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研究課題名（和文） The Future of Human Reproduction: The Input of Japan, the United Kingdom and Germany in the International Framework for Eugenic Governance  
研究課題名（英文） The Future of Human Reproduction: The Input of Japan, the United Kingdom and Germany in the International Framework for Eugenic Governance  
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研究成果の概要（和文）：PIは、日本が新たな優生学に抵抗感を示しているのは、障害者に対する国家主導の優生学が1990年代まで続いていたことが主な原因であることを示した。第二次世界大戦後に優生保護法を廃止したドイツやイタリアなどとは異なり、日本は1996年まで優生保護法を維持していた。研究代表者の研究は、新しい優生学に対する日本の抵抗について、これを文化という抽象的な概念に結びつけてきた従来の常識を覆すものである。

#### 研究成果の学術的意義や社会的意義

The PI refuted the conventional wisdom about Japan's resistance to new eugenics. Rather than using the abstract concept of culture, she has highlighted the long history of state eugenics of disabled.

研究成果の概要（英文）：The PI demonstrated that the reason why Japan is showing resistance towards new eugenics is predominantly the fact that state-sponsored eugenics vis-a-vis disabled people persisted here until as late as the 1990s. Unlike Germany, Italy and other countries which abolished their eugenic laws after World War II, Japan retained its law until 1996. It is the fresh memory of these enforced eugenics, and not "culture" in the abstract, that conditions Japan's stance towards embryo screening.

研究分野： biethics

キーワード： human reproduction eugenics germline genome editing in vitro gametogenesis Japan genetic enhancement global governance disability

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## 1 . 研究開始当初の背景

Japan is an *in vitro* fertilisation (IVF) giant, resorting to *in vitro* fertilisation (IVF) like no other country. This fact is borne out of the statistic that it has a third more hospitals and clinics offering fertility treatment than the second largest utilizer of IVF – the United States of America (USA), which is a nation with more than twice the population of Japan. Highlighting just how widespread IVF has become in Japanese society is the 2015 statistic that one in every 20 babies born that year was conceived through IVF – a record figure which is predicted to grow even further, given that an ever-increasing number of couples are marrying later in life and turning to assisted reproduction. Illustrating the sheer size that the Japanese IVF industry has now reached, the Economist published an article in May 2018 describing what goes on in one of the busiest fertility facilities in the world: “[n]estling among a plantation of high-rises in a business district of Tokyo, the clinic implants fertilised eggs in an average of 75 women a day”.

Against the backdrop of this vibrant IVF sector, it is conspicuous that Japan remains one of the few countries to resist reproduction through life selection, or Pre-implantation Genetic Diagnosis (PGD) as the procedure is called leading to the selection of embryos based on their traits. Indeed, the first PGD case in Japan was not performed until 2004 – a decade and a half since the pioneering such instance in London’s Hammersmith Hospital, and even today this procedure is not recognised as a standard one here, with the total number of cases that have taken place being less than 200 – a minuscule figure compared to the scale in most other developed countries. With this being the case, the speculation that Stanford University Law Professor, Henry Greely, made in 2016 with his provocatively titled book *The End of Sex and the Future of Human Reproduction*, that PGD will, in the next 20 to 40 years, become the dominant way in which any society with a good healthcare system will produce its children, seems to not hold in the case of Japan. Indeed, Japan is far from embracing PGD.

To provide more context for this Japanese divergence, while many other developed societies have by now moved onto permitting PGD not only for what tends to be seen as less controversial ethical cases (i.e. for medical purposes) but also for social reasons (i.e. as a means for family balancing so that there are an equal number of male and female children born to a couple), in Japan, this procedure is hardly tolerated. Japan does not recognise PGD as a standard medical procedure (as in a legal statute), with there having been only 120 cases up to 2015 approved on a case-by-case basis by the body overseeing the actual site of reproduction – the Japan Society of Obstetrics and Gynecology (JSOG). To put this Japanese figure of PGD into perspective, it is less than 1% of its counterpart in the USA, for example. As for a comparison with countries in Europe, a single facility in the United Kingdom (UK), for instance (Guy’s Hospital in London, to be more precise), performs over three times as many cycles involving PGD in a single year (namely, 370 PGD cases in 2014) as there have historically been in Japan. Similarly, although it is difficult to obtain comprehensive data about the scale of PGD practice in Europe as a whole, from the information published last by the European Society for Human Reproduction and Embryology, which reflects the practices between 2011-2013, it could be established that the latter is significantly bigger than in Japan – indeed there were as many as 71 European PGD facilities and 1,755 babies born there for these two years.

So, what accounts for the world’s largest ART industry having such a small portion of PGD cycles? Indeed, it seems an intriguing phenomenon that the country with the highest appetite for medically assisted reproduction is held so strongly back from life-selection practices.

## 2 . 研究の目的

To enrich the international debate on medically assisted reproduction, which Western experiences have hitherto dominated, and also to provide a reference for countries which are now embracing PGD but which might one day consider a policy shift in the other direction, the PI proposed to examine how the decision is made, and maintained, in Japan of refraining from life selection. To be more specific, what is it in the dynamics of the decision-making process here that produces this divergent outcome? As far as the PI is aware, there does not exist a systematic, comprehensive analysis of this kind on this topic. Whilst some smaller studies on PGD do exist in the Japanese language literature, they are either concerned simply with how the ethical issues are construed in Japanese society (i.e. within the context of the indigenous Japanese concept of “*seimei rinri*”, as opposed to the Western concept of “bioethics”), or provide only a single-sided account of the political process – namely that of the organized part of the disability community.

## 3 . 研究の方法

To elucidate whose voices the current regime on PGD in Japan represents, the PI proposed to examine the interactions between, and the involvement in the political process of, a wide range of interested parties: from JSOG and individual doctors, to disability groups, to feminist groups, to patient's groups (carriers of inheritable life-limiting conditions), to politicians (from both the leadership and the opposition), to Ministry of Health Welfare and Labor (MHLW) officials. Since a country's official stance even in the best functioning democracy does not necessarily represent the moral position of the majority, and since the political process is a messy business, with: the economic situation at the time of drafting policy affecting the rules; actors coming and going; and, many considerations (e.g. the welfare of the future child, equity of access, safety, cost-effectiveness) impinging on the consciousness of those in charge of devising the policy, it seemed important to untangle how exactly the restrictive regime in Japan was arrived at and how its maintenance is justified. To reveal this, the PI set out to examine parliamentary records, conduct interviews, and scrutinize reports and official documents by the MHLW and JSOG, amongst others.

#### 4 . 研究成果

The PI's research managed to provide an alternative explanation to what the conventional wisdom was concerning the extremely limited application of PGD in Japan. More specifically, the conventional wisdom, at least from conversations taking place in academic circles and the literature in Japanese, is that divergence on the part of Japan is based on cultural factors in the abstract form. What the PI highlighted is that, more specifically, there could be said to exist a deep-rooted aversion within Japanese society to anything "eugenics", which PGD can legitimately be considered to be, albeit in a different form (i.e. voluntary, as opposed to state imposed as in the past). This aversion, the PI argued, is borne out of the recent history Japan has had with state-sponsored eugenics. Unlike other countries, such as Germany, Austria and the USA for example, Japan did not abolish its eugenics law after World War II but upheld it until as late as the 1990s. Indeed, Japan had until very recently (1996) a law that allowed coercive sterilization of people with disabilities (The Eugenic Protection Law, or *Yūsei Hogo Hō*). The memory of the practices sanctioned through this law vis-à-vis the disability community here has left a deep mark on the Japanese psyche, the PI argued and demonstrated, making many members of the society unaccepting of life-selection policies.

## 5. 主な発表論文等

〔雑誌論文〕 計4件（うち査読付論文 4件/うち国際共著 0件/うちオープンアクセス 0件）

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| 1. 著者名<br>Croydon Silvia  | 4. 巻<br>32(2)        |
| 2. 論文標題<br>Reluctant Rulers: Policy, Politics and Assisted Reproduction Technology in Japan | 5. 発行年<br>2023年      |
| 3. 雑誌名<br>Cambridge Quarterly of Healthcare Ethics  | 6. 最初と最後の頁<br>289-99 |
| 掲載論文のDOI（デジタルオブジェクト識別子）<br>10.1017/S0963180122000603  | 査読の有無<br>有           |
| オープンアクセス<br>オープンアクセスではない、又はオープンアクセスが困難  | 国際共著<br>-            |

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| 1. 著者名<br>Croydon Silvia   | 4. 巻<br>未定       |
| 2. 論文標題<br>Politics of inclusive consultation?: How the voices of of disabled people and feminists prevailed in the debate on new eugenics in Japan” | 5. 発行年<br>2023年  |
| 3. 雑誌名<br>Contemporary Japan   | 6. 最初と最後の頁<br>未定 |
| 掲載論文のDOI（デジタルオブジェクト識別子）<br>10.1080/18692729.2023.2168841   | 査読の有無<br>有       |
| オープンアクセス<br>オープンアクセスではない、又はオープンアクセスが困難   | 国際共著<br>-        |

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| 1. 著者名<br>Croydon Silvia   | 4. 巻<br>8         |
| 2. 論文標題<br>In It Together: Why Writing Our Genetic Future Should Not Be Left to the Scientists Alone | 5. 発行年<br>2022年   |
| 3. 雑誌名<br>Voices in Bioethics  | 6. 最初と最後の頁<br>1-6 |
| 掲載論文のDOI（デジタルオブジェクト識別子）<br>10.52214/vib.v8i.9426   | 査読の有無<br>有        |
| オープンアクセス<br>オープンアクセスではない、又はオープンアクセスが困難   | 国際共著<br>-         |

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| 1. 著者名<br>Croydon Silvia  | 4. 巻<br>4(2)       |
| 2. 論文標題<br>Governing Assisted Reproduction in Japan: Lessons for the Medical Profession from its Counterpart in Justice | 5. 発行年<br>2022年    |
| 3. 雑誌名<br>CBEL Report   | 6. 最初と最後の頁<br>1-12 |
| 掲載論文のDOI（デジタルオブジェクト識別子）<br>なし   | 査読の有無<br>有         |
| オープンアクセス<br>オープンアクセスではない、又はオープンアクセスが困難  | 国際共著<br>-          |

〔学会発表〕 計3件（うち招待講演 2件 / うち国際学会 1件）

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| 1. 発表者名<br>Croydon Silvia   |
| 2. 発表標題<br>Still a bit-player?: Japan and human embryonic stem cell research                  |
| 3. 学会等名<br>Nissan Institute for Japanese Studies, University of Oxford, United Kingdom (招待講演) |
| 4. 発表年<br>2022年   |

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| 1. 発表者名<br>Croydon Silvia  |
| 2. 発表標題<br>Thriving in the Shadow of Induced Pluripotency: Human Embryonic Stem Cell Research in Japan |
| 3. 学会等名<br>Uehiro Center for Practical Ethics, University of Oxford, United Kingdom (招待講演)             |
| 4. 発表年<br>2022年  |

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| 1. 発表者名<br>Croydon Silvia   |
| 2. 発表標題<br>Still a Bit Player?: Japan and human embryonic stem cell research                            |
| 3. 学会等名<br>Japanese Anthropology Workshop conference, Autonomous University of Barcelona, Spain. (国際学会) |
| 4. 発表年<br>2022年   |

〔図書〕 計0件

〔産業財産権〕

〔その他〕

Whilst producing an extensive publication record on the state of new eugenics in Japan (cf. the list of articles above), through this project, the PI has become aware of other gaps in the popular understanding of this country's attitude towards controversial bioethical issues, including those pertaining to the technology developed by Shinya Yamanaka of reprogramming of adult cells. As a result of undertaking this project, the PI is now led to pursue new avenues of research in this area and explore more broad bioethical topics in the context of Japan.

6. 研究組織

|                   | 氏名<br>(ローマ字氏名)<br>(研究者番号)              | 所属研究機関・部局・職<br>(機関番号)   | 備考 |
|-------------------|--|---|----|
| 主たる渡航先の主たる海外共同研究者 | サヴレスキュ ジュリアン<br><br>(Savulescu Julian) | オックスフォード大学・Uehiro Center for Practical Ethics・Singapore National University |    |

7. 科研費を使用して開催した国際研究集会

〔国際研究集会〕 計0件

8. 本研究に関連して実施した国際共同研究の実施状況

| 共同研究相手国 | 相手方研究機関 |
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