

行政院國家科學委員會專題研究計畫 成果報告

「產前基因篩檢、科學母職，與『完美的嬰兒』：探究基因
科技對社會關係的衝擊」(III)

計畫類別：個別型計畫

計畫編號：NSC92-3112-H-002-007-

執行期間：92年05月01日至93年07月31日

執行單位：國立臺灣大學社會學系暨研究所

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處理方式：本計畫可公開查詢

中 華 民 國 93 年 12 月 20 日

Specific Aims

Please state the overall goals of the project, and specific aims, as reviewed and approved by the Study Section and actually awarded. If these specific aims as actually funded did not differ in scope from those actually pursued during the grant period, and if the aims have not been modified, state this. If they have been modified, give the revised aims.

This project originally aimed to research how the genetic screening, diagnosis, and counseling enhance or exploit women's right over reproduction. Besides, the project intended to explore how such genetic technology has increased the social expectation of "perfect babies" and thus influenced how the society views the "imperfect" children. After the first year (2001/8—2002/7), I modify the site of research. In the second year (2002/8—2003/7), I believe that researching the relevant patients' organizations regarding reproductive health and child health could lead to richer findings and therefore broaden my research on these groups. Besides, I add the case of intracytoplasmic sperm injection (ICSI) to include the perspective of men's studies in theorizing gender. For this year (2003/8-2004/7), I further revise my research plan. I am more aware than before that as a Taiwanese scholar, researching on genetic technologies has to recognize our global position, and thus I should not neglect post-colonial perspective in investigating the development of technology. Overall, I intend to reach three goals:

- (1) To finish the investigation on how patients' organizations for the welfare of "imperfect babies" perceive and negotiate with how new reproductive technologies transform motherhood;
- (2) To submit the paper on theorizing the interactive relationship between gender and reproductive technologies through the case of the potential of intracytoplasmic sperm injection (ICSI) to transmit genetic defects causing male infertility;
- (3) To investigate how some sex selection technology traveled from the "west" to Taiwan in order to add the post-colonial dimension on my research project;
- (4) To synthesize the three case studies (i.e. (1) patients' organizations and imperfect babies, (2) genetically infertile men, and (3) traveling of sex selection technologies) in order to further theorize the relationship between new genetics, gender and society.

Progress Summary

Summarize concisely the results obtained for each specific aim during the past year (or reporting period). Negative results, if any, should also be included and approaches taken to improve the prospects of the project discussed. (Do not exceed 5 pages, not including figures and references.)

I now summarize the results that I have got for the four aims listed in last section:

(1) To finish the investigation on how patients' organizations for the welfare of "imperfect babies" perceive and negotiate with how new reproductive technologies transform motherhood:

Part of the finding was presented in the conference organized by the Rotary Club in October in 2003. In this presentation, from the historical data, interviews, and participant observation, I argue that mothers of children with disabilities have been the major momentum for the welfare reform for the disabled in Taiwan. The reform has gradually moved the resources allocation to development of science and technology. From the view-point of these patients' organization, science and technology are not simply the solution. On the one hand, they are concerned whether new technologies like pre-natal screening could detect the imperfect ones. On the other hand, how assisted reproductive technologies or life-saving techniques increase the number of imperfect babies also aroused heated debated. When patients' organization intend to get involved with the development of technologies, we must ask: How could these activists who hold no academic degree in science gain credibility? To what extent does the believability of their claims leads to the result of their protest? In this preliminary investigation, I see the conflict among inner-circle science, support from the scientists, and cultural capital of the activists as critical factors. Mothers due to their identities thus became one of the first lay experts that seek the democratization of new technologies.

(2) To submit the paper on theorizing the interactive relationship between gender and reproductive technologies through the case of the potential of intracytoplasmic sperm injection (ICSI) to

transmit genetic defects causing male infertility;

The part of research has been under revision, and should be finished during the winter break. I plan to submit it to *Technology and Culture*. I found that, while ICSI is often viewed as a breakthrough in overcoming male infertility, since ICSI bypasses natural sperm-selection barriers, the transmission of abnormal genes causing male infertility to the offspring through ICSI becomes a new concern. It is this emergence of genetically infertile men through ICSI that helps trigger scientists to research on men's contraceptive methods through "genes of male infertility." Such scientific research agenda may further urge men to take responsibilities on contraception, which have long been feminists' goal in gender and reproduction.

(3) To investigate how some sex selection technology traveled from the "west" to Taiwan in order to add the post-colonial dimension on my research project;

Racism has been embedded in contemporary feminist attacks against the use of medical technologies for sex selection. When feminists criticize the use of ultrasound, amniocentesis or pre-implantation genetic diagnosis (PGD) for sex-selective abortion, the contexts are mostly Asian. The Asian culture of son preference in India, South Korea, and China becomes the major explanation for such patriarchal practices. Local medical practitioners are presented as "abusing" the medical technology, implying that the Western-invented technology itself is politically neutral. In this project, I first problematize such an argument with the case of the global flow of the Ericsson method, a sex pre-selection technique of separating X-bearing from Y-bearing spermatozoa. Dr. Ericsson published the first paper in *Nature* on the method of in-vitro enrichment of the Y-bearing sperm. Together with artificial insemination, some clinic reports show a "success rate" of 70% to 80% of having baby boys. In 1981, the American inventor of the sex selection technique came to Taiwan to set up the franchise of Gametrics Ltd.; the method

traveled to Asia for the first time. Although major English medical journals have strongly doubted the validity of the Ericsson method since late 1980s, and some centers were closed, such controversy has not reached to the lay people in Taiwan and other regions. This sex pre-selection method is still widely available today. Through analyzing the traveling of such sex selection techniques, I argue for the need to examine race, class and gender altogether and to blur the boundary between local and global when studying sex selection politics. And I believe this could shed light to the application of the latest sex selection methods -- pre-implantation genetic diagnosis (PGD).

(4) To synthesize the three case studies (i.e. (1) patients' organizations and imperfect babies, (2) genetically infertile men, and (3) traveling of sex selection technologies) in order to further theorize the relationship between new genetics, gender and society.

After finishing the previous three case studies, I will spend more time on the theoretical implication of these research projects. I intend to emphasize the importance of men's studies and post-colonial perspective in new genetics studies. Particularly for the case of sex-selection technology, I may need to expand it by doing more research from the users' perspective, as well as from a cross-cultural comparison. And this will become the project topic for the 2005 NSF grant proposal.

Publications

List the title and complete references (author(s), journal or book, year, page number) of all publications **directly resulting from studies supported by the project (i.e., with citation of this grant in the acknowledgement section)**. List the publications for the project in accordance to the following categories: (1) manuscripts published and accepted for publications; (2) manuscripts submitted; and (3) conference proceedings. Provide one copy of each publication not previously reported to the National Science Council in the Appendix.

I want to explain here that in order to get involved with the outbreak of SARS in spring in 2003, I devoted myself to the SARS research and thus digressed from this research project for about three months. This leads to the delay of my plan to revise the following conference papers for journal article submission. Still I think as a medical sociologist, it is worth my efforts to seek my possible contribution to the management of social crisis during that time period. And, I think I can submit the following conference paper to several journals in the near future.

(1)

吳嘉苓，2001，「不同的性別篩選、不同的爭議？」應用倫理研究通訊 17：19-24。

(3)

Chia-Ling Wu. 2002. “Confronting Scientific Knowledge: The Transformation of Patients’ Groups in Taiwan in 2000s.” Paper Presented for the annual meeting of Taiwanese Sociological Society, Tung-Hai University, Taichung, December 14-15, 2002.

Chia-Ling Wu. 2002. “Male Infertility, New Reproductive Technologies and Gender.” Paper presented for the XVth ISA World Congress on Sociology, Brisbane, Australia: July 7-13.

Chia-Ling Wu. 2001. “The Disappearance of Infertile Men? ICSI, Genetics and Gender Politics.” Paper Invited for presentation at the annual meeting of the Society for Social Studies of Science, Boston, USA, November 1-4, 2001. (Paper read by Professor Charis Thompson)

藍佩嘉、吳嘉苓，2003，「變遷中的性別與家庭，弱勢的女性照護者」，發表於「凝聚台灣生命力」研討會，扶輪社與台灣社會學會主辦，10月25日，台大應力館。（其中有關殘障兒童的照護運動與母職認同，為本研究計畫成果）。