

# **Contesting National Sociotechnical Imaginaries:**

## **The Pre- and Early Politics of Human Embryonic Stem Cell Research in South Korea**

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# Introduction

## ◆ Hwang Woo-Suk scandal

- Just a scientific fraud case?
- Research integrity crisis involving some bioethical issues?
- Continuation of the existing hESC debate

## ◆ Sociopolitical landscape of the South Korean hESC debate

- 30% of the South Korean population are Christians – 18% Protestants; 11% Catholics (2005, National Statistical Office)
  - Debate over the moral status of human embryos?
  - The Protestant and Catholic churches had only a limited role in the early phase of the debate.
- Most vocal and sustained critique came from a group of progressive NGO activists (feminists, environmentalists, consumer activists, public health advocates, etc.)

# National Sociotechnical Imaginaries (1)

## ◆ Progressive NGO critique of hESC research

- Not simply advocating bioethical arguments
  - Grew out of a more general campaign to impose strict control on new biotechnology (both medical and agri-food)
  - Broader concerns than any specific biotech applications or developments
- What the nation stands for, what its pressing goals are, what should be the proper place and role of S&T, etc.

## ◆ National Sociotechnical Imaginaries

- “Imagined forms of social life and social order reflected in the design and fulfillment of nation-specific scientific and/or technological projects”

# National Sociotechnical Imaginaries (2)

## ◆ Historical Roots

- Late 19<sup>th</sup> century; Colonial modernization & industrialization
- Sense of urgency to secure national survival & empowerment
- S&T: Conceived primarily as a form of power and an instrument to achieve a “wealthy and strong nation”

## ◆ Park Chung-Hee Military Regime (1961-1979)

- S&T: “source of power for accelerating economic development”
- the state: responsible for planning & directing S&T activities
- Scientists: “motive power for national development”; “pride of the nation”
- Publics: dutiful members of the nation
- “Nation-building through S&T”; “Technological self-reliance”

# Imagining Korea as a Leading Biotech Nation

- ◆ **Chun & Roh Military Regimes (1980-1992)**
  - **Genetic Engineering Promotion Act (1984)**
    - ➔ Article 1 (Purpose): ... to more efficiently develop and promote genetic engineering, as well as to facilitate its industrialization, and thereby to contribute to the sound development of the national economy
- ◆ **Kim Young Sam (1992-1997)**
  - **BIOTECH 2000 (1994)** ➔ \$20 billion by 2007; G-7 biotech capabilities by 2007; world market shares of biotech products to 5% by 2000
- ◆ **Kim Dae Jung (1997-2002)**
  - The world's seventh largest bio-economy by 2010
  - **21st Century Frontier R&D Program (2001)** ➔ securing Korea's indigenous capability for “future core” technologies (bio & nano)
- ◆ **Roh Moo Hyun (2002-2007)**
  - Biomedicine & bio-organs ➔ “Next-generation growth engines”

# Emerging Politics of Biotechnology

## ◆ Need for biotech regulation

- Regulatory vacuum
  - ◆ E.g. Guidelines for Research Involving Recombinant DNA Molecules → Prepared in 1984, but introduced only in 1997 when it was required for Korea's accession to the OECD
- Amendment of Biotechnology Promotion Act?

## ◆ Seeds of discontent

- Environmentalists, feminists, consumer activists, public health advocates, etc ... ← student activism
- In contesting various state-led development projects, some of these activists began to extend their critique of developmental state to S&T.
  - Alliance for Biosafety and Bioethics (1998)

# Korean Bioethics Advisory Commission

## ◆ NGO challenges

- Dolly (1997); early human embryo at Kyung Hee Univ. (1998); Hwang Woo-Suk's cloning of cows (1999); Korea Institute of Agri. Sci. & Tech.'s development of GM crops (1999), etc ...
- ABB: “runaway” march of biotech that would sacrifice “public interest” in the name of “national competitiveness”

## ◆ Korean Bioethics Advisory Commission

- Inclusive → Not just life scientists and medical practitioners, but also social sciences and humanities scholars, religious groups, and civic NGOs
- ABB (esp. Center for Democracy in S&T) → interested in the potential of the commission for democratic control over biotech
  - attempted to broaden the agenda as much as possible
  - no distinction between medical & agri-food biotech

# hESC Research Under Dispute (1)

## ◆ Media framing of the hESC debate

- hESC research without regulation (Hwang Woo Suk & Park Se-Pill) criticized by ABB/CDST activists
- ➔ Science versus ethics over the moral status of human embryos?

## ◆ ABB/CDST activists

- Pro-reproductive rights stance, yet supported a moratorium
- Rationale ➔ No public discussion about the social and ethical implications; no democratic social consensus; no regulation

## ◆ Korean Bioethics Advisory Commission

- human embryo as neither a mere cell cluster nor a full human being but as a hybrid entity
- ➔ The creation of human embryos for purposes other than pregnancy, as well as the creation of human-animal hybrid embryos, should be banned, but that the use of spare human embryos from IVF clinics might be allowed for medical research.



## **hESC Research Under Dispute (2)**

### **◆ Attack came from life scientists & bio-industry**

- Korea Research Institute of Bioscience & Biotechnology
- Federation of Korean Industries, the Bioindustry of Korea, and the Korea Biotechnology Research Association
- 15 life sciences societies & a group of scientists including Hwang Woo-Suk
- Demanded that the cloning of human embryos and of human-animal hybrid embryos should be allowed
- The draft bill would risk the future of Korea's bio-industry

### **◆ Government**

- Even before the KBAC prepared a draft bill, the government already decided to support hESC research (both SCNT and IVF)
- In December 2001, stem cell research was chosen as one of the nine new 21st Century R&D Program projects. → \$120 million over the next 10 years

# Competing Sociotechnical Imaginations

	<b>Supporters of hESC research</b>	<b>NGO Critics of hESC research</b>
<b>Pressing societal needs</b>	Developing / Catching up	Deepening of democratization
<b>Future vision</b>	Advanced industrial nation (G7)	More just & democratic Korea
<b>Risks</b>	Falling behind	Being dominated by developmentalism
<b>S&amp;T</b>	Form of power / instrument for national (economic) development	True potentials of S&T suppressed by developmentalism
<b>State</b>	Developmental state – increasingly its neoliberal variant	Should be transformed into a kind of green welfare state?
<b>Expert</b>	Serving the nation	Serving the people
<b>Public</b>	Dutiful members of the nation – should serve the national interest	Informed citizens – backbone of democratic society
<b>Ethics</b>	Obstacles for national development	Protection of human rights / justice
<b>Market</b>	Useful device for national development though increasingly becoming the model for society	Threats to the public interest
<b>Globalization</b>	Opportunity	Threats to democratic sovereignty
<b>Embryo</b>	Resource (cell cluster) for national development	Hybrid entity that should be respected ← Threatened by developmentalism / patriarchy