurial American – a creature of the new world – a man who will not kowtow to tradition has suddenly appeared as a vision writ large across Asia. Stent’s 1974 praise of pluralism projected out and objectified as “Chinese paganism” has shifted in Silver’s 2006 “eastern spirituality” into a more human-centered and heroic rationalism.<sup>411</sup> Silver has rhetorically driven various arguments against human cloning and genetic engineering into a modern secular category of “religion” or “spirituality.”<sup>412</sup> In a tautological vein, Silver predicts that with the advance of cloning technology all ostensibly “secular” concerns about safety will be irrelevant and “...only religious objections will remain.”<sup>413</sup>

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<sup>410</sup> *Ibid.*

<sup>411</sup> The difference between Stent’s and Silver’s approaches can also be seen in the way these two molecular biologists understand Aristotle’s future influence. Stent (1974), like Silver, introduces Aristotle as the founding figure of “Western monism” – which has clearly played an important role in the early development of science – but now must be cast aside if molecular biology and human cloning are to move forward. Silver, however, believes Aristotle’s monistic inclinations will be more-or-less confirmed by science, especially when one considers that complex living organisms are composed of the same material as inorganic inert material. Silver (2006:42) calls Aristotle’s view of the soul profound since modern science indicates that – just as Aristotle believed – the soul cannot exist without the material body.

<sup>412</sup> See Silver (2001:102). Silver reduces all concerns about the possible physical, psychological, and wider societal issues associated with human cloning to empty substitutes for religious objections to human beings “playing God.” Silver writes: “...people who voice any one or more of these concerns are – either consciously or subconsciously – hiding the real reason they oppose cloning. They have latched on to arguments about safety, psychology, and society because they are simply unable to come up with an ethical argument that is not based on the religious notion that by cloning human beings man will be playing God, and it is wrong to play God.” Also, see Silver (1998:274) where he argues: “As is so often the case with new reproductive technologies, the real objection lies in the realm of spirituality, not science.” Social and economic objections to biotechnologies are dodged or labeled as “religious” in almost all of Silver’s examples.

<sup>413</sup> Silver (2001:105).

## Pluripotent Powers of South Korean Buddhism: A New Global Standard and a National Cultural Revival

Just like the ground becomes firm after it has rained, let us take this as an opportunity to change bad fortune to good. Let's create the global standard of bioengineering on which all of humanity can agree - for a refreshed and incredible nation. I hope together with all (South Korean) citizens that our research activities move forward so we become the mainstream of bioengineering in the world.

Go Junhwan, 1<sup>st</sup> President of the Korean Buddhist Assembly of Professors<sup>414</sup>

When watching your work, I thought to myself: "This is magic not science."

President Roh Moo-hyun during a visit to Hwang's laboratory<sup>415</sup>

The various debates about the issue of cloning all return to the ultimate question of whether you believe in the morality of human liberation. From this perspective, the issue of cloning is not an obstacle for Buddhism. Buddhism is a religion for the people; not a religion for God. Philosophy Professor Cho Sungtaek<sup>416</sup>

We are swept up in an ethical controversy which is not based on our country's rules but rather on foreign rules centered on America.

Jogye Order Monk Venerable Seong-U<sup>417</sup>

If Buddhism cannot say anything about the Professor Hwang Woo-suk Controversy, then it is dead....We shouldn't unconditionally accept Western Ethics.

It is important to delve into our own doctrine.

Venerable Ji-gwan, Head of the Jogye Buddhist Order<sup>418</sup>

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<sup>414</sup> Kim, Ju-il (December 20, 2005). (비온 뒤에 땅이 굳듯이 전화위복의 계기를 삼아, 새롭고 멋진 나라를 위하여 전 인류가 수공할 수 있는 생명공학의 글로벌 스탠더드를 만들고, 연구사업에 더욱 정진해 생명공학의 세계적 주류가 되어주시길 온 국민과 함께 바란다.)

<sup>415</sup> Kim, Geum Bae (2007:169). (여러분의 실험과정을 보면서 이건 기술이 아니라 마술이라 느꼈다.)

<sup>416</sup> Cho, Sungtaek (2004). (복제 문제에 관한 여러 쟁점은 궁극적으로 인간의 자율성과 도덕성을 신뢰하느냐 아니냐의 문제로 귀결된다고 보며, 이런 점에서 불교는 복제 문제에 걸림돌이 될 수 없다불교는 인간의 종교이지 신의 종교가 아니기 때문이다.)

<sup>417</sup> Seong-U (November 28, 2005). (우리나라의 윤리적 잣대가 아닌 미국을 중심으로 한 외국 잣대만 제시한 채 윤리적 논란에 휩싸인 것이다.)

## The Meeting of Magic, Science, and Religion in South Korea

Most, if not all, of what has been called the “stages of (human) thought” – a “primitive” belief in magic, theological and religious theories, the philosophical logic of secular humanism, and advanced scientific reasoning – all of these “separate stages” came together in the move to make a new global standard of life-engineering in South Korea. A meeting or confluence of the nation-state’s powers of magic, science, and religion (as well as national cultural traditions), promised the development of global life-saving biotechnologies for a united democratic Korean public. Moreover, a growing Korean Buddhist and Neoliberal belief in (what Philosophy Professor Cho Sungtaek once dubbed) “the morality of human liberation” promised to raise a second more potent and universal “Korean Wave.” In the scientist, Hwang Woo-suk’s, own words, the Korean bio-revolution promised something greater than a fashionable wave – the revolution would bring a towering “tsunami of stem cells.”<sup>419</sup>

The tectonic (re)alignment which heightened anticipation for a “tsunami of stem cells” was a refashioning of the social-evolutionary stages of magic, religion, and science into Korea’s already-modern<sup>420</sup> and united trinity of magic, science, and religion. In other words, Hwang Woo-suk’s stem cell project promised a revolutionary

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<sup>418</sup> Yu, Cheol Ju (December 3, 2005). (황우석 교수 논란에 대해 말을 하지 못한다면 불교는 죽은 존재.... 서양 윤리학을 무조건적으로 대입하는 것은 안 된다. 우리의 교리를 발굴하는 것이 중요하다.)

<sup>419</sup> Kweon, Yang Hui (May 20, 2005).

<sup>420</sup> This phrase – ‘the Eastern already modern’ – draws, in part on Bob Simpson’s 2009 essay “We have always been modern: Buddhism, science and the new genetic and reproductive technologies in Sri Lanka” for inspiration. Simpson, in turn, draws upon Latour (1993).

and expansive source of (inter)national “bio-power” built upon the rhetorical power of a unified post-coloniality. At the turn of the twenty-first century, Hwang Woo-suk found an outpouring of national faith in his stem cell promises; faith which was, in large part, born of a post-colonial or even so-called post-modern simultaneity and overlap of magical, scientific and religious factors. Moreover, Korean Buddhism found itself in a paradoxical yet unified position of being both a vessel of “traditional national culture” and an internationally recognized “world religion” that could rhetorically counter “Christian or Western moralities” with “Eastern Ethics.” The surplus value of Korea’s cloned human embryonic stem cell technology promised to be both moral and monetary; cloned human stem cells were believed to be beneficial at individual, national and international levels. Marx has suggested in his discussion of commodity fetishism that the material embodiment of human labor and value may be imbued with near-magical or fetishistic effects.<sup>421</sup> In Korea, the impact of this magical aura of anticipated cloned human embryonic products proved to be as contagious and real as the effects of the earlier America epidemic of human cloning fears.

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<sup>421</sup> Taussig (1997) is known for his work - inspired by Marx’s idea of the commodity fetish - on the fetishization of state forms, and currency, among other things. The “magic of the state” I refer to here connects with these notions but, nonetheless, is quite different given the different context and the vastly different degree to which the Republic of Korea’s governance internalized by South Korean citizens when compared to the indigenous peoples and marginalized communities Taussig writes about. Taussig’s phrase – “the big S of the State” – referring to the symbolic magnification and fetishization of state power, would in the present South Korean context, be more productively read as “the big S(science) of the State” to invoke the South Korean state’s “fetishization” of science and technology as well as the nation’s readiness to identify its international standing, strength, and economy with its “science-power.” Cheon (2006:399-401) also connects science, neoliberalism, and citizen’s post-colonial economic anxieties through the commonly used term or notion of *guk-ik* (which can be glossed as for the benefit/profit of nation-state).

Malinowski once wrote that “Magic expresses the greater value for man of confidence over doubt, of steadfastness over vacillation, of optimism over pessimism.”<sup>422</sup> Such sentiments correspond with Malinowski’s work of emphasizing a functionalist explanation for “magic” which is, in Malinowski’s writings at least, most generously read as a heuristic category overlapping with the rational functions of “science” and “religion.” Freud, through his slightly earlier studies of “civilized man”, emphasized a feeling of dissonance or doubt when a so-called rational civilized man experiences an uncanny feeling associated with his or her inadvertent magical thinking.<sup>423</sup> This feeling, as Freud describes it, recalls a feeling of helplessness rather than confidence or optimism.<sup>424</sup> In Freud’s essay on the uncanny, an individual’s inadvertent “magical thinking” becomes an unwarranted and potentially pathological or dysfunctional confidence in man’s own power. Freud describes this “magical thinking” as “the subject’s narcissistic overvaluation of his own mental processes; by the belief in the omnipotence of thoughts....”<sup>425</sup> Thus for Freud this type of individual ‘magical thinking’ is decidedly ambiguous as it is a “primitive” or “narcissistic” extension of the self. In this chapter we will see that Malinowski’s and Freud’s descriptions of “magical thinking” played out in Hwang Woo-suk’s magical stem cell research. In particular, Freud’s linkage of “magical thinking” and the

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<sup>422</sup> Malinowski (1954:90).

<sup>423</sup> Freud (1997).

<sup>424</sup> Freud (1997:212). Freud writes: “From what I have observed, this phenomenon does undoubtedly, subject to certain conditions and combined with certain circumstances, arouse an uncanny feeling, which, furthermore, recalls the sense of helplessness....”

<sup>425</sup> Freud (1997:216).

“compulsion to repeat”<sup>426</sup> will help us better understand the Korean public’s widespread support of this so-called cutting-edge or world-class science in its post-colonial and hence (post)traumatic national context.

Hwang Woo-suk’s stem cell science was certainly magical in its effects in South Korea in expressing confidence over doubt and optimism over pessimism like Malinowski describes above. Hwang’s research was praised as “magic” by then South Korean President Roh Moo-hyun whose administration (2003 – 2008), was searching for opportunities which promised continued financial growth. President Roh first visited Hwang’s laboratory at Seoul National University Hospital less than ten months after he moved into the presidential office in 2003. During this laboratory visit, Roh observed Hwang Woo-suk’s then secret cloned human embryonic stem cell research as well as several of the Hwang team’s other projects.<sup>427</sup> Later, President Roh exclaimed to the press: “As I was watching the experimental processes, I thought – this isn’t science, this is magic.”<sup>428</sup> For President Roh’s newly launched “participatory government” (*chamyeo-jeongbu*, 參與政府), Hwang’s research became an almost

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<sup>426</sup> Freud wrote his essay on “The uncanny” a year before *Beyond the Pleasure Principle* was published. Freud (1997:214) directly mentions the “compulsion to repeat” in “The uncanny” and had described this compulsion in another paper five years before “The uncanny” was published. See Freud (1997:214) footnote number two.

<sup>427</sup> See Kim, Geun Bae (2007). President Roh was shown the work on a project reportedly aimed at developing cows resistant to “mad-cow” disease (*bovine spongiform encephalopathy* or *BSE*) as well as work aimed at perfecting transgenic aseptic miniature pigs for an underserved human organ transplant market.

<sup>428</sup> Kim, Geun Bae (2007:169). “여러분의 실험과정을 보면서 이걸 기술이 아니라 마술이라 느꼈다.”

magical answer to pressing political questions about President Roh's economic leadership and South Korea's financial future.<sup>429</sup>

For President Roh Moo-hyun's administration, Hwang Woo-suk's research promised optimism which carried a surplus; his science inspired a confidence which could cover current Korean economic anxieties and still move forward towards a bright future for Northeast Asia.<sup>430</sup> Moreover, Hwang, as a figure of hope and pride for the nation, was able to mobilize public sentiment and support with a personal narrative which went beyond even the future promises of a lucrative biotech-driven economy. Namely, Hwang turned his research success story into a narrative which embraced and celebrated Korea's painful past history as well as "traditional" Korean values. Hwang Woo-suk's redemptive scientific narrative promised to unify the nation in a historical and humanitarian mission.

Kim Geun Bae<sup>431</sup>, in particular, has described in detail the ways in which Hwang Woo-suk's autobiographical narrative as well as Hwang's career path and promissory rhetoric helped create this nationally and internationally mediated phenomena. In this chapter, I will begin by presenting some of Kim Geun Bae's previous work detailing the ways in which a persuasive national historical and international humanitarian narrative developed around Hwang Woo-suk's cloned

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<sup>429</sup> See Kim, Geun Bae (2007) among others.

<sup>430</sup> *Ibid.* "우리의 사명을 동북아시아 소득 2만 불 시대로 표현하지만 어디서 그 가능성과 희망을 발견할지가 문제였다." "오늘 그 희망을 발견하고 확인하기 위해 여기에 왔다." See also Leo Kim (2008:402) for an English rendition of President Roh Moo-hyun's above statement.

<sup>431</sup> Kim, Geun Bae (2007)

human embryonic stem cell research. Next, I will show how the Korean Buddhist community – in particular Korean Buddhist women – played a crucial role in the way Hwang Woo-suk’s moving national narrative of exchange and redemption impacted public opinion. I will also argue that the support of Korean women was crucial to Hwang Woo-suk’s work and Hwang’s defense against early questions about his team’s human egg procurement procedures. Women’s association with “motherly traits”, women’s narratives of making sacrifices for their children and the nation, and women’s practice of and faith in Buddhism greatly assisted Hwang Woo-suk and Buddhists in building support for and defending Hwang’s research. I will argue that Hwang’s scientific credentials and national stature allowed Korean Buddhist women to engage in religious activities which might otherwise be denounced as “selfish” or “superstitious” in other contexts. I also assert that Korean Buddhist leaders’ support for Hwang’s research facilitated the mobilization of many Korean women around a magical scientific project which promised to grant an “updated” or “modernized” aura to these women’s religious work. However, in the South Korean government’s post-colonial “compulsion to repeat” the so-called advanced nation’s development of a “cutting-edge” biotech economy – a compulsion which was greatly reinforced by practical economic issues accompanying South Korea’s post Asian Financial Crisis integration into the neo-liberal global economy – an unexpected reversal or return occurred. This reversal or return is, perhaps, seen most clearly in an examination of

Korean women's activities and discourses. Thus through a more detailed examination of the talk about Korean women's contributions to the physical and spiritual health of the Korean nation, I will show how a putative unity of magic, science, and religion aided and abetted Hwang Woo-suk's cloned human embryonic stem cell research and promised, to elevate the status of women but, later post-Hwang scandal, returned internationally as the misuse of women. First, I will begin with Kim Geun Bae's discussion of how Hwang grounded his controversial cloning and stem cell research in his memories of a difficult but inspiring agrarian past.

### **Bucolic Biotechnology - Cloning Korean Cows**

In his book *South Korean Science and the Myth of Hwang Woo-suk* (*Hwang Woo-suk Sinbwa-wa Daehanminguk Gwahak*) published in 2007, Kim Geun Bae<sup>432</sup> explains the scientific knowledge-making practices, the networks of people (including journalists and politicians), and the scientific models and materials which facilitated Hwang Woo-suk's stem cell research and Hwang's rise to the ranks of the internationally renowned. Kim observes that Hwang first attracted the attention of the South Korea press and engaged national political figures around the time of the birth of a dairy cow, in 1999, which Hwang reportedly cloned.<sup>433</sup> Imagined as a Korean counterpart to Ian Wilmut's famous cloned sheep Dolly, Hwang's reportedly cloned dairy cow, Splendor

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<sup>432</sup> Geun Bae Kim received his PhD from John Hopkins University where there is a department of history of science and technology and currently teaches at Chonbuk National University. His book draws on actor-network theory.

<sup>433</sup> See Kim, Geunbae (2008) and Kim, Tae Heo (2008).

(*Yeongnong-i*), was named by the head of Korea's Ministry of Science and Technology (MOST) at Hwang's request.<sup>434</sup> Approximately a month later, Hwang once again attracted the Korean press and public interest with the birth of a second reportedly cloned native Korean cow (*han-u*, 韓牛).<sup>435</sup> This second cow was named by Kim Dae-jung who was president of South Korea from 1998 to 2003. Hwang would later describe the birth of these two cows as placing South Korea in the ranks of advanced nations engaged in a fierce cloning competition.<sup>436</sup>

In *South Korean Science and the Myth of Hwang Woo-suk*, Kim Geun Bae details how South Korea's new "cloned cows" linked the various domains of national symbolic and scientific labors. As a veterinarian scientist with expertise in artificial insemination, Hwang Woo-suk was able to use his work with reportedly cloned and genetically modified cows as a bridge to connect his expertise in veterinary science and livestock husbandry to the more lucrative field of human medicine and so-called cutting edge biotechnology.<sup>437</sup> Moreover, Hwang's reportedly cloned Korean cow linked South Korea's relatively new and speculative investments in biotechnology to more long-standing national discourses and international humanitarian values. Thus

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<sup>434</sup> Kim, Geunbae (2007:151). Kang Changhui was the Minister of MOST (科學技術部) at the time. I follow Kim Tae Heo (2008:30) translation of *Yeongnong-i* (영롱이) as Splendor.

<sup>435</sup> The revelation that the Hwang team's stem cell results were fabricated has brought Hwang Woo-suk's claim that he cloned these two cows into question.

<sup>436</sup> Hwang, Woo-suk (2003:33).

<sup>437</sup> See Kim, Geun Bae (2007). In her book *Dolly Mixtures*, Franklin (2007:47) has described this synergistic and connective potential as "proto-capital" which she explains as "a kind of capital primordium or source."

Hwang Woo-suk's mostly microscopic and highly speculative research was recognizably grounded in a clearly visible and much valued mammal.

Sarah Franklin has shown the rich symbolic and material meanings embodied in sheep in general – and the cloned sheep Dolly in particular - in the United Kingdom.<sup>438</sup> Drawing on Franklin, Kim Geun Bae explains that a rich set of cultural associations and agrarian attachments accompanied Hwang Woo-suk's native Korean cloned cow as well. In traditional agrarian Korean life, cows served as an important source of living and reproducing wealth, as well as a source of labor needed to help plough fields and transport goods. On rare occasions, cows were eaten in celebration of exceptional events and for their reported medicinal properties.

The Korean cow's powerful emotional symbolism as a (re)generative economic source can be seen in Hyundai Company founder Chung Ju Yung's recollection of selling one of his father's cows to raise the money needed to begin his business empire. In this well-known story, the Korea cow links the nation's difficult and impoverished past with the South Korean people's current economic success. In 1998, when Chung Ju Yung donated 500 head of cattle to North Korea during a terrible famine, a spokesperson for Chung explained, "He (Chung) has always been thinking that he owes something to the cows."<sup>439</sup> Not long afterwards, Hwang Woo-

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<sup>438</sup> Franklin (2007).

<sup>439</sup> Strom (June, 17 1998).

suk would follow Chung Ju Yung's lead with an added technical twist - Hwang announced he would give 20 cloned cows to North Korea.<sup>440</sup>

The Korean reception of the documentary - *Old Partner (Wonangsori)* – a film which follows a seventy-eight year old farmer and his forty year old Korean ox - is an eloquent illustration of the affective power a portrayal of traditional Korean agrarian life can have on present-day urbanities. Initially released in only seven theaters, *Old Partner* would become the highest grossing independent documentary film in Korea.

Figure 14. A still-cut shot from the 2008 documentary film *Old Partner (Wonangsori)* directed by Lee Chung-ryoul.



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<sup>440</sup> Kim, Geun Bae (2008:154).

Viewed by roughly three million people in theaters and many more in other venues, *Old Partner* closes with the following dedication: “This film is dedicated to all oxen and parents of this land who toiled to feed and clothe us in our childhoods.”<sup>441</sup> In a later book about the film which includes behind the scenes stories as well as essays and poems about Korean family life, the film’s director Lee Chung-ryoul expresses his deep satisfaction that “after seeing this film most people don’t feel at ease until they pick up the phone and call their parents.”<sup>442</sup> The story of mutual dependence and care between the Korean ox and the old farmer - both of whose lives were spent in back-breaking farm work - touched middle-aged South Koreans who had directly experienced South Korea’s rapid industrialization during the seventies and early eighties. The sacrifice of this generation of Koreans whose lives were disrupted by the Korean War (1950-1953) and who raised families and grew crops (or so the main narrative suggests) during South Korea’s rural modernization “New Village Movement” (*Saema-eul Undong*) campaign, - was (re)narrated and memorialized as people aged and died. Their now-grown and middle-aged city-dwelling children, who, if lucky, had been sent to nearby towns or cities for schooling when young, now relived their early childhood memories and remember their parents’ sacrifices while watching *Old Partner*. This film and other similar stories, which speak to the

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<sup>441</sup> 유년의 우리를 키우기 위해 헌신했던 이땅의 모든 소와 부모님께 이 작품을 바칩니다.

<sup>442</sup> Kwon, Gyeong Seong (2009). (영화를 본 사람들 대부분이 부모님께 전화를 드리지 않으면 안 될 것 같은 ‘짹짹’ 기분을 느꼈다니, 그 것으로 충분하다고.)

intergenerational continuities and discontinuities of South Korea's recent past, have long been a theme in Korean literature and film. *Old Partner*, however, in its documentary focus on the relationship between a farmer and his ox, draws its audience into a disappearing and already surmounted way of life which comes to represent an intimate and no longer threatening national past.

In the film, *Old Partner*, there are poignant scenes where the economic value or current market price of the forty year old ox is displayed and contrasted with the more than three decades of labor this ox has given to the old farmer. In one scene at a cattle auction, the old farmer's emotional tie with his partner, the old ox, prompts him to set a ridiculously high price for the lame and thoroughly-spent animal. As younger cattle buyers gather around to chuckle at the somewhat ridiculous spectacle of an old man and his overpriced ox on screen, the film's audience sees the old farmer's past becoming a belittled and misunderstood present-day curiosity. In a close-up shot, the ox sheds a tear as the value of the lives of both the farmer and the ox are mocked and misunderstood. This cattle-market scene contrasts with another, earlier section of the film that captures an impromptu gathering of local men in a nearby village. The local village men gently tease the old farmer about his affection for the ox. One man reminds the farmer, "... you've become a wealthy man because of this cow... the cow is as dutiful as a filial child."<sup>443</sup> The old farmer playfully boasts that he will perform

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<sup>443</sup> *Old Partner (Wonangsoji)*. 어째든, 이소 덕분에 솔직히 부자 됐어. 효자 자식 하나 역할을 한거네...

yearly memorial rites for the ox when it dies and film viewers are reminded of both their own filial duties and of their aging or deceased parents.

Although *Old Partner* was released in 2008, the film is a useful aid in contextualizing – albeit retrospectively – Hwang Woo-suk’s autobiographical narrative and this narrative’s impact on certain segments of the South Korean public. As previously mentioned in the introduction of this dissertation (see pages 42-45), an inspiring biographical essay, written by Hwang Woo-suk, was published together with the biographical narrative of another South Korean scientist (Choe Jae-chon, an evolutionary biologist,) and the work of a well-known Korean artist (Kim Byeong-jong) as a single beautifully illustrated book. The book, *My Stories of Life*,<sup>444</sup> was released a few months after Hwang’s first “ground-breaking” article appeared in the prestigious international journal *Science*. Hwang’s autobiography, as it appears in *My Stories of Life*, recounts his early life of post-war rural poverty and his resolute decision to devote his future to working with cows and oxen with the hope of improving his both his family’s and his neighbors’ lives.

As Kim Geun Bae has observed, Hwang Woo-suk appears to have deliberately cultivated stories of his devotion to Korean cows and his dream of improving rural Korean life through animal husbandry.<sup>445</sup> In *My Stories of Life*, Hwang describes his

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<sup>444</sup> Hwang Woo-suk, Choe Jae-chon, Kim Byeong-jong (2004).

<sup>445</sup> Kim, Geun Bae (2008).

childhood experience of poverty and the great comfort he received from the cow which his widowed mother boarded and raised. Hwang writes:

**I was born in 1953 which was the year when the (Korean) war ended. In those days, everyone in the countryside lived with the burden of poverty as though it was some kind of divine retribution. My family, which lost my father when I was five years old, was also very poor. Thus, for me - even during childhood which is the only time when a person has no troubles to speak of - life meant endurance and survival. I've always kept the thought of survival in mind ever since my early childhood days. The things that comforted me, in those days, were the blue-green mountains and, more than anything else, the gentle sleepy eyes of the cow.** <sup>446</sup>

Hwang's natal family – which consisted of his widowed mother, paternal grandfather, and siblings – could not afford to buy a cow, so Hwang's mother boarded a cow in exchange for the calf that cow would bear. Thus, Hwang describes the cow as his family's “savior” (*guseaju-na dareum eopseota*)<sup>447</sup> since the cow promised a life beyond poverty.

Hwang Woo-suk recollects the great concern and care his family (especially his mother, as discussed below) invested in their boarded cow in *My Stories of Life*. He describes his daily chore of taking the cow out to graze as just as important as his obligation to attend elementary school. Through much of his autobiographical essay,

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<sup>446</sup> Hwang Woo-suk, Choe Jae-chon, Kim Byeong-jong (2004:40). 나는 1953 년생이다. 전쟁이 막 끝난 그때 시골 사람들은 누구나 천형처럼 가난을 짊어지고 살았다. 내 나이 다석 살 때 아버니를 잃은 우리 집이야 두말할 필요도 없었다. 철모르던 어린 시절부터 나는 생존이라는 단어를 가슴에 품고 살았다. 유일하게 고민 없는 시기였어야 할 유년에도 내게 산다는 것은 살아내고 견뎌내는 것이었다. 그런 나를 위로한 것은 푸른 산과 들 그리고 무엇보다 꿈벅꿈벅, 순한 눈망울로 나를 바라보는 소였다.

<sup>447</sup> Hwang Woo-suk, Choe Jae-chon, Kim Byeong-jong (2004:40). 구세주나 다름없었다.

Hwang reminisces fondly about time spent together with grazing cows. Hwang describes the lessons he learned while watching cows and his growing sense of respect for the animal. As the following *My Stories of Life* passage attests, Hwang depicts his childhood as a time when cows provided much needed solace and companionship:

**I liked to gaze into the cow's eyes. When I saw my own reflection in their big and gentle eyes, the cows would playfully rub their heads against me almost as if they were confessing their love to me.... Sometimes when the cows put their heads together (in a huddle) it seemed as though they were in conversation with each other. Cows were never a trifling or unimportant creatures to me; they could think and feel like human beings. Cows were my closest confidants and friends. I shared my desire to see my long departed father once again, my worries about what the future would bring, and my yearnings for the world beyond, with the cows.**<sup>448</sup>

After the above recollections of his youthful affinity with cows, Hwang Woo-suk declares that he has spent his entire life, from the age of five to now over fifty, working with cows. Moreover, he attributes his determination to share his life with cows to a decision made in elementary school - a time when cows were very important to his and other rural families' welfare. This impetus, along with the much needed solace Hwang found among cows, helps explain Hwang Woo-suk's self-

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<sup>448</sup> Hwang Woo-suk, Choe Jae-chon, Kim Byeong-jong (2004:42-43). 나는 소 눈을 가만히 들여다보기를 좋아했다. 크고 순한 눈망울 속에 내가 비치면 녀석들은 기분좋은 듯 제머리를 내 몸에 쓱쓱 비볐다. 사랑한다고 고백이라도 하는 듯. 커다란 혀가 쓱 나와서 풀을 한 움큼 뜯고는 우물거리며 먹는 모습도 보기 좋았다. 녀석들은 저희 들끼리 대화라도 나누는 듯 머리를 맞대고 무슨 시늉을 하기도 했다. 내게 소는 한낱 미물이 아니었다. 생각하고 느낄 줄 아는, 사람과 다름없는 존재였다. 누구보다 가까운, 서로를 위로하는 친구였다. 아버지께 대한 그리움도, 먼 세상에 대한 동경도, 미래에 대한 불안도 나는 녀석들과 나누었다.

reported resolve to become the utmost expert on bovine biology.<sup>449</sup> Hwang Woo-suk's devotion to cows - as Hwang himself attests to in *My Stories of Life* - became such a widely accepted fact in South Korean media circles that, as Kim Geun Bae observes, the Korean press reported that Hwang had written his PhD dissertation on cow fertility when, in fact, Hwang's doctoral research dealt with sex hormones in mice.<sup>450</sup>

Not long after *My Stories of Life* was published, many inspirational children's books about Hwang Woo-suk's life and scientific accomplishments were published, as well. Cheon Jeonghwan observes that at least twelve educational books about Hwang that were published in 2005 alone.<sup>451</sup> *Hwang Woo Suk's Dream* (*Hwang Woo-suk ui Kkeum*, written by Lee Sanghwa with illustrations by Lee Jihyeon) and *Hwang Woo-suk: the scientist who changed the world* (*Sesang eul bakkun gwahakja: Hwang Woo-suk*, by Shin Seung-cheol) are a two examples. Although aimed at young readers with different levels of maturity, these two books present very similar stories about Hwang's life as well as an overly optimistic evaluation of cloned human embryonic stem cell research. For the most part, both of these books faithfully follow Hwang's life story as narrated in *My Stories of Life*, and emphasize Hwang Woo-suk's affinity early determination to learn everything about bovine biology to help improve the lives of his mother, siblings, and neighbors.

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<sup>449</sup> Hwang Woo-suk, Choe Jae-chon, Kim Byeong-jong (2004:43). 평생 소와 함께할 거라고, 소에 관한 한 최고가 될 거라고 초등학교에 다니던 나는 결심했다.

<sup>450</sup> Kim, Geun Bae (2007:48-49).

<sup>451</sup> Cheon (2006:412).

Figure 15 (left-hand side). Clothed in blue scrubs, Hwang kneels beside a calf on the cover of *Hwang Woo-suk's Dream*. Above this children book's large green and blue title, an inspirational message appears in small but emphatic letters - "Crack a rock with an egg! Move the heavens! Saving humankind, Korea becomes the world center...."<sup>452</sup>

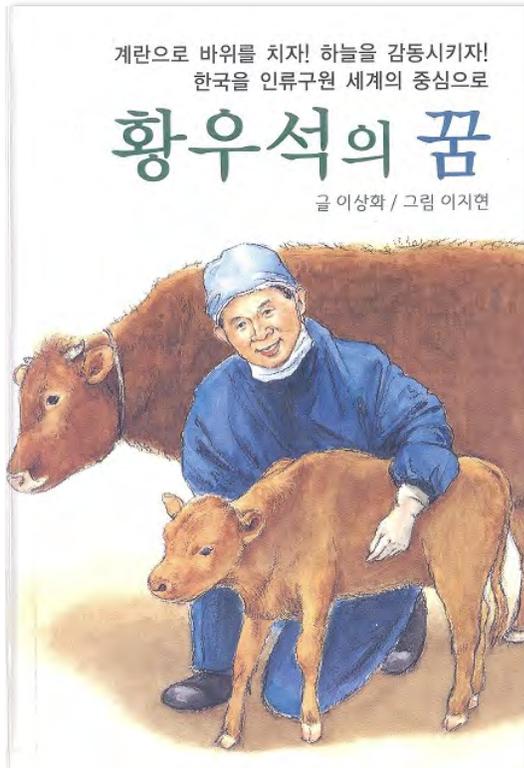


Figure 16 (right-hand side). The cover of *Hwang Woo-suk: the scientist who changed the world* displays Hwang's face next to his name embossed in circular cell-patterned rings. The bottom half of the book's cover shows a cow overlaid with text which reads: There was just one thing which helped Hwang Woo-suk through his difficult childhood. It was the cow. The cow, whose kind blinking eyes met the young boy's gaze.... The cow was a friend and a father to the young Hwang; the cow was everything. Hwang spent his days with his friend, the cow, and learned about life....<sup>453</sup>

<sup>452</sup> Shin, Seungcheol (2005:cover). 계란으로 바위를 치자! 하늘은 감동시키자! 한국을 인류구원 세계의 중심으로

<sup>453</sup> Shin, Seungcheol (2005:cover). 황우석의 고단한 어린 시절에 힘이 되어준 게 하나 있었다. 그 것은 바로 '소'였다. 선한 눈망울을 꿈벅거리며 서로를 마주 보곤 했던 소는 어린 황우석에게 단순한 가축이 아니었다. 소년 황우석에게 친구이자, 아버지, 그의 모든 것이었다. 소년 황우석은 소와 친구처럼 지내며 인생을 배웠다.

In a brief story which is included in all three books - *My Stories of Life*, *Hwang Woo-suk's Dream*, and *Hwang Woo-suk: the scientist who changed the world* - Hwang Woo-suk demonstrates his commitment to working with cows and thus his dedication to improving the lives of his family, his humble neighbors and, by extension, the national public. This story, which first appears in *My Stories of Life*, unfolds during Hwang's third year of high school in Daejeon. After high school students' college preparatory test scores are announced, Hwang's home-room teacher orders Hwang to apply for admission to Seoul National University's Medical College. Hwang, however, insists on applying to the Veterinarian College, instead, because of his resolute determination to study cows. Incensed by Hwang's impertinence, Hwang's teacher slaps Hwang across the face and yells – “Hey, fool! The daughters of all the wealthy families will want to marry you if you graduate from Seoul National University Medical College. What's with the Veterinarian College? What would a dirt-poor boy like you do afterwards?”<sup>454</sup> In the children book's version of this narrated incident, Hwang Woo-suk's home-room teacher graciously refrains from striking Hwang,<sup>455</sup> but the story's underlying message and unstated implications remain the same. Namely, even as a young high school student, Hwang Woo-suk refused to renounce his dream to study livestock and

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<sup>454</sup> Hwang Woo-suk, Choe Jae-chon, Kim Byeong-jong (2004:43). “야, 이놈아. 서울대 의대만 나오면 부잣집 처녀들이 시집 오겠다고 줄을 설 텐데 웬 수의대야? 찢어지게 가난한 놈이 쇠침쟁이 되어서 어찌려구!”

<sup>455</sup> In *Hwang Woo-suk's Dream* (by Lee Sanghwa), Hwang's home-room teacher doesn't hit Hwang (see pages 51-52) however in *Hwang Woo-suk: the scientist who changed the world* (by Shin Seung-cheol) the teacher does hit but only after many reasonably civil attempts to convince Hwang Woo-suk to apply to Seoul National University Medical College (see pages 43-44).

help poor rural Korean families. In *My Stories of Life*, Hwang reminisces – “I believed that if my dream came true then my family, my friends, and our neighbors could live a little better. It was a simple idea based in a childlike purity.”<sup>456</sup>

Hwang’s oft repeated resolution to continue conducting research on cows and thereby contribute to the health of Korean farmers was appealing to South Korean city-dwellers, as well. If the unexpected popularity of a documentary film, like *Old Partner (Wonangsoni)*, about an elderly farmer and his ox, can be attributed to mostly middle-aged South Korean city-dwellers who want to (re)connect with a vanishing rural past, reconnect with their parents (perhaps having become parents themselves), and connect – even if only through a precarious voyeurism – with affective forces exceeding narrow self-interested calculations, then Hwang Woo-suk’s narrative would, in all likelihood, resonated in ways which, at least superficially, resembled this documentary film. Hwang’s story also promised an optimistic reconciliation of the past and the present and included a more explicitly optimistic and putatively ethical vision of a national future – a future which promised to contribute to both global human health and humanitarianism.

This narrative connection of a difficult but idealized rural Korean past with a humane-value-affirming and affluent future, clearly contrasts, however, with the

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<sup>456</sup> Hwang Woo-suk, Choe Jae-chon, Kim Byeong-jong (2004:44). 그렇게 되면 가난한 우리 식구도, 내 친구들도, 이웃들도 좀 더 배불리 먹고 살 수 있을 거라는, 그야말로 어린아이다운 순진한 생각의 발로였다.

subtle plot of *Old Partner*, a film in which both a domestic meat market (with prices skyrocketing over safety issues surrounding imported beef) and a larger regional rural livestock market threaten the shared life and values which bind the old farmer and his ox. In the film, the passage of time and the introduction of farming technologies has greatly (if not fundamentally) changed the relationship between the farmer and his work. Hwang Woo-suk's autobiographical narrative, however, conjures up a lost connection to earlier values and times through high tech research. In essence, Hwang Woo-suk promises a biotech or biologically advanced future which differs from previous forms of modernization and development in that this future (re)creates organic wholeness or naturalness – it is the science of human embryonic stem cells growing natural whole human hearts as contrasted with artificial pace-makers and iron-lung machines.

In *My Stories of Life*, Hwang invokes something resembling sympathetic magic to highlight his reportedly nature-based approach to science and research. After reminiscing about his own nature-rich childhood, Hwang observes, “People, who grow up in a natural environment, resemble nature. People, who grow up in an apartment complex, resemble apartments.”<sup>457</sup> Hwang suggests that South Korea's rapid industrialization and vanishing natural environment has impoverished the

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<sup>457</sup> Hwang Woo-suk, Choe Jae-chon, Kim Byeong-jong (2004:45). 자연을 보고 자란 사람은 자연을 닮는다. 아파트촌에서 자란 사람은 아파트를 닮는다. 우리 사회가 급속도로 산업화되고, 자연이 피폐해지는만큼 사람들의 마음도 삭막해지는 것을 실감한다.

nation's hearts and minds. He suggests, however, that biotechnology will facilitate a return to a more humane landscape; Hwang insists that both he and his research team work with true sincerity like the old-time Korean farmers of bygone days.

In fact, Hwang Woo-suk even likens his laboratory researchers' more technical labors and their humble acceptance of their experimental results as similar to those of a farmer. In *My Stories of Life*, Hwang Woo-suk writes:

**Regardless of whether they are rich or poor, those who have worked in my laboratory for a number of years, develop a mind like that of a farmer. This is because, our researchers who labor over (scientific) experiments reap what they have sown - just like a farmer who tills the soil. .... (P)erhaps, my researchers attain a higher moral or spiritual level (because they are working in my laboratory) with the earnest sincerity of a farmer. Experienced researchers work hard and then wait for their results. It is like famers who toil in the fields and are satisfied just waiting for the harvest.<sup>458</sup>**

Hwang's description of his stem cell researchers and laboratory technicians as "developing a mind like that of a farmer" rhetorically connects middle-aged South Korean's nostalgia for their childhood and/or a rural agrarian life with the highly speculative work of state-sponsored biocapitalism. Furthermore, the laboratory labor, which Hwang invokes above, is marked as a morally transformative experience. In

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<sup>458</sup> Hwang Woo-suk, Choe Jae-chon, Kim Byeong-jong (2004:141). 부자든 가난한 사람이든 일단 실험실에 들어와 몇 년 지나고 나면 농부의 마음을 닮아간다. 땅과 마찬가지로 우리가 하는 실험도 우리가 하는 만큼 그대로 결과가 나타나기 때문이다. ... 어쩌면 농부처럼 성실하게 일하는 과정에 도의 경지가 놓아진 것인지도 모른다. 고참들은 대부분 열심히 일하고 그 결과를 기다리는 것으로 끝이다. 농부가 땀 흘려 일하고 추수를 기다리듯이 그것으로 족한 것이다.

this scenario, Hwang's researchers become earnest and sincere while they are working in Hwang's laboratories and their work is also transforming the world.

Hwang Woo-suk's description of the transformative powers of stem cell work resonates deeply with Korean understandings of Buddhist practice and self-cultivation. The nostalgic idea of a peaceful and comfortable return to a simple and natural agrarian life and agrarian values also appealed to many of South Korea's aging urbanities. Such fanciful ideas are usually easier to imagine than act on. In fact, in twenty-first century South Korea, a highly urbanized population more easily and more frequently participates in the dream of self-transformation, health, and future "agrarian values" as consumers. And Hwang Woo-suk's scientific work promises to appeal more immediately to South Korean consumers as well.

In addition to rhetoric reconciling Korea's export-driven increasingly post-industrial urban-based economy with nostalgic "home-grown" rural values, Hwang promises his research will also bring greater pleasure at lower costs to the South Korean consumer. Namely, Hwang's reportedly cloned Korean cow - along with the promise of a genetically-modified herds - potentially offers a palatable higher quality domestic beef to Korean consumers. Whetting the appetites of consumers and facilitating public participation and involvement in "science" helped Hwang connect more powerfully with politicians and science policy decision makers. Thus with largely symbolic but nonetheless decidedly "high-tech" solutions for various economic, social

and even gastronomical concerns, Hwang quickly became a recognized figure. Three months after Hwang Woo-suk's successful Korean cow cloning was announced, Hwang was appointed to the National Science and Technology Council (NSTC) where he would serve as part of this important decision making body for four years.<sup>459</sup>

### National Cultural Capital – Hwang's Mother and the “Ox-like” Person

In *My Stories of Life*, Hwang Woo-suk reminds readers of the common-sensical truth in the touching phrase - “cows sacrifice everything for humanity”<sup>460</sup> - a well-known expression in Korean Buddhist circles and beyond. Written not long after the publication of *My Stories of Life*, a Korean Buddhist publication asserts that “Zen (*Seon* 禪) Buddhism is particularly close with cows.”<sup>461</sup> The author explains, that while the elephant and the lion are important symbolic animals in the South Asian Buddhist tradition, the cow or ox are a more familiar creature in the teachings of East Asian Zen – especially as illustrated in the iconic Zen Buddhist *Ten Ox-herding Pictures* (*Shim-u-do*, 尋牛圖). Indeed, *Ten Ox-herding Picture* paintings adorn the walls of many

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<sup>459</sup> See Kim, Geun Bae (2007) for an in-depth account of Hwang's more political activities and committee positions. (The NSTC is the 國家科學技術委員會). Hwang was also appointed by then President Kim Dae-jung to a Presidential Advisory Council on Science and Technology (國家科學技術諮問會) in June 2001.

<sup>460</sup> Hwang Woo-suk, Choe Jae-chon, Kim Byeong-jong (2004:43). For example, Hwang writes - 소는 인간을 위해 모든 것을 희생한다. 살은 고기로 먹히고, 뼈는 곰탕이 되고, 가죽은 가방이나 신발이 되고, 똥은 거름이 된다. 지방은 기름이 되어 그 옛날 시골 사람들의 밤을 밝혔다. 단 한 가지도 버려지는 게 없는 것이다. Or see Hwang Woo-suk, Choe Jae-chon, Kim Byeong-jong (2004:64-65), where Hwang writes - 소는 인간을 위해 자신의 모든 것을 희생하는, 가슴 아픈, 그러나 아름다운 존재였다.

<sup>461</sup> Staff (December 24, 2004). 선불교(禪佛敎)는 유달리 소(牛)와 가깝다.

Buddhist temples in South Korea and, as the author of Buddhist publication reminds his readers, Hwang pledged to live his life in the company of cows who are, for Hwang, “a friend and a dream.”<sup>462</sup>

Both this Buddhist publication and *My Stories of Life* attest, repeatedly, that Hwang’s scientific life is characterized by his steady and unyielding “cow-like” tenacity. It is this “cow-like” trait which keeps the youthful Hwang from giving up hope early on and promises to lead Hwang’s embryonic stem cell research team forward to an eventual, if always hard-won, success. The Buddhist article reports - “They (Hwang and his research team) possess the determination and persistence of a cow that silently (without complaint) ploughs forward and will place South Korea in the ranks of advanced bioengineering nations.”<sup>463</sup> Like the cow that sacrifices everything for humanity, Hwang Woo-suk is described as determined to continue on with his back-breaking scientific work for the good of the nation and all of human-kind. Such “cow-like” virtues and an untiring work-ethic were frequently invoked, with self-effacing humor, by Hwang himself and this and similar narratives were widely reported in the South Korean press. In particular, perseverance, self-sacrifice and consistency are highlighted in accounts which describe Hwang and his laboratory team’s scientific work.

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<sup>462</sup> *Ibid.* 세계최초로 인간복제 배아를 이용한 줄기세포 추출에 성공한 황우석(서울대) 교수에게 소는 친구며 꿈이다.

<sup>463</sup> *Ibid.* 소처럼 제 할일을 묵묵히 해내는 그 강직함과 우직함이 한국을 생명공학 분야 선진국 반열에 올려 놓았다.

In the South Korean news media and especially in Korean Buddhist affiliated mass media, Hwang Woo-suk's honest and hardworking ways are frequently attributed to the influence of his equally if not more hardworking mother. For example, on a Buddhist Broadcasting (BBS) interview program, "People and Life" (*Saram gwa Saenghwal*), the interviewer Jo Munbae asks Hwang about great influence of his mother:

**Jo Munbae:** I've heard that your mother had a great influence on your development. What kind of influence did she have?

**Hwang Woo Suk:** My mother greatly influenced my development. I think this is a common feeling for people who are a similar age as myself and grew up in the countryside. My mother lost her husband early on and raised 6 children all by herself. My mother couldn't change my family's circumstances but she raised us with the utmost care and sincerity. While young, I saw my mother's actions and caring attitude and I decided that I should live that way as well'.... My mother's unhurried, even-tempered, and self-controlled way of life had a big impact on me. I learned how I should work by watching my mother.<sup>464</sup>

In this and other interviews, as well as in his autobiographical *My Stories of Life* essay, Hwang describes his widowed and hardworking mother as someone who would "sacrifice anything for her six children." A willingness to sacrifice oneself and anything for one's children has been an oft-invoked characterization of Korean

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<sup>464</sup> No, Byeong-cheol (January 6, 2005). 조문배 - 황 교수님의 성장과정에 어머니가 많은 영향을 끼쳤다고 들었습니다. 어떤 영향을 미쳤습니까? 황우석- 나와 비슷한 연령 대이고 시골에서 자란 사람들에게는 공통적인 감정이 아닐까 싶은데, 어머니는 나의 성장과정에 큰 영향을 미쳤다. 나의 어머니도 일찍 남편과 사별하고 6 남매를 홀로 키우셨다. 가정형편이 여의치 못했지만 어머니는 우리 형제들을 지극 정성으로 키우셨다. 어머니가 보여주신 이 같은 자세는 자라면서 "나도 저런 삶을 살아야겠다는 무언의 교육이 됐다"고 생각한다.... 특히 늘 서두르지 않고, 자신을 절제 할 줄 아셨던 어머니의 삶의 자세는 내게 큰 영향을 주었다. 이를 통해 어떤 자세로 일을 해야한다는 것을 깨달을 수 있었다.

motherhood and, in broad terms, this sentimentalized discourse can be explained, in part, by Margery Wolf's understanding of the "uterine family" – that is the mother and her children – in Confucian-inflected Taiwanese kinship systems<sup>465</sup> which the feminist anthropologist, Cho (Han) Hae-jong, has usefully employed in studying gender and family in the South Korean context. The impoverished, abandoned, or otherwise widowed mother who works tirelessly to feed and care for her children, is also a recognizable theme of colonial Korean literature and life. This image of an impoverished, self-sacrificing, and hard-working woman with young or school-aged children lived on throughout South Korea's developmentalist and military dictatorships when adult men and other paternal family figures were either unjustly imprisoned, on the run, laboring in foreign lands, unable to find employment because of suspected or familial communist affiliations, or simply irresponsible or drunk. Hwang Woo-suk's father reportedly died soon after the Korean War but, regardless of these specific details, Hwang is invoking a well-known image or understanding of Korean motherhood which is shared by those of his - as well as earlier and later - generations. As Hwang explained in the BBS interview above – "...this is a common feeling for people who are a similar age as myself and grew up in the countryside."

In *My Stories of Life*, Hwang Woo-suk repeatedly attributes his untiring "cow-like" work ethic as a valuable gift he acquired while watching his mother and learning

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<sup>465</sup> Wolf, Margery (1972).

from her tenacious but even-tempered and sincere ways. Even more than his early childhood bonds with his bovine friends, Hwang describes his relationship with his mother as defining his character and present-day research goals. In *My Stories of Life*, Hwang recalls:

**I don't ever remember seeing my mother express anger even though she encountered many setbacks and endured much hardship - like an ascetic (*gohaengja*, 苦行者). She would simply smile softly when she was very happy. I never saw my mother lie down or take a rest either. She had to move quickly and walk swiftly to keep her children fed. In spite of all this, my mother never showed or expressed her exhaustion. She worked and silently shouldered the burdens of our family's pain and sorrow with a firm but serene face like a Bodhisattva. My mother truly resembled an ox. She was a sad and honest ox who sacrificed everything for her family without complaint or unnecessary conversation.<sup>466</sup>**

Hwang concludes that the greatest gift he received from his self-sacrificing mother is his own “cow-like” tactlessly honest consistency which is expressed in his sure-footed and tirelessly forward motion, his strong “unembellished” style, and his never-ending efforts.<sup>467</sup> Similar tributes to Hwang's mother and her significant influence on Hwang

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<sup>466</sup> Hwang Woo-suk, Choe Jae-chon, Kim Byeong-jong (2004:51). 고행자처럼 세상의 온갖 시련을 겪어온 분이지만 나는 어머니가 화내는 모습을 본 기억이 없다. 소리 내어 웃는 모습도 본 적이 없다. 아주 좋으면 빙그레 미소를 지으시는 정도였다. 어머니가 편하게 방바닥에 몸을 누이고 쉬는 모습도 나는 보지 못했다. 자식들 입에 뭐라도 넣어주려면 늘 종종걸음으로 바삐 뛰어다녀야 했다. 그래도 어머니는 힘든 내색 한번 없이 담담한 표정으로 보살이라도 되는 양 우리 가족의 슬픔과 고통을 고스란히 짊어지고 묵묵히 일했다. 내 어머니는 정말 소와 닮으셨다. 자식을 위해 모든 것을 희생하는, 그러면서도 쓰다 달다 군소리 한번 하지 않는 우직하고 슬픈 소.

<sup>467</sup> Hwang et al (2004:54). 또 하나, 내가 어머니에게 받은 큰 선물은 소 같은 우직함이다. 앞뒤재지 않고 당장 눈앞에 잇속 같은 것 따지지 않고, 어머니는 평생 성실히 일하셨다. 하루도 쉬는 날이 없었다. 별이 총총한 새벽부터 달이 밝은 한밤중까지 우리를 위해 지칠 줄 모르는 소처럼 일하던 어머니를 고소란히 보고 배웠는지 나도 일이라면 누구에게 지지 않으려고 노력한다. Hwang also suggests the true source of his success

Woo-suk's scientific successes can be found in the numerous books which relay Hwang's story to the South Korean public.

Not without humor, Hwang Woo-suk describes the more recent developments in his relationship with his, now elderly, mother. He confesses that he telephones his mother every night despite his frequent trips abroad and paints a picture of his mother's unrelenting concern, and his own deep gratitude and filial piety in *My Stories of Life*. By comically narrating his continued devotion to his mother, Hwang sentimentalized generational difference – a move which undoubtedly resonates with many middle-aged persons. Despite this touch of sentimental affect and playful humor, it is, nonetheless, quite clear that Hwang's moving tribute to his hardworking mother serves as a vehicle for drawing attention to and recognizing the sacrifices of the many, now-elderly South Korea women. Thus, by implication, Hwang Woo-suk also expresses his warmth and an almost empathic connection with other middle-aged Korean parents who read *My Stories of Life* or learn about Hwang's narrative through other publications, news reports, or neighborhood talk. Hwang, thus, fluently renders his own and his researches link with Korea's difficult past, as well as his continued commitment to the nation's future eventhough his “scientific successes” require much

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can be found in his mother's sweat and tears. (그러니 오늘날 나의 자세는 오롯이 어머니의 땀과 눈물에서 비롯된 것이 아닌가 싶다.)

international travel and his tireless participation in various international scientific conferences – a clear sign of South Korean progress.<sup>468</sup>

### **Making Buddhism and Buddhist Women Modern**

It is an accepted axiom, of sorts, to begin with the observation that Buddhism in Korea was sustained in large part by women devotees (as well as women's various gifts and donations) during the long decades (or even centuries) prior to the introduction of modernity. A high percentage of the people who regularly visit South Korean temples today are laywomen as well. In particular, middle-aged or older married women are often the mainstay of Korean temple lay populations – these married women mediate family and other household and neighborhood relations as well as sundry local affective affiliations and economic obligations both directly and indirectly at Buddhist temples and other Buddhist associated spaces. To varying degrees, Buddhist nuns and monks play important intermediary roles in the making of married Buddhist women's associations but, most of the time, Buddhist laymen are almost entirely absent during daytime weekday Buddhist gatherings and services. This Confucian-inflected gender and age dependent religio-social dynamic is shaped by the rhythms of daily life in combination with the general gendered divisions of labor in South Korean society. In the large urban Buddhist Center where I conducted much of

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<sup>468</sup> See Hwang Woo-suk, Choe Jae-chon, Kim Byeong-jong (2004:52). Physical separation or "exile" from the Korean peninsula carries certain complex historical associations. Furthermore, travel aboard – particularly recreational travel – has not infrequently been viewed as a wasteful luxury.

my fieldwork, one layman (*geo-sa*, 居士) and one laywoman (*bosal*, 菩薩) were chosen to serve as the Presidents of the Center's Laypersons Assembly. And while these two positions – that is the “female lay president” and the “male lay president” - formally mirrored each other across a gendered divide, in practice the laywoman president was at the Buddhist Center nearly every day from morning to night busy organizing and helping the community while the layman president would usually only be visible during certain official ceremonial occasions and was considered, by the laywomen at least, as mostly just a figurehead. This gendered division of the laypersons assembly leadership labor is a useful, if somewhat stereotypical, indicator of how many Korean Buddhist lay communities organize and sustain their everyday activities.

The preponderance of women – particularly middle-aged married laywomen - in lay life has spawned the somewhat derogatory but descriptive term, “Skirt Buddhism” (*chima bulgyo*, 치마佛教) as well as the more elevated appellation of “Bodhisattva Buddhism” (*bosal bulgyo*, 菩薩佛教)<sup>469</sup> to characterize Korean Buddhism and Buddhist activities in general. Although women now comprise more than half of all university graduates in South Korea today, previously women were less-likely to receive a formal education than their brothers. Moreover, the Korean War and poverty interrupted the education of many, now older, South Koreans and prior to

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<sup>469</sup> Bodhisattva (*bo-sal*, 菩薩) being a word commonly used to summon, or simply refer to, a married laywoman in Korean Buddhist circles today. See the Introduction, page five, of this dissertation for an explanatory example.

the nineteen eighties international travel and experience was a rare luxury. Cho (Han) Hae-jong and Moon Seungsook<sup>470</sup> among others describe South Korea during the nation's rapid Cold War Era industrialization as highly militarized and masculinized; public space and activities are characterized as having a decidedly androcentric feel. In such times, women's activities were more spatially circumscribed and more "feminized" realm of household and family concerns found expression in women's religious affiliations and activities, in a way which was not complete dissimilar from the gendered division of (religious) labor in earlier more Confucianized times.<sup>471</sup> Thus, women's religious practices and activities have, at times and even including the present, often been dedicated to family and household health.

This focus and married Korean women's more active participation in Buddhist communities has, among other things, made women a more visible target for modernizing "anti-superstition" reform movements. In the Korean Buddhist context, "modernizing" religious reform discourse – from Han Yong-un's famous early twentieth century treatise to more recent twenty-first century Buddhist media campaigns - have focused on altering religious gestures, practices, thoughts, beliefs, and language which positions power outside of a human individuals own thoughts and actions.<sup>472</sup> More specifically, religious practices described as "praying-for-

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<sup>470</sup> Cho (Han) Haejong (2000:49-69). Moon Seungsook (2005).

<sup>471</sup> See, for example Walraven (1999).

<sup>472</sup> This emphasis on an individuals own thoughts and actions also frequently encourages personal "sincerity" which resonates with Webb Keane (2007) work on Christian missionary discourse in Indonesia.

(good)fortune faith” (*gibok sin-ang*, 祈福信仰) has been criticized and denounced by many as bad or seriously misdirected activity. In 2001, for example, criticism of “Praying-for-fortune Buddhism” (*gibok bulgyo*, 祈福佛教) attracted attention when a scholarly but widely read Buddhist journal, *The Buddhist Review* (*Bulgyo Pyeongnon*, 佛教評論) published a special collection on the topic. The question was raised whether “Praying-for-fortune Buddhism” could actually be considered a genuine or true Buddhist activity. This prompted the Buddhist newspaper – *Dharma Treasure Newspaper* (*Beop-bo Sinmun*, 法寶新聞) – to respond, partly in defense of its own previously published news reports which could be seen as encouraging “praying-for-fortune”.

As seen in this 2001 media event and subsequent Buddhist community debates, pointed public criticism of “praying-for-fortune Buddhism” puts many within Korean Buddhist circles in an uncomfortable position. Buddhist temples and Korean Buddhism, in general, has long relied on the activities and donations of Buddhist women. These women’s activities, however, can be easily construed and criticized as being misdirected and wrong. As a “traditional” Korean religion, Buddhism has been more associated with “backwardness” and “superstition” than Protestant Christianity which brought modern medical missionaries to Korea and promised greater mobility for South Koreans through Christian religious programs and educational affiliations with U.S. colleges and universities during the Cold War. Moreover, Buddhist leaders

who sought to “correct” lay Buddhists or stop “praying-for-fortune” practices could encourage middle-aged laywomen (particularly women who were concerned about the fates of their family members) to seek out Korean shamans, many of whom had already adopted Buddhist gods and symbols into their pantheons. Thus, the problem of reconciling certain Korean Buddhist practices to fit with modern visions of a self-made-man could be a sticky one for some Korean Buddhist elites as well as for less formally educated laypersons and ordained.

### **Buddhism and Women as a Scientific (re)Source**

When the Korean Research Center for the Education of Fetuses *in utero* (*Hanguk Taegyo Yeongu-so*, 韓國胎教研究所) held its inaugural ceremony on February 2002 in Seoul, Hwang Woo-suk attended the celebrations. Abbot of Pagye Temple and Chairman of the Research Center’s Board of Directors, Venerable Seong-u, along with other Buddhist leaders and journalists dedicated the new Center to educating the public about the proper and effective methods of care and education for prenatal fetuses. Plans for developing local regional groups, tentatively dubbed - “Associations for Meditation and the Cultivation of Fetal Education” (*Myeong-sang Taegyo Suryoen Hoe*, 冥想胎教修鍊會) – as well as distributing information and advice through a robust online presence were announced.<sup>473</sup>

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<sup>473</sup> Yeo Taedong (February 15, 2002).

*In utero* education, or *taegyo* (胎教), has reportedly had a long history in Korea and Buddhist ordained have been known to advise laity on its importance and proper techniques – particularly in recent times.<sup>474</sup> Don Baker has shown how Buddhism in Korea, even since its introduction, has been associated with new healing practices and medicinal arts and technologies.<sup>475</sup> Hwang Woo-suk, himself, is said to have returned to health with the help of Buddhism after a nearly fatal illness. In *My Stories of Life*, Hwang reports that this experience moved him to resolve to visit the Buddha at least once a month, as well as deepened his sense of gratitude and desire to help others. The story of Hwang’s bout with illness and his recovery also resonates with various folk healing narratives in which part of a traditional medicine specialist’s healing powers are founded in their own personal struggle with sickness and disease. Such tales may also resonate with Protestant Christian stories of conversion and being reborn or born-again.

Drawing on these and other narratives, Hwang Woo-suk became a recognizable public figure in South Korean Buddhist communities. His participation in a Buddhist-affiliated fetal education events (like the one described above), his monthly temple visits and personal conversations and connections with Buddhist monks and other Buddhist leaders, as well as his energetic, well-publicized, and easy-to-follow lectures explaining his scientific projects (including his embryonic stem cell

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<sup>474</sup> See Chong Go Sunim (2007: 144).

<sup>475</sup> See Baker (1994).

work) before Buddhist audiences made him an exciting and charismatic figure. Moreover, on many occasions, - like, for example, the in-studio audience assembled for the taping of Hwang's Special Lecture on "Life Cloning Technology and Buddhism" for the Buddhist TV Network<sup>476</sup> - Hwang spoke to a live-audience composed, almost entirely, of South Korean Buddhist Laywomen. This and other non-Buddhist affiliated public performances, suggest that Hwang Woo-suk's media presence lay somewhere between, or perhaps even melded, several contemporary and influential national media-relations affective types, like Korean wave or *Hallyu* "fandom" with earlier more melodramatic themes linking morality and social mobility, a home-grown expert competing for the nation in the international arena (seen in 2002 World Cup and other sports competitions), a self-sacrificing scientist, a team leader and father-figure providing for his family<sup>477</sup>, and a humanitarian engaged in healing work. Regardless, by entering into various Buddhist associations - usually through ties to senior monks and the Buddhist media - Hwang Woo-suk and his "effortful" biotech endeavors became connected with a national Buddhist circuit - a circuit of religious publicity and promise which resonated with certain, often highly gendered (and familial), exchange practices.

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<sup>476</sup> See page 46 in the Introduction, above, for more details about Hwang's "Life Cloning Technology and Buddhism" (*Saengmyeong Bokje gwa Bulgyo*, 生命複製과 佛教) performance.

<sup>477</sup> See Cheon (235:400) who speaks of this somewhat "presidential" image as - "먹여 살릴 능력있고 강력한 '아버지' 같은 인물".

Perceptions of Hwang Woo-suk and his research among South Korean women, in general, became particularly important when ethical questions were raised about the acquisition of human egg supplies needed for cloning and the eventual production of “patient-matching” human embryonic stem cells. While some Korean feminist groups had expressed their objections to Hwang’s research early on, their opposition was not shared by the vast majority of South Korean women. In fact, awareness of the contentious egg donation issues surrounding the Hwang team’s human embryonic research only became wide-spread after a science reporter for *Nature* (a U.K. based science journal) reported his suspicions that international research guidelines had been violated. The allegations that female members of Hwang’s research team had donated their own eggs for Hwang’s project (and thus violated the Helsinki guidelines for ethical research), provoked various responses but the South Korean public – and particularly South Korean Buddhists – mobilized to protect and defend Hwang Woo-suk and his research.

Hwang, himself, was quick to publically explain and defend his research protocols. In fact, a section in Hwang’s autobiographical essay in *My Stories of Life* is devoted to recontextualizing and thus explaining the *Nature* news reporter’s suspicions of ethical violations. In this section - dubbed “Misunderstandings about Egg Donations (*nanja gi-jung-e daehan obae*)” – Hwang attributes the “misunderstanding” to English-language communication difficulties and stereotypical assumptions made

about Korean culture.<sup>478</sup> In the next section, titled “Beautiful People (*A-leumda-un Salamdeul*)”, Hwang relates stories about people who desperately want to donate their eggs to Hwang’s team and thus contribute to his potentially life-saving research. He says family members of disabled persons beg his researchers and doctors to extract and use their eggs in Hwang’s research. Hwang describes receiving emails from women who want to donate their eggs after hearing a lecture about his stem cell research. Hwang also writes that medical doctors who work with severely ill or paralyzed patients not infrequently want to donate their own eggs. He emphasizes the notion that it is easy to understand that a mother with a sick or dying child would want to donate her eggs.<sup>479</sup> Later, in a newspaper article published not long after the allegations of ethical misconduct surfaced, Hwang is quoted as saying - “If I were a woman, I would definitely donate my eggs to scientific research without hesitation.”<sup>480</sup>

News articles and blogs (in both Korean and English) began carrying interviews in which Hwang Woo-suk reports he has received many emails from women around the world who want to donate their eggs.<sup>481</sup> Hwang also reports that he cannot reveal the names of his would-be-donors to protect their privacy. South Korean Buddhist newspapers report that Buddhist women and others had organized to donate their eggs to support Hwang’s stem cell research. Kim I-hyeon, a forty

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<sup>478</sup> Hwang Woo-suk, Choe Jae-chon, Kim Byeong-jong (2004:110-112).

<sup>479</sup> Hwang Woo-suk, Choe Jae-chon, Kim Byeong-jong (2004:113-115).

<sup>480</sup> Kim Tae-gyu (June 5, 2004).

<sup>481</sup> See - Nam, Dorothy (June 3, 2004) for an example.

seven year old Buddhist laywoman who - with her two daughters in their twenties - attended a meeting to help organize and support egg donation for research, is quoted by the *Dharma Treasure Newspaper* as encouraging the Buddhist community to support Hwang Woo-suk.<sup>482</sup> Kim challenges others – especially Buddhist women – to unite and remember Venerable Beopjang (once head of the Jogye Buddhist Order) who even pledged to donate his entire body (posthumously) to science.<sup>483</sup>

Like this, various egg donation pledge drives and events were organized by Korean women - many of them Buddhist – to help support Hwang’s research. Groups like the “Association for Egg-donor’s assisting Hwang Woo-suk’s Research” (*Hwang Woo-suk Yeongu Jiji Nanja Gijeung-ja Mo-im*) employed Buddhist notions of *dana* (*bosi* 布施) when encouraging women to donate their eggs to research and used “traditional” Korean national symbols (like the rose of Sharon or *mugunghwa* 無窮花) to symbolize and express their support for Hwang. Thus, women who pledged to donate their eggs, performed their support for Hwang as a “gift of their bodies” (eggs) not unlike the self-sacrificing mother(s) to whom Hwang Woo-suk has dedicated his work. This mirroring narrative of self-sacrificing qualities draws heavily on Korean discourses of the humble and hardworking mother and “traditional” (often Buddhist)

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<sup>482</sup> Kim Hyeontae (November 28, 2005). “난치병 환자들의 치료를 위해 애쓰고 계신 황우석 박사님께 작은 도움이나마 드리고 싶은 마음에 난자기증에 동참하게 되었습니다. 불자로서 보시를 통한 생명나눔의 실천은 당연한 사명이 아닐까요.”

<sup>483</sup> *Ibid.* “마지막 회향의 순간까지도 모든 것을 보시하고 떠나신 법장 스님을 다시 한번 생각하며 여성 불자들의 힘을 하나로 모을 때”라고 덧붙였다.”

women's household and kinship strategies. In fact, the eggs used for the Hwang team's human embryonic cloning experiments<sup>484</sup> were part of another system or reproductive economy of kinship-creating, strategies, and desires that is South Korea's flourishing IVF industry. It was mostly this medical industry which supplied the human eggs needed for Hwang's human embryonic stem cell research programs.<sup>485</sup>

Hwang Woo-suk's relationship with Korean Buddhist leaders and the Korean Buddhist community proved useful in mobilizing support for his human embryonic stem cell research both internationally and domestically. South Korean Buddhism, as well, was able to draw attention to its "Korean roots and values" while at the same time staking a claim to be an equally if not more "modern" and "scientific" religion than Christianity. Hwang's work was both magical and scientific – Hwang's own personal autobiographical narrative combined sentimentalized "traditional" agrarian values with hope for South Korea's increasingly "internationalized" (post-IMF Crisis) economy. Moreover, Hwang's gratitude towards and relationship with his mother appealed to middle-aged parents particularly women. When questions arose about the ethics of egg donation procedures, Buddhist women proved particularly useful in organizing support for Hwang's around Buddhist activities of "(alms) giving" or *dana*.

Thus in many ways, Hwang Woo-suk's relationship with Buddhism and Buddhism's

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<sup>484</sup> Hwang's 2004 Science paper reportedly used 242 eggs from 16 women to produce one stem cell line. In the 2005 Science paper 185 eggs from 121 women were said to have produced 11 stem cell lines. In fact, a later Seoul National University Investigation estimates that a total of 2,061 eggs were used while the Korean Prosecutor Office believes at least 2,236 eggs were used. Kim Gyoung Rae (2010:179).

<sup>485</sup> South Korea's current "population crisis" has played a large role in the framing of Bio-ethical debates. For an articulate discussion of this see Paik (2009). For a feminist analysis of the Hwang scandal, see Leem and Park (2008).

relationship with Hwang and his stem cell research proved to be, at least initially, a useful exchange.

## Chapter 5

### A Buddhist “Soteriology” of Stem Cell Science: Cultivating Originary Technologies and Verifying Virtues

A world which strives to create cloned people  
is exactly the kind of ideal place envisioned by the Buddhas.  
Venerable Cheong-ah, abbot of Ja-gwang Temple<sup>486</sup>

In the same way that Buddhism’s concept of transmigration grounds my research philosophy, the more science develops the more scientists can prove the truth of Buddhism. And this will be a great help to all of humanity.  
Professor Hwang Woo-suk<sup>487</sup>

Professor Hwang, the scientist... He is a pioneer serving humanity. He is the Medicine King Bodhisattva. He is a manifestation of the Medicine Bodhisattva.  
Venerable Jejeong<sup>488</sup>

Our researchers had an almost Zen-like sense of concentration; they could sit for 10 hours in one spot and carefully manipulate the eggs. It was almost like meditation.  
Dr. Moon Shin Yong<sup>489</sup> senior researcher on Hwang’s Team

Go beyond the boundaries (limits) of science and ethics  
and open up the world of unrestrained truth!  
Netizen posting on *Modern Buddhism*<sup>490</sup>

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<sup>486</sup> 복제인간들이 이루어가는 세상은 바로 불교에서 지향하는 인류의 모습.

<sup>487</sup> Quoted in Lee, Gyeong Suk (February 22, 2004).

<sup>488</sup> Jejeong (December 14, 2005).

<sup>489</sup> Quoted in Dreifus (February 17, 2004).

<sup>490</sup> Yu, Cheol Ju (December 2, 2005).

## The “Essence” of the Hwang Incident

In early 2006, a Buddhist monk well known in South Korea for his social and environmental activism, Venerable Dobeop, took time out from his two year “Walk for Bio-peace” around the Korean peninsula, to speak to reporters. Only then did this well-known and active monk agree to speak publicly about the ‘Hwang Woo-suk Incident.’ In voicing his views on the ongoing scandal, the monk posed a simple rhetorical question which, I believe, remains something of an unanswered question even now as the ten year anniversary of the “Hwang Scandal” approaches. But back in 2006, Venerable Dobeop posed the question: “What is the “essence” or “real nature” (*bonjil*本質) of the Hwang Woo-suk Incident which made all (Korean) citizens laugh and then cry – buoyed us up with dreams and then tossed us over the cliff of despair?”<sup>491</sup> His answer, as recorded by reporters in Seoul’s Yangjae dong neighborhood, drew on the longstanding Buddhist diagnostic identification of the source of all illness and suffering of sentient beings everywhere. That is, the monk identified the “essence” of the South Korean science scandal as stemming from “Ignorance about the truth of existence.”<sup>492</sup>

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<sup>491</sup> Ha, Jeong-eun (January 17, 2006).

<sup>492</sup> *Ibid.* 質- “온 국민을 웃게 해주다 울게 하고 꿈에 부풀게 했다가 절망의 나락에 떨어트린 황우석 사태의 본질은 무엇인가”. 答 - “존재 실상에 대한 무지요.”

Other, more specific, diagnostic details of the common citizens' stem cell related afflictions (dubbed the *Hwang Syndrome* in the South Korean press) were given by the monk as well. For example, "First-place-ism" (*il-deungju-ui* 一等主義), the "worship of wealth" (*bujaju-ui* 富者主義), and, of course, the truth-obscuring "mistaken fantasy or delusion" (*jeondo-mangsang* 顛倒妄想) that the popular *Heart Sutra* (*banyasimgyeong* 般若心經) warns of as well.<sup>493</sup> But perhaps the most targeted and thus stinging accusation that Venerable Dobeop voiced was aimed, directly at the Korean Buddhist community. The activist monk reasoned that the Korean Buddhist Community had become so stuck in a 'victim mentality' after being oppressed for 500 years during the Joseon Dynasty (1392-1910) and so immersed in a sense of crisis with the rapid growth of Christianity during the Cold War, that Korean Buddhists all too desperately hoped to gain some sense of self-esteem through the charismatic figure of Hwang Woo-suk, the scientist. Moreover, Ven. Dobeop lamented that Buddhist circles had become far too deluded to quickly awaken from its enticing stem cell dreams.<sup>494</sup>

Not long after Venerable Dobeop's remarks were publicized, another ordained and serious cultivator of the Buddhist path - a monk who had worked together with Venerable Dobeop in various Buddhist environmental movements and even, just a

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<sup>493</sup> Ven. Dobeop quotes the - 遠離顛倒夢想 究竟涅槃 - passage from the *Heart Sutra*.

<sup>494</sup> Yeongwan (February 11, 2006).

few years prior (in 2001) joined Dobeop in a twenty one day fast for peace – chided his peer and friend of forty years, in an open letter. Published in the *Buddhist Newspaper*, Yeongwan’s open letter objects to Venerable Dobeop’s assumption that the Buddhist community is wrong in supporting Hwang Woo-suk. “Why is it wrong for Buddhists to be proud of Buddhists?” Yeongawn asks. Why is it wrong to be proud of a scientist, like Hwang, who is, himself, proud of being a Buddhist and willing to express it?

In his letter, Venerable Yeongwan observes that Dobeop’s opinions and statements have appeared in several of South Korea’s large daily newspapers (like the *Hankyore Newspaper* and *Kyeong Hyang Newspaper*). Thus, as if to encourage Dobeop to engage in some necessary self-reflection along with all with the public self-projection, Yeokwan draws attention to the minuscule but innumerable lives - the insects, worms, and blades of grass - that have been crushed during Dobeop’s “Walk for (so-called) Bio-peace”. Moreover, Yeokwan mentions that some recent photos of the brightly smiling and Bio-peace walking Venerable Dobeop suggest that his “publicity-seeking” friend is more concerned about straightening and whitening his teeth than pondering life’s more important imponderable questions. And to clear up any and all, however improbable, remaining ambiguities, Yeongwan softly but sternly concludes - “Venerable Dobeop, it is time to stop your empty word-games. It is time to stop all

this walking. Please, just be silent. And with your silence, teach other people to be silent, as well.”<sup>495</sup>

It wasn't long before many online Buddhist affiliated web sites were in full uproar and busy bubbling with debates about which of these two monks made more sense. Digital cafes overflowed with speculation about the true intent of Venerable Yeongwan's open letter, and suspicion spread that this particular instance of friendship (*doban* 道伴) among monks - a sort of model spiritual bromance based on the shared aspiration of cultivating the Buddhist Dharma, had, in fact, soured. A few days later, a poet, Lee Wonkyu – who nostalgically confessed to having spent too many hours in the mountains drinking tea with these now feuding protagonists – assured all concerned that Venerable Dobeop and Venerable Yeongwan, who would sometimes joke that they had been married in a former life, would once again boil water together and share a tranquil cup of tea. “Can there be anything more beautiful than this?” the poet asked.<sup>496</sup> As for the lesson to be learned from Dobeop's public remarks on the ‘Hwang Woo-suk Incident’ and Yeongwan's cantankerous reply, Lee wonders out-loud: “I ask myself, am I caught up in the metaphors and intensity of the two monk's words and thus focusing on the finger pointing to the moon rather than searching for the moon, itself?”<sup>497</sup>

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<sup>495</sup> *Ibid.*

<sup>496</sup> Lee, Wongyu (February 18, 2006).

<sup>497</sup> *Ibid.*

The retrospective search for this evasive moon or what Dobeop dubbed, “the essence (*bonjil*本質) of ‘the Hwang Incident’ ”, continues on in this chapter. More than two years after our tea-loving poet, Mr. Lee, pointed to the moon lit the sky awash with Dobeop’s and Yeongwan’s fraternal fireworks, the editorial board of the Korean Buddhist magazine *Engaged Buddhism* devoted over forty pages of their June 2008 issue to a special collection titled - “What is the truth of the Hwang Woo-suk Incident?”<sup>498</sup> Meanwhile, the Busan branch of the *Korean Buddhist Youth Association* (along with the *Bio-sharing Association* Busan’s headquarters) had been busy organizing a seminar about the truth of the Hwang stem cell scandal. And then in February 2009, roughly five years after Hwang announced his initial stem cell success internationally, the South Korean *Buddhist Human Rights Committee* asked Seoul National University to reinstate Hwang to his former professorial post and urged the then President of South Korea (Lee Myung-bak) to give Hwang a chance to resume his research.<sup>499</sup>

The seemingly unending support for Hwang Woo-suk – especially the continued backing of Hwang’s cloned human embryo stem cell research by high-placed leaders of the South Korean Buddhist Sangha(s) – had previously prompted several Korean Buddhist scholars to raise the question of “the truth” of the ‘Hwang Incident’ with the hope that the perspective of certain “pro-Hwang” Buddhist leaders’ as well as many lay Buddhist opinions about the “stem cell scandal” could be better

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<sup>498</sup> Bak, Hui-seop et al (2008:16). (“황우석 사태의 진실은?”)

<sup>499</sup> Eom, Taegy (February 3, 2009).

illuminated. Korea University's Cho Sungtaek, a Professor of Buddhism and Indian Philosophy, and Heo Nam Kyol, a Professor of Ethical Culture at the Buddhist-affiliated Dongguk University, both argued that “the real nature or essence (*bonjil*本質)” of the ‘Hwang Incident’ must first be understood in terms of the “quality of scientific truth” (Heo)<sup>500</sup> or “the truth of (Hwang’s scientific) research” (Cho)<sup>501</sup> instead of other intervening factors.

Needless to say, both Professor Cho Sungtaek and Professor Heo Namkyol were well-informed about South Korean Buddhist debates over the “bioethics” of human embryonic stem cells research and aware of the various South Korean Buddhist responses to the ‘Hwang Incident.’ Throughout most of the ‘Hwang Scandal’, Professor Cho Sungtaek was serving as editor in chief of the *Buddhist Review*<sup>502</sup> - a well-known Buddhist journal which provides informed and in-depth discussions of a variety of Buddhist-related issues and is widely read by educated and interested Buddhist monks, nuns, scholars, and laypersons, alike. Heo Nam Kyol, as a Professor of Ethical Culture at a large Buddhist University, had participated in many meetings of what would become the Jogye Order affiliated *Committee for a Buddhist Bioethics* (*bulgyo-saengmyeong-yulli-jeognip-yeongu-wiwon*佛敎生命倫理定立研究委員會).

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<sup>500</sup> Gang, Yanggu (2006). (황우석박사의 ‘논문조작사건’의 본질은 과학적 진실성과 연구용 난자의 공급을 둘러싼 도덕성문제이지 결코 개인의 성품이나 말솜씨, 그리고 그가 신심 깊은 불자라는 사실에 있는 것이 아니다.)

<sup>501</sup> Cho, Sungtaek (2005).

<sup>502</sup> It seems Professor Cho was the editor in chief from Spring 2003 until the Summer of 2007 and wrote the opening of each issue of *The Buddhist Review* during this time except for the one exception.

Both Cho and Heo had actively participated in an open bioethics conference organized by Buddhist scholars<sup>503</sup> and both men had published their views on Buddhist stem cell related issues previously.

However, in contrast to their previous Buddhist bioethics related engagements<sup>504</sup>, Cho and Heo found themselves<sup>504</sup>, in late 2005 and 2006, attempting to simultaneously explain and rebuke South Korean Buddhist supporters of Hwang and his stem cell research. And although Cho Sungtaek and Heo Nam Kyol approach this unenviable task from somewhat different vantage points,<sup>505</sup> both laymen seek to clarify “scientific” or “objective” truth and, to some degree, re-educate their readers. As seen in Chapter four, Cho Sungtaek, as the editor in chief of *The Buddhist Review*, had previously celebrated Korean Buddhism’s acceptance of human embryonic cloning by attributing this “progressive” stance to Buddhism being “a religion for people” and not “a religion for God.”<sup>506</sup> Cho’s 2004 overly simplistic characterization

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<sup>503</sup> Both Cho Sungtaek and Heo Nam Kyol were, undoubtedly, familiar with the bioethical issues at stake and many of figures influencing Korean Buddhist - especially, the more official level Jogye Order’s - involvement with Hwang Wook and Hwang’s stem cell research. As a professor of ethics, Heo Nam Kyol would be considered an expert in the field and he seems to have been invited to what was the initial meeting (in early July 2004) of what eventually became the Jogye Order’s *Committee for a Buddhist Bioethics*. Heo attended many subsequent meetings and is listed as a co-author of the Bioengineering chapter of the book which the *Committee for a Buddhist Bioethics* eventually published in April 2006, *Modern Society and Buddhist Bioethics*. Both Professor Cho and Professor Heo had previously participated in a *The Korean Society for Buddhist Studies* (佛教學研究會) organized Conference on Buddhism and Bioethics held at Dongguk University in November 2005. At this conference, Cho Sungtaek is reported to have observed that the vast archive of Buddhist sutras could be applied to present-day bioethical questions in a number of various and conflicting ways. Interestingly, Cho expresses his preference for the concept of life being on an increasing or decreasing continuum rather than defined as beginning or starting at a particular point in time when consciousness (情識) forms. See Bak, Ik Sun (November 14, 2005).

<sup>504</sup> Heo, Nam Kyol (2005), Cho, Sungtaek (2004).

<sup>505</sup> This includes simple logistical factors, like timing, as Cho’s short article was published several months prior to Heo’s longer essay.

<sup>506</sup> Cho, Sungtaek (2004:2).

of Christianity and Christian ethics, as well as his optimistic view of Buddhism's enthusiastic embrace of scientific research, would force Cho to re-contextualize his words in 2005.

In the winter 2005 issue of *The Buddhist Review*, Editor-in-Chief Cho expresses consternation at the Korean Buddhist leadership's support of Hwang. As difficult to ignore doubts about Hwang's research data have been raised, Cho modifies his 2004 position and characterizes Buddhism's continued 2005 support for Hwang as "exceedingly strange." He writes:

**... the support and belief that part of the Buddhist community has bestowed upon Prof. Hwang is, beyond a doubt, an exceedingly strange phenomena. I have said 'part of the Buddhist community' but, in fact, if you think about the weight these persons or groups (who support Hwang Woo-suk) carry in the Buddhist community ... you could even say that they represent the whole of Korean Buddhism because these people and groups are at the very center of Korean Buddhism. To this extent, the expression of their opinion is not on the level of an individual opinion but rather becomes representative of the Buddhist community as a whole.<sup>507</sup>**

Clearly, Cho is, with good reason, worried that support for Hwang will be considered (and perhaps even become) the de-facto "official stance" of the Korean Buddhist community.

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<sup>507</sup> Cho, Sungtaek (2005). (이러한 상황에서 불교계 일각에서 황 교수에게 보내고 있는 지지와 믿음은 의아하다 못해 기이한 현상이다. 불교계 일각이라고 표현했지만 그들 인사 혹은 단체들이 한국 불교계에서 차지하고 있는 비중을 생각한다면 그들은 한국 불교계 전체를 대표한다고 해도 좋을 만큼 한국 불교계의 중심에 있는 인사들이며 중요한 단체들이다. 그런 만큼 그들의 의견 표명은 개인적 차원이 아니라 불교계의 입장을 대변하고 있다고 봐야 한다.)

Next, Cho emphasizes embryonic stem cell are not connected to the genuineness (*jinjeongseong* 眞情性) or sincerity of the scientist's thoughts, intentions, or motivations. Cho writes:

**The “essence or real nature” of the “Hwang Incident” is a question of the truth of (Hwang’s) research. This truth is not a question of the authenticity or genuineness of the researcher’s mind but rather an issue which can be illuminated with objective verification ...**<sup>508</sup>

Cho's redirecting of attention from *human subjectivities* (which could draw attention to *epistemological limitations*) to the *ontology of biological (cellular) objects* is similar to an argument Heo Nam Kyol advances in *The Buddhist Review* several months later (March 2006). Not long before the conclusion of the Korean public prosecutor's investigation of Hwang's actions, were announced, Heo emphasized the *primacy* of the so-called “scientific truth” for understanding and judging Hwang's project. Heo argued:

**The primary foundation for our moral judgment is precisely the degree of scientific truth.... It is not founded in the truth of one individual's character or words or whether he (Hwang) is a devout Buddhist or not.**<sup>509</sup>

Thus, both Cho and Heo draw attention away from Hwang Woo-suk's qualities or “faith”, which, they argue, are not “essential” in understanding or judging science. Nonetheless, the conclusive (albeit circuitous) meaning, of both Cho and Heo's

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<sup>508</sup> Cho, Sungtaek (2005). (‘황우석 사태’의 本質은 연구의 진실성 여부다. 그 진실성은 연구자의 심정적 진정성의 문제가 아니라 과학적 사실의 문제이며 객관적인 검증을 통해 밝혀져야 할 문제이다.)

<sup>509</sup> Heo, Nam Kyol (2006). (우리가 도덕적 판단을 뒷받침할 일차적인 근거는 바로 이와같은 과학적 진실성과 연구용 난자의 공급을 둘러싼 도덕성 문제이지 결코 개인의 성품이나 말솜씨, 그리고 그가 신심 깊은 불자라는 사실에 있는 것이 아니다.)

emphatic pointing at the “objective ontological truth of the patient-matching embryonic stem cell” (Hwang’s “moon” so to speak) is ultimately a (deferred) judgment of Hwang’s sincerity and technical skill (which is precisely what Cho and Heo are denying upfront). This is because many Buddhist and other Hwang supporters are not challenging past stem cell ontologies but rather advocating for the continuation of Hwang’s stem cell research.

Cho criticizes what he suggests is a sort-of Korean Buddhist “identity-politics”. “I am concerned,” he writes, “that... the reason for the Buddhist communities ‘unchanging support’ for Professor Hwang, is because he (Hwang) is a Buddhist.”<sup>510</sup> This comment is aimed at Korean Buddhist leaders, in particular, the Head of the Jogye Order, whose unapologetic support for Hwang was well known in Buddhist circles. Later, during an interview on Buddhist radio, the Jogye Order Head asserted, “I am not sympathizing with Dr. Hwang because he is a Buddhist”<sup>511</sup> - as if he were responding directly to this accusation.

Roughly two months after, this Buddhist radio interview and three months after Cho Sungtaek’s editorial essay was published, Heo Nam Kyol aired his suspicions that the Buddhists supporting Hwang were not just confused by Buddhist

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<sup>510</sup> Cho, Sungtaek (2005). I am including a fuller citation of Cho’s essay to provide some additional contextualization: “...support for scientific research must not be confused with support for one particular researcher. Despite this warning, recently, it seems the Buddhist community has been almost entirely supporting one individual, Prof. Hwang, instead of supporting scientific research (as a whole).... And I am concerned that - although I may just be worrying unduly for nothing, but - behind the Buddhist community’s ‘unchanging support’ for Prof. Hwang, the reason is because he is a Buddhist. If Prof. Hwang was not a Buddhist would the Buddhist community be providing “unchanging support” like they are now? It won’t do to confuse support for research with support for a particular researcher.”

<sup>511</sup> Jo, Yong Su (January 3, 2006).

leaders or unable to draw a clear line between objects (stem cells) and subjects (the Hwang scientist), but rather engaged in an active effort of misunderstanding. After stating that both the stem cells and the technology do not exist<sup>512</sup>, Professor Heo speculates:

... it seems that part of the Buddhist Community, who are supporters of Hwang Woo-suk, can't understand this fact or perhaps, I suspect, they are making an effort not to understand it. They have become prisoners of a hasty value judgment instead of making an exact judgment about the facts.<sup>513</sup>

Heo's consternation is palpable. He points to some of the more recent activities of Hwang's Buddhist supporters, who have become increasingly active over the last two months; he mentions the official launching of the *Pan-Buddhist Association of Citizens Supporting Hwang Woo-suk's Research*<sup>514</sup> and a donation drive to help fund Hwang's research among other things. He criticizes a statement of support for Hwang recently released by the *Pan-Buddhist Association* as being an "emotional response (*gamjeongjeog-in* 感情的인 *dae-eung* 對應)" which lacks "ethical refinement." Heo writes, "... our

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<sup>512</sup> In Heo, Nam Kyol (2006)'s words: "To summarize so it is easy to understand, the 'patient-matching somatic cell cloned embryo' and the 'originary technology' both of which Dr. Hwang claimed existed, do not, in fact, exist." (이를 알기 쉽게 요약하면 황박사가 주장하는 이른바 '환자맞춤형 체세포복제배아'와 이를 뒷받침하는 '원천기술'은 현실적으로 존재하지 않는다는 뜻이다. 누가 조작을 지시하고 이를 누가 주도적으로 수행했으며 또한 연구비를 어떻게 집행했는지는 그야말로 부차적인 문제이다.)

<sup>513</sup> Heo, Nam Kyol (2006) (그런데도 불교계 일각의 황우석 지지자들은 이를 인식하지 못하고 있거나 애써 알려고 하지 않는 것이 아닌가라는 의구심이 들 정도로 정확한 사실판단 보다는 성급한 가치판단의 포로가 되어 버린 것 같다는 생각이 든다.)

<sup>514</sup> The *Pan-Buddhist Association of Citizens Supporting Hwang Woo-suk's Research* (황우석 연구 후원을 위한 범불교 국민연대 - 범불교연대) - a confederation of various other Buddhist groups supporting Hwang's work - was launched on February 6, 2006.

citizens have become too easily excited and optimistic, like they have forgotten everything else.”<sup>515</sup> He worries this emotional excesses along with recent developments are making the Korean Buddhist Community appear increasingly ridiculous. He concludes, “It seems that (much of the Buddhist Community) is making subjective and religiously-biased value judgments over and over again....”<sup>516</sup>

Despite his exasperation, Heo Nam Kyol does identify several factors which he believes are fueling the emotional excesses of Hwang Woo-suk’s Buddhist supporters. He mentions the power of nationalism, Buddhists feelings that they have been repeatedly victimized by other religions and outside forces, as well as the heady pressures of inflated hopes and expectations fueled by the press and mass media. And yet these explanations do not completely capture South Korean Buddhism’s passionate support for Hwang - something central to understanding the Buddhist stem cell engagement remains amiss. Early on, Heo Nam Kyol poses an interesting question, albeit with the intent of highlighting the ludicrous nature of Korean Buddhists’ support for Hwang’s work. He asks, “Among all the numerous scientific technologies which could contribute much to the future of human welfare, why are

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<sup>515</sup> Heo, Nam Kyol (2006). 『그런데 우리 국민들은 이 모든 것을 잊은 채 너무 쉽게 들뜨고 흥분해마지 않는다.』

<sup>516</sup> Heo, Nam Kyol (2006) (...주관적이고 역-종교편향적인 가치판단을 되풀이하고 있는 것으로 보일 수 있다는 말이다.)

these Buddhists supporting, with such enthusiasm, only the cloned embryo stem cell research which Dr. Hwang Woo-suk directs?”<sup>517</sup> This question begs an answer.<sup>518</sup>

In this chapter, I show how early 21<sup>st</sup> Century South Korea “grass roots” mobilization of the nation’s “gift of biopower” emerged out of an active cultivation of certain humanitarian virtues and scientific practices which loosely resonated with Mahayana Buddhist Soteriologies. For Korean Buddhists, the cloned stem cells’ “generative pluripotent nature” became linked with Buddhist community building practices which sustain and support the cultivation of Great Mahayana Faith. Stirring narrated emotional displays, collective performances, and ecumenical gestures bound Korean Buddhist selves and stem cell technologies together while refashioning both scientific and Buddhist economies.

The South Buddhist Korean support of Hwang and his stem cell research is more aptly characterized as being based in an “excess of emotion”<sup>519</sup> than a “lack or deficit” of epistemological models or understanding. In fact, at times, Buddhist

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<sup>517</sup> *Ibid.* (...장차 인류의 복지에 기여할 수 많은 과학기술 가운데서도 유독 황우석 박사가 주도하고 있던 복제배아줄기세포 연구에만 전폭적인 지원을 아끼지 않고 있는 듯한 불교계 일부의 분위기는 어딘가 균형감을 잃고 있다는 인상을 지울 수 없다.)

<sup>518</sup> Heo, Nam Kyol (2006) does briefly remark that the unsparing support for Hwang shows that some members of the Korean Buddhist community have clearly lost their sense of balance. Nonetheless, Heo’s insightful question remains.

<sup>519</sup> Interestingly Kim, Jongyoung (2007:78) introduces this phrase “excess of emotion” (感性過剩) but too quickly passes over this powerful description. The phrase appears when Kim argues against what he (somewhat schematically) describes as the “Deficit Model” of the public’s understanding of science (PUS). This model, at least as Kim represents it, assumes the public’s reception of science is largely passive while, in fact, Kim observes, supporters of Hwang’s research were very active. Unfortunately, Kim insists on a rather blunt divide between “science” and “the social” which seems to rescue him from agreeing too much with enthusiastic Hwang supporters but also severely limits his argument. See, for example, Kim’s definition of “social scientism” (2007:101). Kim also makes a point of mentioning that none of the Hwang supporters he interviewed – except one person – carefully read the 2004 and 2005 articles Hwang’s team published in *Science*. See Kim, Jongyoung (2007:100).

inspired advocates of Hwang's embryonic stem cell research - including those who supported Hwang's stem cell project long after his work was judged fraudulent – often displayed a greater sense of the epistemological variables involved in the production of biological scientific knowledge than those who more readily deferred to “objective” scientific authority and international expertise. Kim (2007) has observed that Hwang's enthusiastic supporters (so-called “Hwang Fans”) mastered considerable amounts of detailed information about the various complexities of Hwang's embryonic stem cell research - sometimes at considerable cost to their own economic livelihoods.<sup>520</sup> The South Korean Hwang supporters Kim interviewed were not all Buddhists, but Buddhists played a significant role in organizing grass root support for Hwang's work and, as my ethnographic data confirms, Buddhist temples and centers were useful organizing sites for nonsectarian Hwang support groups. Thus, although some embarrassed Buddhist scholars (like Cho Sungtaek and Heo Nam Kyol) were quick to criticize Buddhists for supporting Hwang *just* because he was Buddhist, something more was clearly at stake.

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<sup>520</sup> Kim, Jongyoung (2007:100).

## The Dedicated Path of a Student of Life

People, who study life, laugh, cry, experience great happiness and feel great sorrow because of the life they investigate. Biologists, more than anyone else, know how beautiful, mysterious, dynamic and lovely life is for we are persons so captivated by life that we happily spend all of our youth in one small corner of a laboratory.

We, who live and dream of life, hope only for life's radiant smile.

Hwang Woo-suk in *My Stories of Life*<sup>521</sup>

When professors of Seoul National University gathered together in May 2004 for the first general assembly of the new *SNU Buddhist Professors' Nondualism Association* (*bul-ibui*不二會), plans were made for holding monthly research seminars in addition to a number of other Buddhist related activities.<sup>522</sup> A professor of physics, So Kwangseop, acting as the first president of the *Nondualism Association*, called upon the Buddhist professors of each college at Seoul National to research how modern scholarship and Buddhism can work together. Professor So also explained that the *Nondualism Association* would, through the group's various activities, show that scholarship and religion are not two separate different domains but rather a united endeavor.<sup>523</sup> As if to symbolize their ecumenical stance and Seoul National University's, as well as Korean Buddhism's, rapidly growing interest in internationalization, the *Nondualism*

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<sup>521</sup> Hwang Woo-suk, Choe Jae-chon, Kim Byeong-jong (2004:79). (그뿐 아니라 생명을 다루는 자들은 늘 그 생명으로 인해 울고 웃고, 기쁘고 또 마음 아프다. 생명이 얼마나 아름답고, 신비하며, 역동적이고, 사랑스러운지 그 누구보다 잘 알고 있는 생명과학도는 그 매력에 빠져 청춘을 고스란히 실험실 한 편에 묻으면서도 행복하고 자랑스럽다. 생명과 함께 꿈꾸며 살아가는 우리들이 바라는 것은 오직 모든 이들의 황한 미소다.)

<sup>522</sup> Kim, Cheol-U (June 2, 2004).

<sup>523</sup> Eo, Hyeongyeong (June 4, 2004). Professor So Kwangseop who is the first president of the group said "each field plans to research how modern scholarship and Buddhism can become one" also they "will show through action that scholarship and religion are one."

*Association* invited the well-known monk, Venerable Hyon Gak – an American from New Jersey who had joined the South Korea Buddhist Sangha twelve years prior - to give the *Association's* inaugural Dharma Talk.<sup>524</sup> Both of the Buddhist representatives of Seoul National's Veterinarian School - Professor Woo Hee-jong and Professor Hwang Woo-suk – attended this inaugural meeting as well.

Several months prior to the *Nondualism Association's* first full meeting, Hwang Woo-suk announced his research team's first embryonic stem cell results and had subsequently received the Republic of Korea's first (and notoriously it's last) Top Scientist Award. And when the Buddhist affiliated newspapers – *Modern Buddhism* and the *Buddhist Newspaper* – reported on the new Buddhist Professors' Association at Seoul National, Hwang's presence at the meetings are mentioned in each and every article.<sup>525</sup> Moreover when *Modern Buddhism* published an article reporting that the influence of Buddhism had expanded in 2004 with the launching of various work-related Buddhist groups, the launching of the *SNU Professors' Nondualism Association* is highlighted along with the formation of Buddhist groups for police officers and bank employees as well as a Buddhist association for the wives of men working at the Kori Nuclear Power Plant.<sup>526</sup> Hwang Woo-suk, and his stem cell research as well as other SNU-based “Buddhist research”, looms large in this *Modern Buddhism* article's recap of

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<sup>524</sup> Kim, Cheol-U (June 2, 2004). Hyeon Gak (1999).

<sup>525</sup> A total of four articles are published on events surrounding the launch of the SNU Professors Nondualism Assembly – three articles in *Modern Buddhism* and one article in the *Buddhist Newspaper*. Hwang Woo-suk is mentioned in all of these articles. In two of these articles, he is mentioned first before other Buddhist figures involved.

<sup>526</sup> Kim, Eun-gyeong (December 21, 2004).

the new Nondualism Group. The article reads: “Centered around Prof. Hwang Woo-suk - who was the first to succeed in human embryonic stem cell cultivation – a *Seoul National University Nondualism Buddhist Professors’ Association* has been established. The *Association* will focus on encouraging Buddhist research in different areas and finding more Buddhist Professors. This group is steadily expanding the domain of Buddhist research.”<sup>527</sup> Here, the meaning of “Buddhist research” is not restricted to the historical or philosophical investigation of the “Buddhist tradition” but rather broad more flexible if quite amorphous notion that Buddhist practices and perspectives (frequently signified by the English-Korean neologism the “Buddhist mind”) can and should be applied to most, if not all, human activities and endeavors – especially those of a scholarly nature.

*My Stories of Life* – a book comprised mostly of two personal narratives written by SNU scientists Hwang Woo-suk and Choi Jaecheon – also illustrates how the professionalized pursuit of scientific knowledge is mixed and blended with the metaphysical, moral and emotional quest to understand “life”. One instance of this discursive blending (or interweaving) of the pursuit of science with acts or practices of a more explicitly religious nature, can be extracted from Hwang Woo-suk’s use of the Sino-Korean term *gwabakdo* (科學徒) or “disciple or student of science” in his *My*

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<sup>527</sup> Kim, Eun-gyeong (December 21, 2004). (“...세계 최초로 인간배아줄기세포 배양에 성공한 황우석 교수를 중심으로 서울대 통합교수불자회가 창립돼 전공에 따른 불교연구 장려와 불자교수 발굴 등을 통해 불교연구영역의 외연을 점차 넓혀나가고 있다.”)

*Stories of Life* autobiographical essay. And while I don't wish to overemphasize a slight semantic distinction, Hwang's use of the word *gwabakdo*, when describing himself instead of the more widely used Sino-Korean term for scientist, *gwabakja* (科學者), subtly effects the overall tone of his narrative.

When Hwang directly describes himself as a 'person of science' in the first few pages of his narrative in *My Stories of Life*, he employs the word *gwabakdo* in following phrase - "Although I am a student of natural science..."<sup>528</sup> - and the following sentence - "As a student/follower of science (*gwabakdo*) who is determined to walk this path all my life, I believe that scientists (*gwabakdo*), of all people, should..."<sup>529</sup> By referring to himself as a mere "student of science" in this way, Hwang adopts a humble rhetorical position to address his general reading public rather than wielding the authority the "scientist's" (*gwabakja*) professional expertise. Moreover, Hwang's narrative voice and his *gwabakdo* or "student" status and stance opens a more ostensibly egalitarian space for a story which builds on the shared concerns and presumed commonalities of humanity.<sup>530</sup> Thus, rather than presenting himself as a

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<sup>528</sup> Hwang Woo-suk, Choe Jae-chon, Kim Byeong-jong (2004:33). (나는 자연과학도지만...인간의 삶을, 그것도 막연한 인간이 아니라...)

<sup>529</sup> Hwang Woo-suk, Choe Jae-chon, Kim Byeong-jong (2004:36). (평생 과학도로서 한길만 가자고 다짐해 온 나는 과학도야말로....)

<sup>530</sup> Although I may be overstating (and over-extending) the semantic associations of the word *gwabakdo* (科學徒) compared to *gwabakja* (科學者) or even *gwabakka* (科學家), nonetheless the example sentence given for *gwabakdo* is the following (taken from Yi Mun-yol's novel *The Age of Heroes* (*Yeong-ung sidae*): "Although I chose the field of medicine, I – as a pure student of science – will pursue the truth which is not tarnished by human egos, biases, and personal

secular professional expert wedded to “rational objectivity”, Hwang (and perhaps his book’s editors) nurtures a narrative voice which blends his professional scientific work with a humble student’s search for answers to pressing human questions.

A similar blending or intermixing of “religious” words into “scientific” work can be seen elsewhere in *My Stories of Life*. For example, the Sino-Korean word *hwadu* (話頭) – which may refer to a nonsensical phrase or even a single word (taken from a *kongan*) used in certain *Seon* or Zen Buddhist practices – has been applied, by Korean language speakers (and no doubt, by some English speakers as well), to any and almost every petty query or momentary mystery. This absurd and thus sometimes humorous extension of *Seon* Buddhist terminology to decidedly “non-religious” or “secular” activities has become cliché but, nevertheless, the Sino-Korean word *hwadu* carries an additional meaning in present-day Korean language use which invites renewed and sometimes productive confusions.

In present-day South Korea, the word, *hwadu*, can be used to signify important ‘non-religious’ talking points as, for example, seen in a recent news article which reports that the *hwadu* of a provincial district’s upcoming election is ‘economic development’.<sup>531</sup> Yet despite – or perhaps because of - this more “secular” use of the term (*hwadu*), its semantic import may be pristinely and productively muddled anew

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dogmatism. (비록 의과를 택했지만 저는 순수한 과학도로서 인간의 아집과 편견이나 독단에 오염되지 않는 진실을 추구할 것입니다.) See – (last accessed 8/6/2014)

[http://krdic.naver.com/search.nhn?dic\\_where=krdic&query=%EA%B3%BC%ED%95%99%EB%8F%84](http://krdic.naver.com/search.nhn?dic_where=krdic&query=%EA%B3%BC%ED%95%99%EB%8F%84).

<sup>531</sup> Kim, Dong-i (April 4, 2014).

when the word - *hwadu* as ‘talking point’ - parachutes into a more religious realm. In *My Stories of Life*, for example, Hwang describes his youthful determination to conduct research on cows as follows – “I wanted to enrich the lives of both my own hungry family and my neighbor’s lives by studying cows that produce many calves which grow up to be healthy and strong and with this small hope, I made cows my life-long *hwadu*.”<sup>532</sup> Hwang’s mobilization of *hwadu* here seems to be quite distant from the word’s Buddhist definition and yet in both the Buddhist and Hwang’s more “worldly” use of the term here, the emphatic motion towards (social) progress and (personal) improvement is still present. Moreover, it is quite unlikely that a person would declare their life-long embrace of a ‘talking-point’ but not uncommon for Korean Buddhist meditators to adopt a single *hwadu* which they “investigate” for life – a stance somewhat similar to Hwang’s assertion of a lifelong commitment to bovine research. And, the sense of overlap between specific Buddhist meaning of the word *hwadu* and Hwang’s use of the term gains more resonance when the symbolic significance of the “cow” (or “ox”) in *Seon* Buddhism (as discussed in chapter four) is invoked.

The *hwadu* – in Hwang’s *My Stories of Life* narrative - may rest uncertain on the page but when reporter (Kim Cheol-U, writing for *Modern Buddhism*) introduces the Professor Hwang and his co-authors in a *My Stories of Life* book review, Kim proclaims,

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<sup>532</sup> Hwang Woo-suk, Choe Jae-chon, Kim Byeong-jong (2004:32). (새끼 많이 낳는 소, 튼튼하게 잘 자라는 소를 연구해서 배고픈 우리 가족과 내 이웃들의 삶을 기쁘게 하고 싶다는 작은 소망으로 나는 평생 소를 화두로 삼았다.)

“Hwang Woo-suk, Choi Jaecheon and Kim Byung Jong have lived their entire lives seizing the *hwadu*.... their passion for life and their scholarly *hwadu* are all found inside (this book).”<sup>533</sup> In another article, Reporter Lee Kyeong Suk writes, “Through the *hwadu* of bioengineering, Professor Hwang is determined to devote himself entirely to (the welfare of) humankind....”<sup>534</sup> Such moving discursive connections of scientific research (Hwang Woo-suk, Choi Jaecheon), artistic insight (Kim Byung Jong), and Korean Buddhist interests (via the *hwadu*) showcases one way in which the mass mediated performance of “religion” and “scholarship” share the stage in a “united endeavor.” Such discourses which embrace the bio-religious ‘*hwadu* of life’, speak to one of the overarching goals of the new *Seoul National University’s Professors’ Nondualism Association* – that is demonstrating the unity of scholarly research and Buddhist thought and practice. In particular, Hwang Woo-suk, the scientist, himself, would come to “embody” the virtues necessary for a nation’s journey towards the promise of a miraculous materiality and the bio-economic powers recuperated in life’s return to an original pluripotency.

Williams, Kitzinger, and Henderson have observed that the terms and metaphors used to describe the figure of “the scientist” were important metaphoric markers in the earlier debates on embryonic stem cell research which played out in the

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<sup>533</sup> Kim, Cheol-U (December 19, 2004). (평생 화두로 잡아온 생명...최재천 · 황우석 · 김병종교수는.... 생명을 향한 열정, 그리고 그것이 이들의 학문적 화두라는 것을 고스란히 담았다.)

<sup>534</sup> Lee, Gyeong Suk (February 22, 2004). (황 교수는 ‘생명공학’ 이라는 화두로 오로지 인류를 위해 헌신하겠다고 (방일 않는 정진과 하심이 몸에 밴 불자다.)

U.K. mass media.<sup>535</sup> People, who supported embryonic stem cell research in the British press, were more likely to describe research scientists as pioneers whose work was opening new scientific frontiers. Those opposed to the research described scientists as engaging in acts of, plunder, piracy, and even cannibalism. In South Korea – particularly the Korean Buddhist press – Hwang Woo-suk (as a scientist) was represented within, and thus came to represent, a complex and interconnected vocabulary of moral virtues which illustrated a more explicitly affective approach to describing his scientific work.

Hwang was said to have “embodied” or “(physically) absorbed” (*mom-e baeda*) the humility and a tireless devoted posture.<sup>536</sup> Newspaper descriptions of Hwang’s devotion to stem cell research frequently coincided with virtues, gestures, and daily schedule followed by serious cultivators of the Buddhist path. For example, Hwang Woo-suk was described as so immersed in his research that he did not rest on weekends or holidays and rarely slept more than three hours a night.<sup>537</sup> A *Buddhist Newspaper* reporter affirmed, after an interview with the stem cell scientist, that Hwang rises at 4:30 am – the standard time for an urban temple’s morning rituals - and always completes his daily hour of meditation.<sup>538</sup> All three of South Korea’s Buddhist

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<sup>535</sup> Williams, Kitzinger, and Henderson (2003:805).

<sup>536</sup> Lee, Gyeong Suk (February 22, 2004). ((황 교수는 ‘생명공학’이라는 화두로 오로지 인류를 위해 헌신하겠다고며) 방일 않는 정진과 하심이 몸에 밴 불자다.)

<sup>537</sup> *Ibid.* (지난 수년간 휴일과 명절을 반납한 채 하루 3시간 이상 잔 적이 드물 만큼 연구에 몰두했다.)

<sup>538</sup> Eo, Hyeon-gyeong (May 25, 2004).

newspapers, portrayed Hwang as a model of inspiration both in his Buddhist practice and in his devotion to practicing science.

The degree to which these two paths – the road of a Buddhist self-cultivator (*subaengja* 修行者) and that of the “student of science” (*gwahakdo* 科學徒) overlapped and blended or even fused together in the Korean Buddhist media varied. When serious questions about Hwang’s research surfaced in the mainstream Korean press, the different ways in which Hwang Woo-suk and his research project were imaged and articulated inside Korean Buddhist circles would become increasingly identifiable. Buddhist supporters of Hwang were clearly in the majority and, for the most part, dominated the Buddhist mass media (newspapers, radio, and TV). In particular, the *Dharma Treasure Newspaper* and *Buddhist Television (BTN)* became a reliable mouthpiece for Hwang’s supporters. However, even when those opposed to embryonic stem cell research and Hwang’s detractors worked to more explicitly mark and separate “science” and “the path of scientists” from Buddhism, as a “religion”, and “the path of practicing Buddhists”, the overarching unifying trope of science and Buddhism as a long, arduous, and ultimately deeply fulfilling and rewarding journey remained influential.

Consider, for instance, the opening paragraphs of a public statement made by the *Korean Buddhist Orders Association* (KBOA, *hanguk-bulgyo-jongdan-hyeop-ui-hoi* 韓國佛教宗團協議會), a Buddhist Union composed of representatives from twenty-

eight different South Korean Buddhist Orders.<sup>539</sup> The KBOA statement, was written in response to public turmoil which erupted around questions of ethics (both journalistic ethics and human subject stem cell research ethics), after an investigative television news program (MBC's *PD Notebook*) raised several serious questions. Released in December 2005, the *Korean Buddhist Orders Association* statement begins:

**Self-cultivators walk the path of self-cultivation. Scientists walk the path of scientists. Like this, the methods of pursuing truth are different for each person and different depending on the circumstances. Many scientists, even at this very moment, are walking – struggling step by step – along the path in their field of study towards the truth for the greater development of human civilization, just like self-cultivators are also, at this very moment, walking the path seeking the truth of enlightenment.**

**The path that Dr. Hwang Woo-suk intends to travel is also like this. Dr. Hwang's research results were won with great difficulty while walking this path and no one can deny that these results - this accomplishment - are an accomplishment for our nation and all of humankind.<sup>540</sup>**

In the remainder of this statement's six short paragraphs, the *Korean Buddhist Orders Association* calls for national unity and greater social harmony. The KBOA concludes, "It is wasteful for our country to continue with consumptive conflicts and hostilities. We earnestly hope that from now on, we will solve the problems confronting our

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<sup>539</sup> As of early January 2015, there are twenty-eight different Korean Buddhist Orders affiliated with the KBOA. See <http://www.kboa.or.kr/> (last accessed 1/7/2015).

<sup>540</sup> Kim, Won-U (December 9, 2005). ("수행자에게는 수행의 길이 있고, 과학자에게는 과학자로서의 길이 있습니다.이렇듯 진리를 추구하는 방식은 사람마다, 처해진 여건마다 다릅니다. 지금 이 순간에도 많은 과학자들이 수행자가 깨달음을 향한 구도의 길을 걸어가고 있는 것처럼 인류문명의 발전을 위해 자기의 분야에서 진리를 향한 치열한 발걸음을 내딛고 있습니다." "황우석 박사가 가고자 하는 길 또한 그렇습니다. 황우석 박사의 연구성과는 그런 길을 가는 과정에서 어렵게 얻은 결과로서 우리 민족은 물론 인류 전체의 업적이자 성과라는 사실은 누구도 부정할 수 없을 것입니다.")

society wisely with tolerance and unity.”<sup>541</sup> A familiar Korean Buddhist approach to difference can be seen in the KBOA statement – one which recognizes and seems to embrace difference but only in so far as different paths and the different truths they lead to eventually and ultimately reside in harmony and in the ultimate encompassing Buddhist truth of enlightenment. Thus, although it is clearly stated that “the methods of pursuing truth are different for each person and different depending on the circumstances”, nevertheless, the Korean Buddhist leaders describe and evaluate “the path of Dr. Hwang Woo-suk.” They conclude that no one can deny that Hwang’s results are an “accomplishment for our nation and all of humankind.” Thus the KBOA calls for unity among the South Korean press, scientists, and all citizens.

The statement, signed by KBOA President Venerable Ji-gwan, who was also, at the time, the Head of the Jogye Order can be seen as making an argument for the ultimate unity of various different levels and paths – that is an ultimate unity between Buddhism and science. The rhetoric of the first two opening paragraphs (above) implicitly makes a case for ordained Buddhist participation in public discussion of Hwang Woo-suk’s stem cell research. The grounds of the KBOA’s public intervention are not found in an explicit statement of “Buddhist Bioethics” but rather in the extension of compassion and the assumed similarity of the difficulties of those

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<sup>541</sup> *Ibid.* (...더 이상의 소모적인 갈등과 반목을 지속하는 것은 국가적인 낭비입니다. 현하 우리 사회가 당면한 문제가 지혜롭게 해결될 수 있도록 관용과 화합, 그리고 상생의 정신으로 풀어나갈 수 있기를 간곡히 기대합니다.)

– ordained Buddhist spiritual cultivators and research scientists - who “walk the path pursuing truth.” Although, the KBOA acknowledges certain methodological and situational differences, the Buddhist leaders, nevertheless, lay claim to understanding “the path that Dr. Hwang Woo-suk intends to travel” since they, themselves, have undertaken a similar journey and travelled on the paths towards truth. Such rhetoric - which simultaneously presupposes and thus serves to create, at the very least, a commensurability or shared commonality of experience - has performative social and political features. The assumed association or shared commonalities of the path of Buddhist self-cultivation and the path of hardworking scientists serve to enhance or bind the national import and status of both the Buddhist Order’s leaders and nation’s leading scientist, Hwang Woo-suk.

The trope likening scientific research to “a journey” is common; these travelling metaphors can be found in descriptions of both British and American stem cell research, as well. According to Kitzinger, American and British press reports likened stem cell research to a journey to primarily highlight a much anticipated arrival at a promised destination.<sup>542</sup> In contrast, the “journey” trope in South Korea, especially as used above by the KBOA, focuses attention on the long and arduous “path” or process of scientific research. To speak of life-as-a-journey in a Korean Buddhist vein is to imagine *samsara* - that eternal cycle of birth, suffering, death, and

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<sup>542</sup> Kitzinger (2008:423,426).

rebirth. And to choose a “path of edification” – be it scientific or spiritual, at least according to the above KBOA announcement – one must make great efforts to overcome the colossal difficulties encountered along the way.

### **An Aspiration to Alleviate Human Suffering**

If Hwang Woo-suk is understood as being a scientist who walks along a wide Buddhist path, the question arises – what Buddhist path or “vehicle” is Hwang travelling on? There are many clues to answering this question in Hwang’s autobiographical narrative found in *My Stories of Life*. Here, Hwang explains his reason for deciding to study “natural science” which, he argues is like studying “the humanities” in that science also begins with human beings:

**They say the humanities is the branch of scholarship which focuses on human beings while the natural sciences focus on investigating nature. I think about things a little differently. Natural science also begins with human beings. If there wasn’t any desire or hope of making human life better then there would be no reason to investigate nature. Although I am a student of natural science, I want to help human life, that is, not just some vague abstract notion of human life but the lives of my neighbors and those around me. I majored in natural science so I could help alleviate some of the suffering from human lives.<sup>543</sup>**

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<sup>543</sup> Hwang Woo-suk, Choe Jae-chon, Kim Byeong-jong (2004:33). (흔히 인문학은 인간을 연구하는 학문이요, 자연과학은 자연을 연구하는 학문이라고 하지만 내 생각은 조금 다르다. 자연과학도 인간에게서 출발한다. 인간의 삶을 더 낫게 하려는 희망이나 동기가 없다면 자연을 탐구할 이유가 없다. 나는 자연과학도지만 인간의 삶을, 그것도 막연한 인간이 아니라 나와 함께 살아가는 이웃들의 삶에 작은 도움이라도 되고 싶다는 생각으로, 그분들의 고통을 조금이라도 덜어주고 싶다는 생각으로 자연과학을 전공했다.)

This autobiographical narrative of Hwang's determination to study "natural science" is expressly founded in "a desire to make human life better." Moreover, a desire to "help human life" is described as the original foundation or motivating source of all the natural sciences defined as the branch of scholarship which investigates nature. Thus, Hwang implies, that while the humanities and the sciences may be different branches or pathways of scholarship, ultimately they both spring from a human motivations and reach towards a larger (even universal) human goal. In this sense, Hwang's confessed approach to "natural science" parallels the *SNU Buddhist Professors' Nondualism Association's* aspiration to show through their academic activities that scholarship and Buddhism are not irreconcilably separate paths. Moreover, in this purposeful blending of "humanistic scholarship" and Buddhism, a picture of what has been described (especially in the Taiwanese Buddhist context) as "Buddhist humanism" begins to emerge.

Buddhist scientist Hwang Woo-suk's clear focus on the importance of his original motivation (or "founding consciousness") for studying science (in the above *My Stories of Life* passage) resonates with his description of his childhood aspiration to devote himself to studying cows to improve the lives of his family members and neighbors (see above in Chapter four). In fact, a narrative emphasis on the original or primary motivations (and emotions) which inspire scientific research runs throughout Hwang's account of his own scientific career and life story. This thematic repetition

gives Hwang’s autobiographical tale an underlying arc which makes his “inspiring journey” - from a destitute childhood in a rural farming village to a high-tech stem cell research laboratory in an ultra-urban environment – a model of the value of a lifetime of hard work guided by a noble aspiration springing from an early childhood awareness of life’s considerable difficulties.<sup>544</sup>

The various aspirations and desires of human (as well as other sentient beings) also carries great importance for the Mahayana Buddhist universal project of enlightenment. More specifically, with the development of Mahayana Buddhism a particular kind of “religious” or “idealized” aspiration gained significance and wider appeal.<sup>545</sup> This aspiration – the rising of what has been called *bodhicitta* in Sanskrit or *bo-sal-sim* (菩薩心) in the Sino-Korean lexicon – is expressed in a vow to free all sentient beings from the world of suffering or *Samsara* (*sabasegye* 娑婆世界) and to eventually achieve enlightenment for oneself, as well. In the Mahayana Buddhist context, anyone – nuns, monks and laypersons alike - can give rise to *bodhicitta* and thus become a *bodhisattva* and walk “the Bodhisattva path” (*bo-sal-do* 菩薩道) by committing themselves to this goal. Moreover, the Bodhisattva path is often professed (in Mahayana) to be the most lofty and noble route to enlightenment as

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<sup>544</sup> Such “modelling” or displays of ideal historical figures is reminiscent of Han Yongun’s ideas about how Buddhist displays should be modernized along seemingly Confucian lines in his *Joseon Bulgyo Yusinnon*. See Tikhonov and Miller (2008:41-152).

<sup>545</sup> For a detailed description of the differences in how the Bodhisattva was defined and imagined in early Buddhist so-called Hinayana literature compared to the later Mahayana sutras see Lopez (1988).

seen, for example, in a popular Mahayana sutra's comparison<sup>546</sup> of the small glowworm-like light of those Buddhists who travel other paths to the great luminescence of the Bodhisattva who, like a rising sun, illuminates our entire continent.<sup>547</sup>

In present day South Korea, the bodhisattva's path or career is often expressed with the Sino-Korean Buddhist phrase “pursuing enlightenment above and edifying sentient beings below” (*sanggubori* 上求菩提 *habwajungsaeng* 下化衆生). Almost every Buddhist book or public Dharma talk contains, at least one reference to this phrase at some point if it is not entirely devoted to explicating this ideal of the Mahayana path. A prolific historian of modern Korean Buddhism, Lee Gwangsik, begins his latest volume with the statement – “Buddhism is widely known as a religion which calls for “pursuing enlightenment above and edifying sentient beings below.”<sup>548</sup> And both lay

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<sup>546</sup> In Mahayana, the *Bodhisattva path* (菩薩道) became evaluated above other roads to enlightenment, like that of the *śrāvaka* (聲聞), or those who became enlightened by hearing the Buddha's words, and the path of a *pratyekabuddhas* (獨覺) or someone who attain enlightenment alone - without any teachers or guides. In the *Mahāyānabhairava-sūtra* (摩訶般若波羅蜜經) or *Pāncavimsatisahasrikaprajñāpāramitā-sūtra*, the *Bodhisattva* is compared with the *śrāvaka* and the *pratyekabuddhas*. See Conze (1975:59).

<sup>547</sup> Although “light” and “luminescence” are fairly common metaphors, I will note that in *My Stories of Life* (*Na ui Saengmyeong Iyagi*), Hwang also employs the metaphor of - as well as appeals to the physical experience of - sunlight to inspire others. Most notably, Hwang admits to talking about the “early light of dawn” (黎明의 빛) in all of the science classes he teaches. And while he admits that the light of dawn may seem to be unrelated to the study of science, he believes that an “authentic experience” of a single sunrise can inspire students to adopt lofty goals and aspirations. Hwang explains: “The light of dawn is innocent like nature and without any pretensions (無心하다), and engraves itself on a clear awakened soul. The light of dawn opens the eyes of the soul. Only then can a person transcend their individual desires and goals and embrace a lofty aspiration for the sake of society and humankind.” Hwang Woo-suk, Choe Jae-chon, Kim Byeong-jong (2004:190). (여명은 자연처럼 무심하고 맑게 개인 영혼에 각인되는 빛이다. 여명의 빛은 영혼의 시력을 열게 한다. 그때비로소 사람은 개인적인 욕망이나 목표를 뛰어넘어 사회와 인간을 위한 지고한 목표를 가질 수 있다.)

<sup>548</sup> Kim, Kwangsik (2013). (불교의 이념은 上求菩提하고, 下化衆生하는 종교로 널리 알려져있다.)

and ordained Buddhists are flattered when it is announced that they have made great efforts to obtain enlightenment above and help others below.<sup>549</sup> Thus pursuit of enlightenment above can be linked to numerous activities including research or scholarly work.<sup>550</sup> An essay by a Seoul National University Professor of Earth and Environmental Sciences, Lee Gi Hwa, provides an unusually self-conscious comparison of a bodhisattva's pursuit of the Buddha's wisdom (or enlightenment) with a scholar's search for knowledge through his/her research efforts. In an essay published in the *Dharma Treasure Newspaper*, Lee reviews a book written by the prize winning Japanese mathematician, Hironaka Heisuka, titled *The Joy of Scholarship*.<sup>551</sup> Throughout his review, Lee re-frames or "translates" Hironaka's advice into Mahayana Buddhist idioms and concepts. For example, Lee asserts that, "A scholar – as someone who pursues truth – is, on the Buddhist scale, a Bodhisattva who is pursuing the Buddha's wisdom above."<sup>552</sup> While recounting Hironaka's advice that

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<sup>549</sup> For example, the book *Na ni Seowon, Na ni Salm* (edited and published by Hyeondae Bulgyeo Sinmun-sa in 2014) contains interviews with twenty-five inspiring Buddhists – both ordained and lay, who are described as "edifying sentient beings below while pursuing Bodhi above and edifying sentient beings with Bodhi from above..." The preface of *Na ni Seowon, Na ni Salm* concludes that "...these (25 interviewede) Buddhists are this era's Bodhisattvas and our guides."

(상구보리하면서 하화중생하고, 하화중생을 상구보리로 승화시킨 이들은 우리 불자들의 사표로서 이 시대의 보살들.) See also Ha, Jeong-eun (March 29, 2014).

<sup>550</sup> Indeed, given the high social status and prestige associated with education, scholarship, and university research in South Korea, the linking of "obtaining enlightenment above" (上求菩提) and university scholarship would seem to be quite easy especially considering Korea's Confucian background and modernization processes. However, in modern South Korean Buddhism, the *Seon* or Zen order's tendency to be anti-intellectual spawns various conflicts and contradictions. For example, the much respected South Korean monk, Venerable Seongchul (性澈, 1912-1993), who sparked much debate (and consternation) with his insistence on a pure subist or sudden doctrine of enlightenment and thus challenged the value of Buddhist doctrinal discussions as well as the enlightenment of several great monks (for example, *Bojo Jinul* 普照知訥, 1158-1210), was himself very well-read and versed in Buddhist doctrine.

<sup>551</sup> Lee, Gihwa (February 15, 2006).

<sup>552</sup> *Ibid.* (학자는 진리를 추구하는 사람으로서 불교적인 견지에서 上求菩提하는 보살이라고 할 수 있다.)

scholars should always approach their research with an open mind, Lee invokes the wisdom of the *Diamond Sutra* (*geumgang banyabaramil-gyeong*, 金剛般若波羅密經) - the shortest of the *Perfection of Wisdom* (*Prajna-paramita*) sutras which profess the transcendent wisdom of *sunyata* (*gong* 空 or ‘emptiness’).<sup>553</sup>

With a sentiment that seems to resonate with a Bodhisattva’s aspiration to help suffering sentient beings, Hwang Woo-suk professes his own and his team’s researchers motivations in *My Stories of Life* - “We don’t conduct our research because we think of making money. We’re just motivated by an innocent (or pure) desire to alleviate the suffering of people around the world who are afflicted by difficult to cure diseases....”<sup>554</sup> Even before the science scandal erupted, Hwang repeatedly announced his intentions to give any profits his stem cell research created to the Korean people. Moreover, he clearly expressed his conviction that patient-matching embryonic stem cells would benefit people all around the world. Newspapers serving South Korea’s Buddhist community, as well as larger nonsectarian daily national newspapers, relayed Hwang’s statements to the South Korean public and thus conveyed his expressed desire to help people suffering from disease. For example, at the end of a guest lecture on stem cell research that Hwang gave at Dongguk University in 2004, Hwang

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<sup>553</sup> Thus, even though Lee (February 15, 2006) is critical of Hwang Woo-suk’s scientific integrity, Lee’s attempts to suture science into Buddhist texts results in some dubious epistemological assertions, like - “is 100% sure of the proposed solution before calling it the solution. Lee summarizes that this means “In the Scholarly world even 1% of falsehood isn’t acceptable” (학문의 세계에서는 단 1%의 허위도 총할 수 없다는 이야기다.)

<sup>554</sup> Hwang Woo-suk, Choe Jae-chon, Kim Byeong-jong (2004: 33). (우리는 돈을 염두에 두고 연구하지 않았다. 전세계 난치병 환자들의 고통을 덜어주고 싶다는 순수한 목적...)

thanked his audience and said, “Lastly I would like to emphasize that if this research succeeds, the fruits of our work must not go to just one person. I believe this technology must be for the stake of the nation and our citizens.”<sup>555</sup> Hwang’s words were reported verbatim afterwards in the newspaper *Modern Buddhism*. The *Buddhist Newspaper* introduced Hwang (along with another Buddhist scientist) to their readers in the spring of 2004 with a special feature article. In this article, Hwang vows, “I will continue to work hard at my research until the day when all people suffering from disease can be cured.”<sup>556</sup>

Stories of how Shakyamuni Buddha sacrificed himself and his body for the sake of others in his previous incarnations as various bodhisattvas are known throughout the Buddhist world as the *Jataka Tales*. Simpson has shown how examples of *Jataka Tales* bodhisattva have been mobilized to encourage public participation in medical work in Sri Lanka. Metaphoric links between a “bodhisattva’s career” (*bosal-haeng* 菩薩行) and medicine are also found in various Mahayana texts where a bodhisattvas efforts to help usher sentient beings into enlightenment is likened to a

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<sup>555</sup> Jo, Yong Su (October 7, 2004). (그리고 마지막으로 강조하고 싶은 것은 만약 이 연구가 성공한다 해도, 이 과실은 어느 특정인에게 가서는 안 된다고 생각한다. 이것은 국가나 국민들을 위한 기술이어야 한다는 것이 내 생각이다.)

<sup>556</sup> Eo, Hyeon-gyeong (May 25, 2004). (병으로 고통 받는 사람들을 치료할 수 있는 그날까지 연구를 게을리 하지 않겠다.)

doctor's healing work.<sup>557</sup> Consider, for a moment, a passage taken from Santideva's (*Jeokchon* 寂天) sastra, *Introduction to the Bodhisattva Career* (*ip-bosal-haeng-non* 入菩薩行論), which is known for its exemplary expression of a bodhisattva's aspiration:

**Thus by the virtue collected  
Through all that I have done,  
May the pain of every living creature  
Be completely cleared away.**

**May I be the doctor and the medicine  
And may I be the nurse  
For all sick beings in the world  
Until everyone is healed!**<sup>558</sup>

As this passage in Santideva's sastra moves forward, the bodhisattva pledges to give of himself and his body without any feeling of loss as he aspires to serve as “a guide for all travelers on the way.” Many attributes of Bodhisattva are used to describe Hwang Woo-suk and his research. The purity his motivations as well as the importance of deep concentration in the lab are themes that appear often. Researchers who work with Hwang are also described in complimentary ways.

When questions were raised about Hwang Woo-suk's research, various Buddhist fundraising movements were held and some Buddhist women organized to pledge eggs donations for Hwang's work. Alan Cole<sup>559</sup> has noted that Buddhism was (early on) “organized around the exchange of two very different types of goods” –

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<sup>557</sup> The lines of this distinction between “psychological or spiritual suffering” and “suffering due to illness or disease” are, of course, quite blurry and culturally variable and thus it can't be assumed that certain words or explanations are being used as metaphors or analogies.

<sup>558</sup> From Santideva's *Bodhicaryavatara* or 入菩薩行論. Translation taken from Thurman (1987:74).

<sup>559</sup> Cole (2006)

that is material goods from laity in exchange for merit (*punya*) – a kind of “higher currency.” Hwang Woo-suk’s biotechnology promised to exchange material investments and bio-matter for an internationally recognized “humanitarianism” which could also bring economic and health benefits to sustain the South Korean economy well into the future. This gathering of resources from the many to invest in a “value-added” and purportedly “less alienable” international scientific “stem cell gold” was fueled, in some cases, by discourses in which stem cells were indirectly likened to “Buddha nature” – a “doubled self” that one seeks to discover as the power to change samsara into the dharma-hatu.

## Conclusion

Since the late 1990s and on into the twenty-first century, stem cell research has drawn attention not just in South Korea but around the globe as a promising direction for so-called regenerative medical research and as an engine of economic growth. France, Spain, the Netherlands, Australia, Sweden, China, U.S.A. and Canada, among others, have all been in the race to develop stem cell related technologies which are imagined as potentially having a wide-range of possible medical applications.<sup>560</sup> Companies like ESI Cell International have been established in Singapore, where stem cell research is a part of this city-state's *Biopolis Center*<sup>561</sup> and the governments of Japan and India have also invested in stem cell work.<sup>562</sup>

Stem cells ability to change into other kinds of cells is what makes these cells valuable to scientists, doctors, and biotech investors who hope to provide medical treatment by using these cells to create a variety of replacement cells for patients with lost, damaged, or diseased tissues. Adult stem cells exist alongside normal differentiated adult cells and are able to generate new adult cells as well as replace themselves. Investors, scientists, and others have also been interested in embryonic stem cells which can, theoretically, generate all kinds of tissues. Both adult stem cells and embryonic stem cells do not exist outside the body and thus cultivation techniques were necessary to propagate and sustain these cells *in vitro*. Embryonic

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<sup>560</sup> Franklin (2005).

<sup>561</sup> Ong (2013).

<sup>562</sup> See Bharadwaj and Glasner (2009), Sleemboom-Faulkner (2008) and Patra (2011).

stem cell lines were first cultured in 1998 which sparked speculation that they could be used to grow any and all types of tissues and organs outside the body. Organs grown in laboratories would already have a ready-made and potentially lucrative market since the demand for organs needed for transplant procedures already greatly exceeded the available supply. Scientists speculated that transplanting organs grown from stem cells taken directly from the patients who needed the new organs, themselves, could ultimately be safer than using donor organs since the new organs grown from a patient's stem cells would not provoke an immune system response. Since embryonic stem cells were said to produce any and all tissues and organs in the body, stem cells extracted from an embryo with the same DNA as the transplant patient were less likely to be rejected by the patient's immune system. Cloning technologies, which transferred an adult (somatic) cell's DNA-filled nucleus into an egg whose nucleus had already been removed and thus subsequently produced a "cloned embryo", promised to yield "patient-matching" embryonic stem cells.

The Hwang team's research into cloning human embryos and then extracting human embryonic stem cells from cloned human embryos should be understood in this context. At the time, many believed that cloned human embryonic stem cells had great potential to produce "patient-matching" tissues and organs which would become the foundation of a new field dubbed "regenerative medicine". As a veterinarian scientist, Hwang Woo-suk had little if any human medical research

expertise, however, his work on cloning cows gave him experience to draw on in his attempts to clone human embryos from adult human cells.

Other researchers were attempting similar work – for example, a biotech company in Massachusetts, Advanced Cell Technology (ACT), had announced it cloned a human embryo in 2001 – however no patient-matching embryonic stem cells had been extracted. Moreover, cloning human embryos with somatic cell nuclear transfer (SCNT) required a supply of healthy human eggs which were difficult to acquire and expensive. Hwang Woo-suk’s team announced their first *Science* publication claiming success in extracting patient-matching human embryonic stem cells in 2004 and then followed with a second *Science* article in 2005 claiming greater success and efficiency with the procedure. Questions about the possible violation of international human research subject guidelines arose soon after the publication of the Hwang team’s first article. Then, in 2005, additional questions about the ethics surrounding the procurement of human eggs for the Hwang team’s research were followed by suspicions about data fabrication and South Korea became embroiled in the so-called “Hwang Woo-suk Stem Cell Research Scandal.”

While questions about Hwang Woo-suk’s ethical oversight protocol and research results captured the South Korean public, as well as international science media’s attention, Shinya Yamanaka at Kyoto University was experimenting with a different way of making adult cells return or revert back to earlier and more

pluripotent states. In 2006, Yamanaka succeeded in creating induced pluripotent stem cells (iPS or iPSC) using mouse cells and then human cells in 2007. The creation of iPS cells raised questions about the necessity of ethically controversial work on human embryos to produce human embryonic stem cells if cells with similar properties could be produced by other means. In 2012, Shinya Yamanaka was awarded the Noble Prize for his iPS work along with Sir John Gurdon for his much earlier research on nucleus transfer cloning experiments with frogs. Induced pluripotent cells, however, while widening the field of stem cell research, have not simply replaced human embryonic stem cells. Inducing pluripotency in adult cells has its own difficulties and efficiency rates are quite low. Moreover, incomplete reprogramming of iPS is reported as another issue which may impact the future application of these cells. For now, iPS cells are generally thought to possibly have different characteristics and uses than embryonic stem cells and adult stem cells. Thus, stem cell research has diversified and work continues with different kinds of stem cells.

In 2013, it was announced that Shoukhrat Mitalipov at the Oregon Health and Science University (Beaverton) had succeeded in creating the cloned human embryonic stem cell (hSCNT) lines which Hwang Woo-suk's team had claimed to create in his now-retracted 2004 and 2005 *Science* articles. Mitalipov had previously reported success in producing cloned embryonic stem cell lines by using adult cells taken from monkeys in 2007. This Oregon Health and Science University work was

reported as showing greatly improved efficiency rates; Mitalipov's work produced cloned human embryonic stem cell lines after using less than ten human eggs. Thus earlier well-publicized warnings from scientists, politicians, and biotech investors that embryonic stem cell research in the U.S.A. would likely fall far behind Asian – and particularly South Korean advances – proved to be mostly unfounded and greatly inflated. In fact, former President J.W. Bush's 2001 ban on federal funding for research on new embryonic stem cell lines had not stopped individual states – most notably California – from moving to direct millions in public funds into human embryonic and other kinds of stem cell research.<sup>563</sup>

In the first half of this dissertation, I have followed how the fears and fantasies of “human cloning” developed in Euro-American context and were received and rearticulated in Korea. I have argued, that the (Romanticist) figure of “the (human) double” played a role in the articulation of “conflicting inner agencies” (“superego” etc.) in early twentieth century psychoanalysis. Moreover, I have suggested that this articulation – at least in its early formative stage – incorporated anthropological “theories of recapitulation” which both reinforced a “universal human psychology” or “thought process” but also simultaneously divided this “process of human psychological development” into mutually constitutive “primitive/immature” to

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<sup>563</sup> Maryland passed a law including \$15 million in grants for both adult and embryonic stem cell research and other states (New Jersey, Illinois, New York) considered funding stem cells as well. See Bellomo (2006:79-81) and Fox (2007: 417).

“civilized/mature” stages. I show how, in more recent times, “human cloning talk” developed in the context of the Cold War, industrialization and mass-consumption, the privileging of individualism and neo-liberal identities in the U.S. that contributed to the emergence of bioethics in the late 1960s and 1970s America. Much of the general “human cloning discourse” which was rehearsed in the 1960s and 1970s was carried over into subsequent “eruptions” of human cloning talk in the news – most notably the 1997 announcement that a cloned mammal (a sheep named Dolly) had been born in the U.K.

In their most informative book which addresses the development of (human) cloning related government policies in the U.K., Germany, Italy, and Japan, Herbert Gottweis, Brian Salter, and Catherine Waldby have described the news of the first mammal cloned from an adult cell (Dolly) as a “dislocatory moment.”<sup>564</sup> Indeed, many describe the 1997 sheep cloning news as a moment of radical departure from previous scientific assumptions. Take, for instance, the molecular biologist, Lee Silver’s, oft repeated comment to *New York Times*’ Gina Kolata. Silver gushed: “It’s unbelievable. It basically means that there are no limits. It means all of science fiction is true.”<sup>565</sup> Another well-known American commentator, Leon Kass - a biochemist and medical doctor who, early on in 1967 rather serendipitously became involved in the, then

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<sup>564</sup> Herbert Gottweis, Brian Salter, and Catherine Waldby (2009) are invoking Ernesto Laclau.

<sup>565</sup> Kolata (February 23, 1997).

fledging, field of bioethics, chose the word “repugnance”<sup>566</sup> to capture what he described as a “complex emotion” which is said to rise up - like vomit, perhaps - from the depths of “human wisdom” when the humanity is confronted with human cloning. Others, speaking somewhat more simply, have explained the sense of discomfort or nausea people may experience when contemplating human cloning as due to the subject’s inherent “yuck factor.” This ambivalence over human cloning, and the wide swing between the fantasy of limitless possibility (Silver) and inarticulate reportedly-automatic repugnance (Kass) suggests that the human clone becomes a particularly compelling supplemental technology in Euro-American contexts.

In this dissertation, I have considered whether the highly ambivalent nature of the Derridean supplement is also expressed in early Korean discourses on human cloning. After examining the work of Han Yong-un, an early Korean Buddhist modernizer, and Korean newspapers from the early twentieth century to the present day, I find that an ambivalence akin to the haunting logic of the supplement also surfaces in “doubles/clones” discourses in Korea, although there are also significant variations as well as subtle differences. A striking variation, which forecasts later Korean Buddhist understandings of Hwang’s human cloning research, is found in a newspaper editorial whose author comprehends the ban on human cloning as duplicity in U.S. global politics.

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<sup>566</sup> Kass (1998:17).

In the later part of the dissertation, I cover the Korean Buddhist community's relationship with Hwang Woo-suk and Korean Buddhist support for cloned human embryonic stem cell research. Hwang reportedly converted to Buddhism in 1987 and had continued to cultivate his relationship with Korean Buddhism as he rose to national prominence. Buddhist leaders, for the most part, embraced this affiliation and Hwang's "cutting-edge" stem cell research as it resonated with imported ideas about the compatibility – or even unity - of Buddhism and science. I have showed how Hwang's relationship with Buddhism was useful in momentarily countering a long-standing association of medical and scientific modernity with Christianity and "the West". Moreover, the support of Korean Buddhist women proved useful for Hwang's research on both a domestic and international stage. In the end, South Korean government and media expectations for Hwang Woo-suk's "patient-matching" human embryonic stem cell research and Korean Buddhism's domestic and international position helped subsume various conflicting interests. Moreover, Hwang's claims about "Buddhist attitudes" and "Buddhist support" for his human embryonic stem cell research, proved useful to U.S. stem cell research supporters who warned U.S. voters against falling behind "Asian advances". Such "competing nations" imaginaries are reminiscent of Han Yong-un's early "man-made-man" story. Now, the Asian "man-made-man" of scientific modern threatens to return and, uncannily, advance beyond "the West."

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