

Sex/Gender Differences in Work and Pathways to Parenthood in Industrialized Economies

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ABSTRACT

Many industrialized societies have below-replacement fertility rates and many of their governments have made fertility promotion an objective in their policy. South Korea, the context of two of my three studies, has the lowest fertility rate in the world. A deeper understanding of pathways into parenthood and parental leave policy from a South Korean context may provide insights as to how to address the problems of declining fertility and gender inequality in South Korea and other industrialized societies. Moreover, stubborn sex/gender differences in parental leave usage and labor force participation rates raise the question as to whether we might be overlooking some important element in our conceptualization of the work and parenting behaviors of men and women. Studies A, B, and C of my dissertation sought to answer these questions.

Study A seeks to examine the association between socioeconomic status of men and women and their lifetime fertility or childlessness. This study used data from the Korean Longitudinal Study of Aging (KLoSA), Wave 1 collected in 2006. Results showed that, for men, education, employment, and income were significantly positively associated having a child/children, whereas no significant association was found among women. The findings imply that in South Korea, men who have difficulty bearing the normative expectation of financial responsibility of fatherhood tend not to have children.

Study B is a theoretical discussion paper, where I applied a biological/evolutionary framework to understanding the sex/gender differences in parental leave and labor force participation behaviors. The refractory nature of gender gaps in parental leave and labor force participation statistics raises the question as to whether the current dominant conceptualization of gender gaps needs to be reexamined. Application of biological/evolutionary thinking reveals that

it can contribute to explaining the stubborn nature of the sex differences in work and parenting behaviors. This paper illustrates how, and under what circumstances, the biological/evolutionary framework can be applicable in discussions around sex/gender gaps in work and parenting behaviors, with rudimentary policy idea examples, and can be helpful for thinking about what each society is willing to give up for sex/gender equality.

Study C is a policy case study on parental leave in the context of South Korea. Based on the idea that policy making is a political process where values clash, this policy case study is an attempt to uncover the assumptions behind the arguments for two parental leave policy alternatives in South Korea. The data sources from which to infer values and assumptions were official documents and public comments on the National Assembly website. The data were analyzed using a constant comparison method. The findings can be summarized in three points. First, the narratives around parental leave were gendered. Second, there appeared to be competing narratives about fathers' motivation for childrearing. Third, philosophical tensions between equality and individual choice were apparent in the discourse around parental leave policies.

I anticipate that my dissertation makes a unique contribution to advancing knowledge about sex/gender differences in work and pathways to parenthood in industrialized economies. By elucidating the normative expectations of fatherhood, bringing to the foreground biological sex differences in work and parenting behaviors, and highlighting the narratives around parental leave policies that have been overlooked, the findings and discussions of these three studies provide implications for how South Korea and other industrialized societies around the world could approach the issues of low fertility and sex/gender differences in work and parenting behaviors.

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Table of Contents

Abstract	2
Acknowledgements	4
Chapter 1: Introduction	8
Statement of the Problem	8
Theoretical Frameworks	10
Life History Theory	10
Biological and Evolutionary Perspectives	11
Sociocultural Perspectives	12
Policy Responses to Declining Fertility	13
Parental Leave	14
South Korea as a Context	15
My Three Studies	16
References	19
Chapter 2: Study A: The Association Between Socioeconomic Status and Lifetime Fertility for Men and Women in South Korea: Is There a Gender Difference?	24
Introduction	24
Literature Review	25
Methods	30
Sample	30
Procedure	31
Measures	31
Analyses	35
Results	35
Chi-Square Tests for Childlessness	36
Association between Economic Variables (Education, Employment, and Income) and Childlessness for the Total Sample	38
Association between Economic Variables (Education, Employment, and Income) and Childlessness for Men and Women	40
The Moderation Effect of Gender on the Impact of Socioeconomic Variables on Childlessness	42
Discussion	42
Conclusion	45
References	47

Chapter 3: Study B: Alternative conceptualizations of the stubborn sex/gender gaps in parental leave usage and labor force participation rates: A theoretical discussion	53
Introduction.....	53
Background.....	55
The Story of Sweden.....	58
Sociocultural Perspectives	60
Biological and Evolutionary Perspectives	62
Why biological and evolutionary perspectives?	64
Applications of the BEF.....	66
<i>Gestation and lactation</i>	67
<i>Establishing paternity</i>	68
Biological/Evolutionary Thinking Guiding Policy Discussions.....	70
Mandatory parental leave policy.....	71
Policy that provides strong incentives for paternity testing.....	74
Setting goals and choosing paths	77
Conclusion	78
References.....	80
Chapter 4: Study C: A Case Study of South Korea’s Parental Leave Policy Discourse: Exposing the Implicit Values and Assumptions in Policy Debates	88
Introduction.....	88
Why Parental Leave?	92
Two Different Approaches to Parental Leave Policy in South Korea	93
Approach A: The Current Policy – Voluntary Parental Leave.....	94
Approach B: Mandatory Parental Leave for Fathers	95
Methods.....	97
Data Sources	98
Data on Approach A	98
Data on Approach B.....	99
Qualitative Analysis.....	100
Results from Part 1: Constant Comparative Analysis of Official Documents.....	105
Sex-Targeted Nature of Policies	107
Male-specific elements	107
Female-specific elements.....	108

Equality vs. Liberty.....	111
Results from Part 2: Constant Comparative Analysis of Public Comments.....	113
Arguments for Mandating Fathers’ Parental Leave.....	115
Benefits for the society	115
Benefits for women.....	116
Benefits for children	117
Policy vs. norm	117
Benefits for men.....	118
Fathers’ responsibility as a parent.....	119
Arguments against Mandating Fathers’ Parental Leave	120
Conservative ideologies	120
Similarities and Differences between Results from Parts 1 and 2	122
Similarities	122
Narratives about biological factors influencing females only	122
Narratives about environmental factors influencing both males and females	122
Emphasis on individual choice and responsibility.....	123
Differences	123
Mentions of women’s sole childrearing and men’s lonely death in Part 2 only.....	123
Competing narratives about fathers’ parental motivation in Part 2	124
Discussions: Implications from Results from Parts 1 and 2	124
Different Narratives for Men’s and Women’s Parental Leave.....	124
Environmental and Biological Factors.....	125
Competing Narratives around Fatherhood.....	126
Philosophical Tensions	126
Limitations and Future Research Directions.....	128
Conclusion	130
References.....	133
Chapter 5: Conclusion.....	141
Purpose.....	141
Major Findings.....	141
Implications.....	143
References.....	152

Chapter 1: Introduction

Statement of the Problem

For my doctoral dissertation, I have conducted three studies that are relevant to the topics of sex/gender differences in work and parenting behaviors, childlessness, and parental leave policy in South Korea and other industrialized economies. Low fertility is a concern for many industrialized economies due to the inevitable impacts on the economy that population decline entails, as well as an ensuing imbalance between the number of workers and those needing care. Fertility rates, defined as the number of children born on average to a woman over her lifetime per country, vary around the world, from 6.9 to 0.8 births per woman for 2020 (World Bank, 2023). Many developed countries have below-replacement (below 2.1 births per woman) rates, while developing countries have higher numbers (World Bank, 2023). South Korea, the context of two of the three studies of this dissertation, ranked the lowest for fertility rate among 200 countries and territories in 2020 (World Bank, 2023). The rate of population decline is projected to be so rapid that immigration will have only a minor impact (Westley, Choe, & Retherford, 2010).

Childlessness is an important phenomenon to understand in the study of fertility. According to Aarssen and Altman (2006), fertility decline is largely attributable to the fact that many more women today do not have children at all compared to the past. Childlessness is commonly divided into three large categories in the literature: involuntary childlessness, childlessness by choice, and childlessness by circumstances (Buhr & Huinink, 2017). Involuntary childlessness means that a person is childless because he/she lacks the biological capacity to reproduce. The second group, childlessness by choice, consists of people that consciously choose not to have children. Last, those that are childless by circumstances are

people who do not reject parenthood outright but postponed having children or remained childless for various reasons. Those that are childless by circumstances form the largest group within the childless population (Buhr & Huinink, 2017). That many childless people are childless due to circumstantial reasons implies that it may be possible to promote fertility by minimizing barriers to having children. These circumstantial barriers are the primary focus of my dissertation.

While both men and women experience circumstantial childlessness, men and women appear to have disparate barriers to parenthood. Existing literature on childless / voluntarily childless (childless for non-biological reasons) people demonstrates that the reported reasons for being/choosing childlessness are different by gender in industrialized economies. Women reported worry and stress about childcare, career, and physical consequences of childbearing, whereas men reported financial burden and not being able to make major purchases as reasons for childlessness (Avison & Furnham, 2015; Park, 2005; Seccombe, 1991; Sung, Choi, & Lee, 2015a; Sung, Choi, & Lee, 2015b). It has also been demonstrated in industrialized economies that gender is related to how socioeconomic status (SES) is associated with a person's childlessness. For men, the impact of SES on childlessness appears consistently unidirectional; those with high levels of education, employment, and income were more likely to be parents or intend to become parents (Berrington & Pattaro, 2014; Fiori, Rinesi, & Graham, 2017; Kanazawa, 2014; Kneale & Joshi, 2008; Miettinen et al., 2015; Miettinen & Szalma, 2014; Parr, 2010; Ravanera & Beaujot, 2014; Seiz, 2013; Vignoli, Derefahl, & De Santis, 2012; Waren & Pals, 2013). On the other hand, for women, the impact of socioeconomic status (SES) on childlessness tends to be inconsistent. Some studies report that women with high SES (education, employment, and income) tend to be childless / intend to remain childless (Abma & Martinez,

2006; Fiori, Rinesi, & Graham, 2017; Keizer, Dykstra, & Jansen, 2008; Parr, 2005; Waren & Pals, 2013). Other studies show mixed results or demonstrate the opposite direction of association (Kreyenfeld, 2005; Kreyenfeld & Andersson, 2014; Miettinen, 2010). We can see from these studies that pathways into childlessness are different by gender in advanced economies (Keizer, Dykstra, & Jansen, 2008).

Theoretical Frameworks

There are two main threads of theoretical frameworks with which to understand the sex/gender differences in the childlessness phenomenon. One large thread is sociocultural perspectives (Vygotsky, 1978). In sociocultural frameworks, the concept of gender, which is socially and culturally constructed characteristics of women and men, is emphasized as the primary influence that drives gender differences.

The other large thread is Charles Darwin's (1871) evolutionary paradigm, which is mostly concerned with how people behave to maximize their evolutionary fitness. "Evolutionary fitness" refers to the contribution to the next generation's genetic pool, which is directly related to reproductive success. In this dissertation, I divide this large theoretical paradigm into two subcategories: life history theory and biological and evolutionary perspectives. Life history is primarily concerned with how resources are allocated to maximize evolutionary fitness, whereas biological and evolutionary perspectives emphasize how male and female humans behave differently to maximize their fitness.

Life History Theory

Based on the evolutionary paradigm, life history theory asserts that people allocate their available resources to maximize evolutionary fitness. In trying to achieve maximum fitness, individuals make two resource allocation decisions. One is between growth/survival and

reproduction, and the other is between quantity and quality of offspring. Life history theory argues that resource availability is an important factor for decisions around reproduction. Individuals who have many resources would be able to allocate those resources to either the quantity or quality of children, or both. Life history theory provides a fitting explanation as to why industrialized societies tend to have lower fertility rates than agricultural societies. In industrialized economies, it takes more years (and thus more resources) to raise a child to be ready to work and function as an adult than in agricultural societies. So, in industrialized societies, because each child requires greater resources to raise than in agricultural societies, people have fewer children and allocate more resources to each child than in agricultural societies.

In life history theory, leaving offspring before death is considered an adaptive behavior. In other words, childlessness is not a direction that most people pursue when resources are available to them. The premise of life history theory - that people have an innate drive to reproduce - makes it possible for policies to intervene and help people who want to have children have them. This theory adequately explains why those who are childless by circumstances form the largest portion within the childless population. However, this theory alone does not explain why there are sex/gender differences in the childlessness phenomenon. This limitation leaves room for other theoretical perspectives, such as evolutionary biological and sociocultural frameworks, to be used concurrently with life history theory.

Biological and Evolutionary Perspectives

In biological and evolutionary frameworks, also based on the evolutionary paradigm, the premise is that human behaviors are influenced by and evolutionary forces and biological sex. The basic premise of evolutionary perspectives, when applied to human behaviors, is that

individuals take behavior strategies to maximize one's evolutionary fitness. Evolutionary fitness refers to the contribution to the next generation's genetic pool, which is directly related to the reproductive success of oneself and one's biological offspring. Applying this premise, in order to maximize evolutionary fitness, a parent can allocate his/her resources to (1) producing more children, or (2) investing in the child he/she already has, in order to maximize the chance of the child's reproductive success.

In biological and evolutionary perspectives, (natal) sex is “a conceptually unproblematic, highly significant binary category whose relevance to all aspects of experience across the lifespan has strong theoretical support” (Worthman, 1995, p. 579). So, biological sex is an important factor that drives sex differences in the behaviors of mothers and fathers because, for example, males and females make different biological investments when producing a child; in gestation, mothers bear a greater biological cost than fathers. Also, because fertilization occurs inside the body of a female and thus outside of the body of a male, males do not have the biological mechanisms to identify their biological offspring. In biological and evolutionary perspectives, these factors, among others, are emphasized as the influences that drive sex differences in the childlessness phenomenon.

Sociocultural Perspectives

In the Statement of the Problem section, I described that pathways into childlessness are different by “gender,” rather than “sex.” This emphasis on gender is what can be called the “gender” conceptualization, or a sociocultural approach to solving this ongoing concern. In brief, gender can be defined as socially and culturally constructed characteristics of women and men. Originally a theory of developmental psychology, the sociocultural theory focuses on the role of social interaction and culture in human behaviors (Allman, 2018; Vygotsky, 1978). Sociocultural

approaches, in the context of this paper that focuses on gender differences in work and parenting behaviors, refer to those that examine factors like gender norm-related attitudes and discrimination. Some of these norms include cultural expectations that women should be the one to stay home, and men should be the one to bear financial responsibility (Carlson, 2013). So, in sociocultural frameworks, the concept of gender bears greater significance than sex, which is the biological compositions of males and females. Because sociocultural influences that cause gender differences in parenting and workforce participation were created by the societies themselves rather than something innate, it is believed that it is also possible to undo such influences. Many societies have tried to incentivize women to stay in the workforce after childbearing and to encourage fathers to stay home and co-parent more equitably. For example, in South Korea's parental leave program, when the second parent uses parental leave after the first parent does, the benefit for the first three months is increased; this is to encourage fathers to use parental leave (Ministry of Employment and Labor, n.d.). Therefore, sociocultural frameworks are highly optimistic that social policy can mitigate gender differences related to parenting and working.

Policy Responses to Declining Fertility

Many industrialized economies have below-replacement fertility rates, and in 2015, fertility promotion was a declared family policy objective of 55 governments around the world (Sobotka, Matysiak, & Brzozowska, 2019). According to a working paper by the United Nations Population Fund (Sobotka, Matysiak, & Brzozowska, 2019), reasons for very low fertility include economic and labor market uncertainty; conflicts between career and family life; gender inequalities in the division of housework and childcare; high parenting demands; unaffordable housing; rapid family changes incompatible with long-standing norms, values and expectations;

and social and political upheavals. Some of the policy responses to declining fertility around the world include provision of accessible and high-quality childcare, parental leaves, one-time financial incentives, flexible working hours, subsidized and accessible provision of assisted reproduction, and financial support to low-income families. These measures are thought to have yielded varying results different countries. For example, even though accessible and high-quality childcare is understood to be indispensable to sustaining higher fertility rates, in some countries (such as Japan and South Korea), even expansions of childcare provision only had ambiguous impacts on fertility rates (Sobotka, Matysiak, and Brzozowska, 2019). This may imply that we do not fully understand how to respond to declining fertility rates in different places, and there is more to be learned about the phenomenon of low fertility.

Parental Leave

Among the many policies aimed at promoting fertility rates, I focus on parental leave in my dissertation because it is a measure that seeks to ameliorate gender inequality and the incompatibility of professional and personal lives. As mentioned above, there are many reasons why people are choosing to have fewer children or no children in industrialized nations. One important reason is that in many of these nations it is hard for women to have children and keep careers at the same time. If women did not have to sacrifice their careers when becoming mothers, the costs (and opportunity costs) of motherhood would be lower, offering one possible option for increasing fertility. If mothers could continue to bring in income to the family, fathers would not have to be sole breadwinners of their families. In other words, if it was easy for mothers to keep their careers, and the financial burden of fathers would be reduced, increasing the opportunity for them to invest their time in their families and childrearing. Keeping mothers in the labor force also means that there are more workers to vitalize the economy and taxpayers

to support the welfare system. Therefore, it is important that policy measures aim at making it easier for mothers to keep their careers, and in the late 20th century, parental leave policies were developed in part as a measure to encourage female labor force participation and promote families/fertility (Haas, 1992). The incompatibility of professional career and family life is cited as one of the main drivers of low fertility (Sobotka, Matysiak, & Brzozowska, 2019). Among the multiple measures to increase fertility, I focus on parental leave in since it is a measure that aims at achieving work-life balance and gender equality.

South Korea as a Context

South Korea is the context of two of the three studies in this dissertation. As mentioned above, in 2020, South Korea ranked the lowest for fertility rate among 200 countries and territories ranked by the World Bank (2023). The South Korean government has been trying to implement policies since 2005 to increase birth rates (Sung, Choi, & Lee, 2015a) but to no avail. Some of the policy measures implemented by the South Korean government have included providing varying degrees of affordable housing, maternity leave, spousal pregnancy leaves, reduced medical costs for children, flexible and/or reduced work hours, monthly child benefit (of about 88 US dollars), accessible childcare, and extra-curricular activities at school (Jang, 2018). However, the fertility rate has been falling consistently to 0.92 births per woman for 2019 (Heo, 2020). From this ongoing decline we can say that the existing policies have not (yet) been effective in encouraging fertility in Korea, but it is unknown whether the ineffectiveness of South Korea's approach is attributable to the policies' direction, strength, or both. A better understanding of fertility decisions and factors that lead to childlessness will be helpful in designing more effective policies to impact declining fertility.

Declining fertility is not a trend that is unique to South Korea; many industrialized economies have below-replacement and declining fertility rates (Sobotka, Matysiak, & Brzozowska, 2019). For example, the United States has a fertility rate of 1.6 births per woman, which is also below replacement rate. A deeper understanding of the childlessness phenomenon and parental leave policy narratives of South Korea, where fertility rate is the lowest in the world, will provide other countries an opportunity to think about the issue of low fertility before it gets as serious as in South Korea.

My Three Studies

For my three-paper dissertation, I conducted one empirical study using quantitative data, one theoretical discussion paper, and one policy case study. South Korea's low fertility rate is a concern that has not been effectively addressed by the government and little research on fertility has been conducted in South Korea specifically. To deal with the issue of declining fertility in South Korea more effectively, more information about the characteristics of childless men and women in Korea will be beneficial. In other advanced economies, studies demonstrated correlations between socioeconomic status and childlessness, so I conducted a similar statistical analysis for the first study (Study A) of my dissertation. Therefore, using quantitative methods, I explored the link between men and women's childlessness, and socioeconomic conditions in South Korea in the first study.

In the second study (Study B), I examined the applicability of a biological/evolutionary framework to understanding the sex/gender differences in parental leave and labor force participation behaviors. Application of biological/evolutionary thinking revealed that it can contribute to explaining the stubborn nature of the sex differences in work and parenting behaviors. Study B illustrated how, and under what circumstances, the biological/evolutionary

framework can be applicable in discussions around sex/gender gaps in work and parenting behaviors, with rudimentary policy idea examples, and can be helpful for thinking about what each society is willing to give up for sex/gender equality.

The third study (Study C) is a policy case study where I aimed to uncover implicit values and assumptions in the narratives around parental leave policies in South Korea. This case study is premised on the notion that policy decisions are the product of value arguments, rather than a rational quest to find a technical solution to a problem (Stone, 1997). Using official documents and public comments as data, I examined implicit values and assumptions in the narratives around the current parental leave policy and a bill that proposed mandating parental leave that did not pass. Exposing the implicit values and assumptions behind each policy argument will reveal what we are emphasizing and overlooking when conceptualizing parental leave policies. The knowledge of these values and assumptions will also make it easier to make policy decisions based on conscious examinations of value trade-offs. This study also offers insights into current policy struggles and the failure of policy options to increase fertility by highlighting the value tensions inherent in the current policy debate.

To sum up, Study A, the secondary data analysis study, highlighted that gender differences exist in the childlessness phenomenon in Korea; high SES men were more likely to be parents, whereas the same trend was not present among women. Study A identified in Korea the same trends of gender differences in the pathways into parenthood that were present in other industrialized nations. Then, Study B, the theoretical discussion paper, investigated the topic of sex/gender differences that came up in Study A. Study B focused on the differences in the work and parenting behaviors of men and women, and discussed how biological and evolutionary perspectives could be helpful in conceptualizing the sex differences in labor force participation

and parental leave usage rates, with rudimentary policy ideas. Lastly, Study C, the policy case study, zoomed back into Korea and investigated how the South Korean government and the general public were conceptualizing the parental leave policies. Study C illuminated, among others, that mothers' and fathers' parental leaves were conceptualized in a gendered way, and that there was pessimism in the projections about how rapidly the gender gaps in parental leave usage will narrow. Taken together, I anticipate that this dissertation will help us better understand the pathways into childlessness in Korea, better make sense of sex/gender differences in work and parenting behaviors and bring to the foreground the clash of values in the policy debates around parental leave in Korea, so that policy discussions can happen based on conscious examinations of assumptions, and with realistic goals in mind.

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Chapter 2:

Study A: The Association Between Socioeconomic Status and Lifetime Fertility for Men and Women in South Korea: Is There a Gender Difference?

Introduction

Declining fertility is a concern for many industrialized economies due to the inevitable impacts on economic and military power that population decline entails, as well as an ensuing imbalance between the number of workers and those needing care. Fertility rates, defined as the number of children born on average to a woman over her lifetime per country, vary around the world, from 6.9 to 0.8 births per woman for 2020 (World Bank, 2023). Most industrialized economies have below-replacement (below 2.1 births per woman) fertility rates, while developing countries have higher rates (World Bank, 2023).

In 2020, South Korea ranked the lowest for fertility rate among 200 countries and territories ranked by the World Bank (2023). The South Korean government has been trying to implement policies since 2005 to increase birth rates (Sung et al., 2015a) but to no avail. Some of the policy measures implemented by the South Korean government have included providing varying degrees of affordable housing, maternity leave, spouse pregnancy leaves, reduced medical costs for children, flexible and/or reduced work hours, monthly child benefit (of about 88 US dollars), accessible childcare, and extra-curricular activities at school (Jang, 2018). However, the fertility rate has been falling constantly to 0.98 births per woman for 2018 (Gim, 2019). From the results we can say that the existing policies have not been effective in encouraging fertility in Korea. It is unknown whether the ineffectiveness of South Korea's approach is attributable to the policies' direction, strength, or both. A better understanding of fertility decisions and factors that lead to childlessness can be helpful in designing more effective

policies. Therefore, the purpose of this paper is to explore the link between men and women's childlessness and socioeconomic conditions in South Korea.

Literature Review

Childlessness is an important phenomenon to understand in the study of fertility. According to Aarssen and Altman (2006), fertility decline is largely attributable to the fact that many women do not have children at all. Childlessness is often divided into three large categories in the existing literature: involuntary childlessness, childlessness by choice, and childlessness by circumstances (Buhr & Huinink, 2017). Involuntary childlessness commonly means that a person does not have children because he/she lacks the biological capacity to reproduce. The second group, childlessness by choice, consists of people that consciously chose not to have children. Lastly, those that are childless by circumstances are people that do not definitely reject parenthood but postponed having children or remained childless for different reasons. Those that are childless by circumstances forms the largest group within the childless population (Buhr & Huinink, 2017). In contrast to the involuntarily childless group, people that are childless for non-biological reasons (childless by choice or childless by circumstances) are often called 'voluntarily' childless.

There has been prior research to understand the childlessness phenomenon and the focus of such research has mostly been on women. For example, there have been studies on women's fertility intentions over time (Hayford, 2009), reported reasons for choosing childlessness (Graham et al., 2013), experiences of being childless (Doyle et al., 2013), psychological well-being among voluntarily and involuntarily childless women compared to mothers (Jeffries & Konnert, 2002), dealing with the stigma aimed at women who do not have children (Gillespie, 2000; Kelly, 2009), and on the role of companion animals on fertility intentions (Laurent-

Simpson, 2017). While there is still significant room for research, the research literature on women's fertility is fairly well-established.

Men are a relatively understudied group in the research field of childlessness (Bell, 2013; Blackstone & Stewart, 2012; Jamieson et al., 2010), though men's attitudes are as important as women's in making a couple's fertility decisions. One older study (Marciano, 1978) shows that within a couple, when the husband and the wife disagree on fertility intentions, women tend to follow their husbands' decisions. A more recent study from Italy (Tanturri & Mencarini, 2008) shows that there was a larger percentage of voluntarily childless women who ascribed their childlessness to their husbands than those who attributed that choice to their own preferences (the age of respondents for this study were 40-44, an age range that was deemed old enough to provide information about permanent childlessness). This tells us that, for lifetime fertility choices, intentions of men are at least as important as those of women.

Studies on voluntarily childless individuals illustrate that pathways to fertility decisions are not identical for men and women (Park, 2005; Seccombe, 1991). Women reported worry and stress about childcare, career, and physical consequences of childbearing, whereas men reported financial burden and not being able to make major purchases as reasons for childlessness (Avison & Furnham, 2015; Park, 2005; Seccombe, 1991). It can be seen that intentions of both men and women are important in fertility decisions and that pathways into fertility decisions are different by gender. Thus, it is important to study characteristics of childlessness for both men and women.

We have some knowledge about childlessness and socioeconomic factors for men in industrialized economies. It has been shown that men with high levels of education are less likely to be childless and/or intend to remain childless (Fiori et al., 2017; Kneale & Joshi, 2008;

Miettinen et al., 2015; Miettinen & Szalma, 2014; Parr, 2010). Conversely, a Canada-based study (Ravanera & Beaujot, 2014) finds that childlessness was positively associated with education among younger age groups (20-29 and 30-39). Ravanera and Beaujot (2014) attribute this positive association to the 'postponement effect' of education; the postponement effect means that those with high levels of education start their careers late, and thus postpone having children until a later age. Employment and occupational status were also found to be significantly negatively associated with men's childlessness/intentions to remain childless in multiple studies (Berrington & Pattaro, 2014; Fiori et al., 2017; Miettinen & Szalma, 2014; Parr, 2010; Ravanera & Beaujot, 2014; Seiz, 2013; Vignoli et al., 2012; Waren & Pals, 2013). Also, a Finland-based study demonstrates that unemployed men were more likely to relinquish parenthood; in other words, they were more likely to have no fertility intentions, even though their personal ideal number of children is above zero (Miettinen, 2010). Similarly, negative associations were found between income and childlessness/intentions to remain childless for men (Kanazawa, 2014; Ravanera & Beaujot, 2014; Vignoli et al., 2012). There appears to be a trend that men with low socioeconomic status are more likely to be childless in industrialized economies.

For women, the impact of socioeconomic status on childlessness tends to be inconsistent. It has been demonstrated that in Australia women with higher income tended to be childless (Parr, 2005) and in the Netherlands, highly educated women tended to remain childless (Keizer et al., 2008). In the United States those with higher years of education (Waren & Pals, 2013) or those with higher incomes and prior work experience (Abma & Martinez, 2006) were more likely to be voluntarily childless. Similarly, in Italy and Britain, women with no employment or part-time employment were less likely to be childless (Fiori et al., 2017). A Germany-based

study (Kreyenfeld, 2005) that investigates the impact of economic uncertainty on women's fertility postponement demonstrates different directions of association based on women's educational attainment. Women with high levels of education tended to postpone parenthood when they feel worried about their personal economic status. However, women with low education were more likely to become pregnant when they are unemployed or unhappy with their personal economic situation (Kreyenfeld, 2005). Also, unemployed women aged 29 to 44 had lower risks of first birth compared to employed women in Germany (Kreyenfeld & Andersson, 2014). In Finland, women with high income were less likely to be voluntarily childless (Miettinen, 2010). The impact of socioeconomic status on fertility appears inconsistent among women, which may indicate a need to more closely examine policy contexts or cultural contexts to better understand the relationship.

As mentioned earlier, South Korea has the lowest fertility rate in the world (World Bank, 2023), and there has been research that examined reasons for childlessness and the characteristics of childless people and couples. There was a qualitative study on South Korean men who were delaying parenthood (Sung et al., 2015a). Sung, Choi, and Lee's in-depth interview study mentions economic problems and insecure living standards as important reasons for their postponement of fatherhood. A similar in-depth interview study on married women who were delaying parenthood (Sung et al., 2015b) finds economic difficulties and difficulty of maintaining both work and childcare, among others, as reasons for fertility decisions. Using married couples' data, Lim (2021) examined the socioeconomic differentials of fertility in South Korea, and found that husbands' higher education, standard (relatively secure) employment, and homeownership were associated with transition to parenthood, but employed wives were less likely to enter parenthood. Lim (2021) is very similar to this study in that it also examined the

association between socioeconomic status and (transition to) parenthood; however, this study is unique in that it tested the relationship between economic variables and lifetime fertility of South Korean men and women, including those who have never been married. This gap in knowledge is critical because researchers point out the possibility that economic factors are a potential reason for South Korea's low fertility rate, but this possibility has not been fully validated (Sung et al., 2015a; Sung et al., 2015b; Yang & Rosenblatt, 2008), especially for lifetime fertility.

Research on middle-aged people is important because it provides information about lifetime fertility, but there is no study on middle-aged individuals and childlessness in Korea. The age of 45 is commonly used as the cut-off point when examining completed fertility (Ciganda, 2015; Parr, 2010). Only by looking at middle-aged or older adults we can make conclusions about who remains childless until (nearly) the end of their childbearing years. In order to find out whether the trend for childlessness found in other industrialized economies is also present for middle-aged men and women in South Korea, this study investigates the effect of education level, employment status, and income on childlessness of middle-aged men and women.

Gender differences in the childlessness phenomenon imply that gender norms may play a role in who becomes a parent and who remains childless. It could be that those that do not fit into the expected roles of the male breadwinner/female homemaker family model tend not to have children. The authors of a Canada-based study on childless men stated that 'the normative expectation that men should be economically stable before forming a family and becoming a parent continues to prevail' (Ravanera & Beaujot, 2014, p. 59).

South Korea has a unique culture around marriage and parenthood. In South Korea, marriage is a very common path toward procreation. According to the OECD (2019), only 1.9%

of births happened outside of marriage in Korea in 2014; this is the lowest rate among OECD countries. It seems that marriage rates and fertility rates are declining together; marriage rate declined steadily from 1970 to 2020 in South Korea (OECD, 2022). Moreover, South Korea has a distinctive culture around children's education. Anderson and Kohler (2013), using South Korea as a case study, examine the link between the low fertility rates of East Asian countries and the culture of the region that places high emphasis on children's education. They suggest that the cultural norm of 'education fever' raises the cost of childrearing in East Asian countries, such as South Korea, perhaps making socioeconomic factors more salient in procreation choices. Following Ravanera and Beaujot's (2014) theoretical explanation, this study is a preliminary attempt to investigate whether one's ability to fulfill the normative expectation for fatherhood/motherhood influences childlessness in South Korea.

Methods

Sample

Cross-sectional data of the baseline survey (Wave 1, conducted in 2006) of the Korean Longitudinal Study of Aging (KLoSA) (Korea Employment Information Service, n.d.) was used for this study. KLoSA is a nationally representative sample of people aged 45 and older living in households (as opposed to those living in institutions) in South Korea, except the island of Jeju. The original purpose of KLoSA is to guide policy making in preparation for the aging society of South Korea (Korea Employment Information Service, n.d.). The survey collected data about respondents' health, income, consumption, assets, and employment (Korea Employment Information Service, n.d.). The population was stratified according to region and type of housing (apartment and non-apartment). The total number of respondents in the sample was 10,254.

In an attempt to minimize contamination in the employment variable by retirement, the upper limit for age was set at 59. The statistical analysis of this study used a subsample of 4,705 men and women aged 45 to 59 (1947-1961 birth cohorts). Among the 4,705 individuals, 167 were childless. It is safe to state that the number of children an individual has in this age group is close to his/her lifetime fertility.

Procedure

The KLoSA Wave 1 survey was conducted in the six-month period starting from July 2006 through personal interviews. Households were selected and visited based on stratification and randomization. Selected households were informed by mail that they would be visited by interviewers. Interviewers visited households that had at least one person aged 45 or above. 7,574 households were considered to meet the qualifications and at least one member in 6,171 households responded. The response rate for households was 81.5%. Everyone above the age of 45 in the household was interviewed. 13,602 individuals were considered to meet the criteria for this survey and 10,254 completed the survey within the time frame; the response rate for individuals was 75.4%. If there was no one above 45 in the visited household, the next household was visited. Computer assisted personal interviewing (CAPI) was used to receive the information from subjects. At the end of the interview, respondents received a predetermined amount of money as an incentive. Korea Employment Information Service did not reveal the amount of the incentives.

Measures

In this study, level of education, status of employment, and the amount of income are examined as the socioeconomic status (SES) variables per person. Education, income, and occupation are key components recommended by The National Committee on Vital and Health

Statistics for consistent measures of SES across groups (Carr, 2012). In addition to education, employment, and income, they also recommended using ‘family size and relationships’ as a measure for SES, in order to capture the amount of resources allocated to one individual in the family unit. However, family size and relationships will not be used as a measure for SES in this study because family size is directly relevant to the outcome variable of this study (whether a person is childless or not). Family size and relationships cannot be used as a dependent variable and independent variable at the same time. Moreover, education, employment, and income were commonly used as measures for socioeconomic factors across many previous studies, and therefore are consistent measures for SES. In this study, two dependent variables, four independent variables, and four control variables were utilized.

For childlessness, the dependent variable, a re-coded variable of the original variable, ‘number of children alive,’ was used. For this research, this question was re-coded into a dichotomous variable, where 0 represents childless and 1 denotes having a child/children. It is important to note that this measure denotes childlessness vs. having a child/children, and not childlessness by choice or circumstances. From this data, one cannot make claims about their ideal number of children. Moreover, this survey question did not capture the number of deceased children that respondents may have had.

Gender was used as an independent variable. For analyses that involve either only men or only women, gender is used as a grouping variable. The responses for the variable were either male or female.

For the second independent variable, education, a re-coded variable of an original variable in the survey was used. The original variable was labeled ‘respondent’s education level’ and the respondent had the following four options: ‘elementary school or below,’ ‘middle school

graduate,’ ‘high school graduate,’ and ‘university graduate or higher.’ This variable was recoded into a three-outcome variable by combining elementary school or below and middle school graduate into middle school or below. The value of 1 represented middle school or below, 2 high school graduate, and 3 university graduate or higher. In other research (such as Parr 2010 or Ravanera & Beaujot, 2014), middle school graduates are usually grouped together as ‘high school or below’. In this study, however, middle school or below is a separate category because a large percentage of people in this sample fit into the categories of middle school or below (43.6%; 2047 out of 4,700) and high school graduate (41.1%; 1930 out of 4,700). This is probably because for most people in the sample education was free only up to elementary school, as middle school education started becoming free in 1985 and has become completely free in 2002 (Lee, 2018).

For the third independent variable, employment, one original variable in KLoSA was used. The original variable was whether the respondent was working or not at the time of the interview. ‘Yes’ to this question means that he/she was working, and ‘no’ means that he/she was not working.

For the fourth independent variable, income, four original variables in KLoSA were recoded into one variable for combined income from employment and self-employment. Variable 1 was ‘whether respondents had income from employment’ in the year before the interview, 2005. Variable 2 was ‘whether the respondent had income from self-employment’ in 2005. The third and fourth variables were ‘average monthly incomes’ from ‘employment’ and ‘self-employment’ in South Korean won (KRW). Variables 3 and 4 originally had missing outcomes if the respondent did not have income from employment or self-employment, respectively. The missing outcomes in Variables 3 and 4 were replaced by 0’s when it was clear from Variables 1

and 2 that the respondent had no income from the source. However, when they refused to respond whether or not they had income in Variables 1 and 2, the missing outcomes remained as missing in Variables 3 and 4. To make a variable for total income from employment and self-employment, Variables 3 and 4 were added. When there was at least one missing outcome in either Variables 3 or 4, the combined variable was left as missing. Lastly, the combined variable was re-coded into a dichotomous variable, according to whether the respondent had an income that was above or below the 2005 average monthly wage of KRW 2,404,385 (Ministry of Employment and Labor, n.d.).

Age group was used as a control variable. Ravanera and Beaujot (2014) demonstrated that the proportions of childless men are higher in recent birth cohorts than in older cohorts. To account for the effect of cohorts, age group was used as a control variable. Age was grouped into three categories identical to those used in Parr (2010): 45-49 year olds, 50-54 year olds, and 55-59 year olds.

Disability was used as the second control variable. This is to prevent spurious associations between the independent and dependent variables. It is possible that a person is not in employment, does not have high levels of education, and is childless because he is severely disabled. The effect of disability on childlessness was accounted for in the logistic regression in order to minimize such confounding influence. This question asked whether the respondent has ever been diagnosed with a disability by a doctor (yes/no).

Region was used as the third control variable. The original variable for region had 15 administrative divisions of South Korea as outcomes. This was re-coded into a dichotomous variable that denotes whether a respondent resides in the Seoul Capital Area (*sudogweon* in Korean) which includes Seoul, Incheon, and Gyeonggi. Seoul Capital Area is where much of the

economic and political functions of the country are concentrated. In 2006, about half (48.4%) of the total population of South Korea resided in Seoul Capital Area (Korean Statistical Information Service, n.d.).

Religion was used as the fourth control variable. The original variable for religion had six outcomes: no religion, Protestantism, Catholicism, Buddhism, Won Buddhism, and other. The re-coded variable had four outcomes: no or other religion, Protestantism, Catholicism, and Buddhism (three major religions of South Korea). Won Buddhism and other had very low frequencies: 6 (0.1%) and 37 (0.8%), respectively. Therefore, no religion, Won Buddhism and other were combined into 'no or other religion.'

Analyses

Using SPSS, crosstabulations, chi-square tests, and logistic regression analyses were run. For the logistic regression analysis, the dependent variable was 'having a child/children,' the independent variables were gender, education, employment, and income, and the control variables were age group, disability, region, and religion. To test the moderation effect of gender on socioeconomic variables, interaction terms between education, employment, or income and gender were used. Missingness was treated with listwise deletion. The logistic regression analyses only used cases that had complete data; 4,613 out of 4,705 (98.0%) were included in the analysis. Most of the missingness was from the income variable, which had 86 missing cases (1.8%) out of 4705.

Results

The sample represented a diverse cross-section of South Korean's middle-aged population. Slightly more women than men were in the sample, but there was great diversity in terms of education, income, employment, religion, disability status, and other factors. In relation

to the dependent variable, in the total sample, 3.6% (167 out of 4,704) of the respondents were childless.

Chi-Square Tests for Childlessness

Table 1 presents results from the crosstabulations and chi-square analyses. For the total sample, the dependent variable of having a child/children had statistically significant relations with age group, disability, region, religion, gender, education (marginal significance), employment, and income. For consistency, the same independent and control variables were used for logistic regression analyses, even when some of the variables were not significantly associated with the outcome variable in the chi-square tests. This was because some variables had significant associations in one gender and not the other.

Table 1

Crosstabulations and Pearson's chi-square tests for numbers and percentages of respondents who have never been married or are childless by variables: Men and women aged 45-59 in KLoSA Wave 1 data for South Korea 2006.

	# of individuals childless (% within row)	Row total
Age Group (control)	$\chi^2 = 15.443$ **	
45-59	81 (4.5%)	1789
50-54	58 (3.9%)	1506
55-59	28 (2.0%)	1409
Disability (control)	$\chi^2 = 52.522$ **	
No disability	139 (3.1%)	4474
Has a disability	28 (12.2%)	230
Region (control)	$\chi^2 = 19.783$ **	
Does not live in Seoul Capital Area	72 (2.6%)	2808
Lives in Seoul Capital Area	95 (5.0%)	1896
Religion (control)	$\chi^2 = 8.491$ *	
No or other religion	86 (4.0%)	2152
Protestantism	42 (4.3%)	968
Catholicism	10 (2.5%)	397
Buddhism	29 (2.4%)	1187
Gender (IV)	$\chi^2 = 13.158$ **	
Female	70 (2.7%)	2616
Male	97 (4.6%)	2088
Education (IV)	$\chi^2 = 5.234$ ^	
Middle school or below	87 (4.3%)	2046
High school graduate	57 (3.0%)	1930
University graduate or higher	23 (3.2%)	723
Employment (IV)	$\chi^2 = 4.376$ *	
Not working	83 (4.2%)	1969
Working	84 (3.1%)	2735
Income (IV)	$\chi^2 = 8.450$ **	
Below average	150 (3.9%)	3869
Above average	13 (1.7%)	749

** . $p < 0.01$; * . $p < 0.05$; ^ . $p < 0.10$ for Pearson's chi-square tests between each pair of variables

Association between Economic Variables (Education, Employment, and Income) and Childlessness for the Total Sample

For the total sample, the control variables, age, disability, and region were significantly associated with having a child/children. The independent variables, gender, education, employment, and income were significantly positively associated with having a child/children after accounting for the control variables. Model 1 in Table 2 presents the result from the logistic regression analysis for childlessness for the total sample. Being male had a significant negative association with having a child/children ($p < 0.01$; OR: 0.373; CI_{95%}: 0.256, 0.542). Being a high school graduate had a significant positive association with having a child/children ($p < 0.01$; OR: 1.846; CI_{95%}: 1.286, 2.650). The odds of high school graduates having a child/children were 1.846 times higher compared to those with middle school education or below. Being a university graduate or higher had a marginally significant positive association with having a child/children ($p < 0.1$; OR: 1.651; CI_{95%}: 0.966, 2.820). Compared to those with middle school or below level of education, the odds of university graduates having a child/children were 1.651 times higher. For the employment variable, compared to those not working, those working were significantly more likely to have a child/children ($p < 0.01$; OR: 1.661; CI_{95%}: 1.147, 2.407); their odds of having a

Table 2

Logistic regression model for the outcome variable of childlessness: Men and women aged 45-59 in KLoSA Wave 1 data for South Korea 2006.

Outcome: <i>has a child/children</i>	Model 1 Men and women Odds Ratio	Men only Odds Ratio	Women only Odds Ratio
Age Group (control) (Ref. 45-49)			
50-54	1.388 ^	2.506 **	0.604 ^
55-59	3.545 **	7.576 **	1.270
Disability (control) (Ref. no disability)			
Has a disability	0.341 **	0.475 *	0.208 **
Region (control) (Ref. does not live in Seoul Capital Area)			
Lives in Seoul Capital Area	0.510 **	0.497 **	0.544 *
Religion (control) (Ref. no or other religion)			
Protestantism	0.873	0.926	0.736
Catholicism	1.467	4.495 *	0.739
Buddhism	1.304	1.983 ^	0.847
Gender (IV) (Ref. female)			
Male	0.373 **		
Education (IV) (Ref. middle school or below)			
High school graduate	1.846 **	2.009 **	1.328
University graduate or higher	1.651 ^	2.243 *	0.852
Employment (IV) (Ref. not working)			
Working	1.661 **	2.809 **	1.029
Income (IV) (Ref. below average)			
Above average	2.625 **	2.643 **	1.269

***. p* < 0.01; **. p* < 0.05; ^*. p* < 0.10; Odds ratios of interest for the analyses are in bold.

child/children were 1.661 times higher compared to those not working. For income, the reference category was having an income of below average. Having an income of above average had a significant positive association with having a child/children (*p*<0.01; OR: 2.625; CI_{95%}: 1.393,

4.947). Compared to those with the income of below average, the odds of those with above average having a child/children were 2.625 times higher.

Association between Economic Variables (Education, Employment, and Income) and Childlessness for Men and Women

Table 2 also presents the result from the logistic regression analyses for childlessness for men and women separately. For men in the sample, the control variables, age, disability, region and religion were statistically significant. The independent variables, education, employment, and income were significantly positively associated with having a child/children after accounting for the control variables. For education, the reference category was middle school or below. Being a high school graduate had a significant positive association with having a child/children ($p < 0.01$; OR: 2.009; CI_{95%}: 1.227, 3.289). The odds of high school graduates having a child/children were 2.009 times higher compared to those with middle school or below. Likewise, being a university graduate or higher had a significant positive association with having a child/children ($p < 0.05$; OR: 2.243; CI_{95%}: 1.110, 4.533). Compared to those with middle school education or below, the odds of university graduates having a child/children were 2.243 times higher. For employment, compared to those not working, those working were significantly more likely to have a child/children ($p < 0.01$; OR: 2.809; CI_{95%}: 1.681, 4.693); their odds of having a child/children were 2.809 times higher compared to those not working. For income, the reference category was having an income of below average. Having an income of above average had a significant positive association with having a child/children ($p < 0.01$; OR: 2.643; CI_{95%}: 1.301, 5.367). Compared to those with the income of below average, the odds of those with above average having a child/children were 2.643 times higher.

Table 3

Examination of the moderation effect of gender on the impacts of socioeconomic variables on childlessness: Men and women aged 45-59 in KLoSA Wave 1 data for South Korea 2006.

Outcome: <i>has a child/children</i>	Model 2 Odds Ratio	Model 3 Odds Ratio	Model 4 Odds Ratio
Age Group (control) (Ref. 45-49)			
50-54	1.377 ^	1.387 ^	1.383 ^
55-59	3.506 **	3.592 **	3.547 **
Disability (control) (Ref. <i>no disability</i>)			
Has a disability	0.342 **	0.374 **	0.345 **
Region (control) (Ref. <i>does not live in Seoul Capital Area</i>)			
Lives in Seoul Capital Area	0.514 **	0.515 **	0.509 **
Religion (control) (Ref. <i>no or other religion</i>)			
Protestantism	0.869	0.876	0.874
Catholicism	1.480	1.468	1.464
Buddhism	1.299	1.302	1.307
Gender (IV) (Ref. <i>female</i>)			
Male	0.332 **	0.267 **	0.358 **
Education (IV) (Ref. <i>middle school or below</i>)			
High school graduate	1.710 ^	1.805 **	1.850 **
University graduate or higher	1.122	1.608 ^	1.634 ^
Employment (IV) (Ref. <i>not working</i>)			
Working	1.640 **	1.154	1.676 **
Income (IV) (Ref. <i>below average</i>)			
Above average	2.441 **	2.448 **	0.994
Education × gender (interaction term) (Ref. <i>middle school or below × female</i>)			
High school graduate × male	1.166		
University graduate or higher × male	1.881		
Employment × gender (interaction term) (Ref. <i>not working × female</i>)			
Working × male		2.014 *	
Income × gender (interaction term) (Ref. <i>below average × female</i>)			
Above average × male			2.996

** . $p < 0.01$; * . $p < 0.05$; ^ . $p < 0.10$; Odds ratios of interest for the analyses are in bold.

For women in the sample, the control variables, age group, disability, and region had significant or marginally significant associations with having a child/children. The independent variables, education, employment, and income, were not statistically significantly associated with having a child/children after accounting for the control variables.

The Moderation Effect of Gender on the Impact of Socioeconomic Variables on Childlessness

In addition to Model 1, the interaction terms between each socioeconomic variable and gender were added. Again, one interaction term was added at a time to each model. Table 3 presents the findings from the examination of the interaction effects. Model 2 shows that the interaction term between education and gender was not significant with respect to having a child/children. Model 3 demonstrates that the interaction effect between employment and gender on childlessness was statistically significant ($p < 0.05$). Model 4 illustrates that there was no significant interaction effect between income and gender with respect to having a child/children.

Discussion

This Korea-based study on lifetime fertility revealed two main findings. First, education, employment, and income were significantly positively associated with having a child/children. Second, for men, education, employment, and income were significantly positively associated with having a child/children, whereas for women, none of the socioeconomic variables had significant associations with having a child/children. There were clear differences in the results of men and women. The statistically significant effects of socioeconomic variables on having a child/children for the total sample appear to be mostly, if not completely, driven by men.

The significant positive associations between socioeconomic variables and having a child/children imply that, in South Korea (at least in the older generations), men tend not to have

children when there is a discrepancy between one's own capacity (perceived by oneself or by others) and the normative expectation of economic capability of fatherhood (Ravanera & Beaujot, 2014). This relationship could be because these men internalize the norms of fatherhood, and/or because they have difficulty finding a partner (Ahn, 2010) to have children with due to the discrepancy between their low socioeconomic status and ideals about male breadwinners. Also, it appears that the traditionally masculine financial responsibility was a burden for men only in this cohort.

Some recommendations can be made for policy design and future research. First, it appears that men's childlessness seems to be impacted by poor socioeconomic status, which is presumably not by voluntary choices. If it can be assumed that there is no difference in ideal numbers of children between those in high SES and low SES, childlessness by circumstances appears to be a major group within childless men. However, more research is needed to find out whether individuals' fertility ideals are different by SES in South Korea.

This study's examination of the effects of socioeconomic variables on childlessness highlighted that men in South Korea tended to have a child/children when they were able to take care of financial responsibilities. Consequently, alleviating men's normative financial burden could be one of the possible ways to encourage fertility in South Korea. The financial responsibility of men can be reduced by sharing it with women by encouraging female labor force participation. If women can bring incomes of their own, families would not have to rely on men's economic capability alone. Women would not have to be as selective about men's socioeconomic standing when finding a partner and having children with him as they would in the male breadwinner/female homemaker model. This would mean a large cultural shift, both in terms of convincing men to support their wives' wage earning, but also providing additional care

outside of the home for children to allow women to return to the workplace. Another place for policy intervention would be to encourage the development of daycare and other childcare situations at low or reduced costs. A potential implication of this study's findings for South Korea and other countries is that family-friendly policies and change in culture that enable and encourage sharing of financial responsibility could be beneficial for slowing fertility decline. However, more research is needed to determine what the best policies might be to support the younger cohorts now in their childbearing years.

Providing affordable and accessible childcare and job-protected parental leaves could also be potential solutions. Measures that are often named family-friendly policies for gender equality (OECD, 2017) could also help slow fertility decline. Such policies could help alleviate the normative financial responsibility of fatherhood (Ravanera & Beaujot, 2014) and normative childcare responsibility of motherhood (Park, 2005; Seccombe, 1991) by encouraging dual-income families and enabling work-life balance. As aforementioned, some of these policy measures (such as accessible childcare maternity leave, spouse pregnancy leaves, and flexible work hours) are already in place in South Korea. Since the existing policies have not been effective in countering fertility decline in South Korea, it is possible that the existing policies have not been strong enough to change gender norm-related behavior. Strengthening the policies and ensuring that people take advantage of them are important. Also, it is necessary to make efforts to change people's minds so that family-friendly policies are used.

Limitations of this study must be discussed. The data for study was cross-sectional and the respondents were aged 45 and over. Therefore, causality cannot be reliably established. From this data, we do not know the socioeconomic status of the respondents at the times when their fertility decisions were formed and finalized. Especially, income quartile and employment status

could have been different when their fertility decisions were made. It is also possible that childless men have less motivation or pressure to pursue career success and/or higher income, thus appear to have lower socioeconomic status than those that had a child/children. Future research can examine the causality of the relationship between socioeconomic status and childlessness for men. The income variable was limited to income from employment and self-employment. This means that their income from other sources (such as rents) or value of assets owned are not accounted for. Also, one of the dependent variables for this research was childlessness, and not voluntary childlessness, childless by choice, or childless by circumstances. As aforementioned, the respondents' ideal number of children would provide more insight into their reasons for childlessness. There is also no historical information to understand the socioeconomic history of each person in the study, only their current socioeconomic status. Lastly, because this study was done with 2006 data with 1947-1961 birth cohorts, whether the results can be generalized to current young generations of South Korea remains a question. Nevertheless, the findings show that high SES men are less likely to be childless, in terms of finalized fertility. More research on South Korean individuals of childbearing age is needed to establish pathways into childlessness for young generations.

Conclusion

In South Korea among a 1947-1961 birth cohort of middle-aged adults, men who have low education levels, are not working, and/or have low income were more likely to be childless. This could be because they are unable to fulfill the normative expectation that fathers should be financially capable (Ravanera & Beaujot, 2014) to support a family. The pressure of gender role norms could be a reason that some people are childless in South Korea. Family-friendly policies

and changes in culture that enable both parents to maintain careers and to share parenting roles could also be beneficial for encouraging fertility.

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Chapter 3:

Study B: Alternative conceptualizations of the stubborn sex/gender gaps in parental leave usage and labor force participation rates: A theoretical discussion

Introduction

Low fertility is a concern for many industrialized countries because of the economic impact population decline entails. For example, population decline makes welfare and pension systems difficult to maintain due to the change in the proportions of workers and those needing care or pension allowance. Parental leave policy has been adopted in many countries as a measure to boost fertility because high and equal usage of parental leave by mothers and fathers theoretically facilitates women's continued labor force participation. It has also been demonstrated that fathers' leave usage is associated with increased fathers' involvement in the care of their children (Huerta et al., 2014; Knoester, Petts, & Pragg, 2019; Petts & Knoester, 2018). However, nowhere are the gender distributions of parental leave usage and labor force participation equal. Even in Sweden, which has the smallest gap in the gender distribution of parental leave usage in OECD countries, women take parental leave more often than men. Moreover, the gender gaps are larger in terms of other measures, such as days in leave usage and labor force participation. In other words, even the most successful country has not been able to completely eliminate gender gaps in parental leave usage and labor force participation.

Given this background, in this paper I ask whether the goal of closing the gaps in parental leave usage and labor force participation may be better served by reconceptualizing the nature of these gaps. In other words, this paper intends to pose a question as to whether these gender gaps are purely "gender" gaps, which are socially and culturally constructed. I apply biological/evolutionary thinking to see if a part of these gender gaps can be attributed to "sex,"

which is more closely aligned with the biological characteristics of males and females.

Identifying the unique contributions of “gender” from a sociocultural framework as well as “sex” from biological and evolutionary perspectives may offer insights about where prior policy attempts to encourage fertility may have been unsuccessful in closing the sex/gender gap in parental leave and labor market participation.

I intend to do three things in this theoretical discussion paper. First, I will demonstrate where a “gender” conceptualization, or a sociocultural framework, stops working, taking Sweden as an example. Second, I will explore how a “sex” conceptualization, or a biological/evolutionary framework, could make a unique contribution to understanding sex/gender gaps in parental leave and labor force participation rates. Last, I will illustrate that the biological/evolutionary framework can be useful in policy discussions. Since research discussions tend to occur in two separate silos – one for sociocultural thinkers and the other for biological/evolutionary thinkers, this paper is an attempt to demonstrate that the ideas of both camps can be utilized together.

Throughout this paper, I separate the concepts of gender and sex which are often used interchangeably in fertility and family policy research. The discussion of this paper is limited to people whose gender identity matches their biological anatomy. However, this is not to disregard the unique needs of people with differences in sexual development or varying gender identities. The existing policy initiatives have focused on heterosexual cisgender couples as the primary dyads who bear children globally, and thus this paper will also focus on those couples to help contribute to the policy debate.

I will also try to use the terms sex and gender to mean two different concepts of biological sex (male/female) and sociocultural gender (men/women). When referring to both sex

and gender at the same time, which happens frequently when talking about people whose gender identity matches their biological anatomy, I will utilize the concept, sex/gender. However, when discussing other scholars' research findings, I will use the original terms used in the source, since the two words tend to be used interchangeably.

Background

As aforementioned, low fertility is a concern for many industrialized countries, and childlessness is an important force that drives declining fertility (Aarssen & Altman, 2006). Studies in industrialized economies have repeatedly shown that men and women have different barriers to parenthood and that pathways into childlessness differ by gender (Keizer, Dykstra, & Jansen, 2008). Economic factors, such as financial burden and not being able to make major purchases, appear to be important for men's childlessness, whereas childbirth, childcare, and balancing work and family are often cited as reasons for women's childlessness (Avison & Furnham, 2015; Park, 2005; Seccombe, 1991). Moreover, in industrialized economies, studies have shown that men with low socioeconomic status are more likely to be childless, whereas for women the impact of socioeconomic status on childlessness tends to be inconsistent (Abma & Martinez, 2006; Berrington & Pattaro, 2014; Fiori, Rinesi, & Graham, 2017; Kanazawa, 2014; Keizer, Dykstra, & Jansen, 2008; Kneale & Joshi, 2008; Kreyenfeld, 2005; Kreyenfeld & Andersson, 2014; Miettinen, 2010; Miettinen et al., 2015; Miettinen & Szalma, 2014; Parr, 2010; Ravanera & Beaujot, 2014; Seiz, 2013; Seo & Stotzer, 2021; Vignoli, Derefahl, & De Santis, 2012; Waren & Pals, 2013). These findings highlight how labor force participation is an important consideration in fertility decisions.

Governments have identified the nature of these differences as a gender problem stemming from economic and family structures, and parental leave policies were developed

based on this problem identification. Gender differences in childlessness exist in industrialized economies in part because it is hard for women to have children and keep their careers at the same time. Current economic and family structures still place disproportionate burdens on women to sacrifice careers in favor of child-rearing, and many women face significant career costs when trying to balance motherhood and career (Keizer, Dykstra, & Jansen, 2008). If women did not have to sacrifice their career prospects by becoming mothers, the costs (and opportunity costs) of becoming a mother would be reduced. Moreover, if it were easier for women to continue to work after becoming mothers, men partnered with women would not have to become sole breadwinners of the family, easing the financial burden on men and allowing them to participate more in parenting duties. So, parental leave was introduced as a policy that could make it easier for both parents to continue to work and to raise children. In the late 20th century, many countries began passing parental leave policies, developed in part as a measure to encourage female labor force participation and promote fertility (Haas, 1992).

Parental leave, in theory, has the potential to minimize these gendered barriers to parenthood. However, to do so, equal usage of parental leave by both men and women is important. In practice, mothers' disproportionately high usage of leave (compared to fathers) makes hiring women less appealing to employers, because such leave is an additional cost (Asai, 2019). Even in countries like Sweden and South Korea where the leave-takers receive allowance not directly from employers but from parental or unemployment insurance, if women workers are more likely than men workers to be absent due to parental leave (or quit after the leave), employers will continue to find men workers more appealing (Asai, 2019). The additional costs of hiring potential mothers have historically exacerbated the gender wage gap. Moreover, career breaks due to parental leave can make it difficult for women workers to build a competitive edge

in the labor market as effectively as men workers who bear less of such disadvantage (Ayanna, 2007). Wage gaps and career breaks can further discourage women from pursuing careers and continues to force men out of family life and into primary breadwinner roles. Policies that do not just allow, but actively encourage, both men and women to take time off to care for their children have the potential to make men and women represent equal expenses for employers (rather than perpetuating the idea that women are more expensive employees) and is intended to promote fertility by providing financial parenting support to both mothers and fathers, making parenthood seem a more reasonable option for many families. So, equal usage of parental leave by men and women workers is essential in minimizing gendered barriers to parenthood.

However, no country has succeeded in achieving gender equality in parental leave usage. Even Sweden, a country known for its egalitarian dual-earner model (Cooke & Baxter, 2010; Guo & Browne, 2022), has not achieved parity in parental leave uptake. Other countries with ultra-low fertility rates, such as South Korea, which recorded a fertility rate of 0.75 births per woman (the lowest in the world) in the second quarter of 2022 (Bak, 2022), are looking to the relative success of Sweden (and other Nordic countries) in making parenting responsibility equal for men and women (Jeong, 2019), and are trying to follow the policy footsteps of Sweden. This task of applying a biological/evolutionary framework to understanding the sex/gender differences in parental leave and labor force participation behaviors started from this question: if equal usage of parental leave is important, and if Sweden's policy may not lead to that equality quickly (or ever), is following Sweden's path the right choice for countries attempting to reach sex/gender equality to solve ultra-low fertility, without compromising labor force participation rates? Ignoring biological and evolutionary perspectives may be a blind spot in conceptualizing the problem of these sex/gender gaps.

The Story of Sweden

Sweden is often mentioned as the country that has the most supportive family policies, including paid parental leave (Eriksson, Larsson, and Tydén, 2012). Sweden has the smallest gap in gender distribution of parental leave usage among OECD nations, with only 10 percentage-point difference between mothers' usage (55%) and fathers' (45%) in 2016 (OECD, 2019). However, a slightly less optimistic picture emerges if we use different measures, such as male share of usage and labor force participation rates. For example, according to OECD (2019), Swedish men and women took 28% and 71%, respectively, of the total number of days for which maternity, paternity, and parental benefits were drawn in 2016 (Sweden came second highest in terms of male share of days used. Iceland came first with 29%.) In other words, utilizing the number of days as the measure of parental leave usage reveals a much larger gap between men and women's uptake than looking at men's and women's participation in the program as a yes/no variable.

One of the main objectives of parental leave policy is to make labor force participation rates equal (Carlson, 2013). So, examining the labor force participation rates of men and women (aged 20-64) in Sweden in addition to their parental leave uptake provides a more complete picture related to fertility suggesting an ongoing inequality. In 2019, 85% of women and 90% of men were in the labor force (Statistics Sweden, 2020). Looking more closely into full-time and part-time employment, 59% of women employed full-time, as compared to 75% of men (Statistics Sweden, 2020). More women (21%) than men (9%) were engaged in part-time employment (Statistics Sweden, 2020). Also, more men (73%) were "at work" than women (65%), as opposed to being temporarily absent ("absent" refers to the status of being employed but not having performed the job because of holiday, illness, parental leave, studies, or other

reasons); more women (15%) than men (11%) were absent from work (Statistics Sweden, 2020). We can see from these numbers that even with one of the most supportive family policies, Sweden has not achieved perfect parity in parental leave usage, nor in full-time and part-time labor force participation. The sex distribution (the word used in Statistics Sweden [2020]) in parental leave usage and labor force participation, while smaller than most other countries, is one factor that could make hiring women still less appealing to employers than hiring men, perpetuating the inequalities in the workplace.

Also of note is that these gaps did not change much in the recent years, which alludes to the stubborn nature of these sex/gender differences when it is left to individual choices of men and women. In 2005, 80% of women and 86% of men were in the labor force (Statistics Sweden, 2006). Looking more closely into full-time and part-time employment, 49% of women were in full-time employment compared to 72% of men (Statistics Sweden, 2006). Also, more women (27%) than men (8%) were in part-time employment (Statistics Sweden, 2006). Also, more men (70%) were actually at work than women (61%); more women (15%) than men (11%) were temporarily absent from work due to illness, holiday, parental leave, or other reasons.

When examining these differences across the last 14 years in the period between 2005 and 2019 in Sweden, the gender gap in labor force participation statistics did narrow, but not by much. Utilizing the rates of being actually at work as opposed to being absent due to illness, holiday, parental leave, and other reasons as a measure reveals that the rate of change across the 14 years was very slow. In 2005, the sex/gender gap in the rates of being at work was 9 percentage points. In 2019, the gap was still 8 percentage points. Also, since the rate of change seems to be slowing down recently, it is also uncertain as to whether these sex/gender gaps are ever going to completely disappear in Sweden with the existing set of policies in place.

The rate at which the sex/gender gap in parental leave usage narrows is a consideration for societies that want to implement or are implementing parental leave policies similar to those in force in Sweden. According to Haas (1992), in Sweden, fathers made up 24% of those taking parental leave in 1987. This number is comparable to South Korea's proportion of men using parental leave in the first half of 2020. The proportion of fathers among those who used parental leave was 24.7% in the first half of 2020 (Ministry of Employment and Labor, 2020). From 1987 to 2016, the number rose from 24% to 45% in Sweden. If South Korea follows this trajectory, South Korea's proportion of men among those who used parental leave would rise to 45% in about three decades. This sluggish rate is not a very bright picture for countries with ultra-low fertility rates that are considering or utilizing similar policies.

Sociocultural Perspectives

According to Haas (1992), Sweden developed its parental leave policy based on these three concerns: "(1) worry over low birth rates; (2) the need to encourage women's employment; and (3) a desire to liberate men from gender stereotypes." From this, we can infer that the basic premise behind Sweden's parental leave policy, and in fact many nations' parental leave policies, was that if men and women are liberated from gender stereotypes and given choice to work and/or look after their children, men and women will do both similarly, resolving at least one reason why people were choosing to remain childless or have fewer children. This emphasis on gender stereotypes is what can be called the "gender" conceptualization, or a sociocultural approach to solving this ongoing concern. Originally a theory of developmental psychology, the sociocultural theory focuses on the role of social interaction and culture in human behaviors (Allman, 2018; Vygotsky, 1978). Sociocultural approaches, in the context of this paper that focuses on sex/gender differences in work and parenting behaviors, refer to those that examine

factors like gender norm-related attitudes and discrimination. Some of these norms include cultural expectations that women should be the one to stay home, and men should be the one to bear financial responsibility (Carlson, 2013). So, in sociocultural frameworks, the concept of gender bears greater significance than biological sex. Because sociocultural influences that cause gender differences in parenting and workforce participation were created by the societies themselves rather than something innate, it is believed that it is also possible to undo such influences. Many societies have tried to incentivize women to stay in the workforce after childbearing and to encourage fathers to stay home and co-parent more equitably. For example, in South Korea's parental leave program, when the second parent uses parental leave after the first parent does, the benefit for the first three months is increased; this is to encourage fathers to use parental leave (Ministry of Employment and Labor, n.d.). Therefore, sociocultural frameworks are highly optimistic that social policy can mitigate gender differences related to parenting and working.

It appears that this optimistic premise was warranted to solve a *portion* of the existing gap between men and women. As described in the preceding section, Sweden's policy has yielded considerable success in making parental leave usage and labor force participation close to equal for men and women. Surely, there are many other factors that affect parental leave uptake and labor force participation rates, but parental leave policies are the only things that we examine here as other factors that influence these rates are beyond the scope of this paper. However, as also described above, even in Sweden, which has the smallest gap in the gender gap of parental leave usage in OECD countries, gaps remain in parental leave usage and labor force participation. Also, based on the examination of the rate at which these gaps in labor force participation are narrowing in Sweden, it is uncertain whether the existing set of policies based

on sociocultural reasoning will ever completely eliminate these gaps. At this point, it might be worth asking whether at least a part of these gaps is actually of a different nature than “gender” gaps.

Biological and Evolutionary Perspectives

We have seen that, even in Sweden, it took decades to narrow the sex/gender gap in parental leave usage to the current level, and that the current level is not a complete closure of the gap. One might wonder why this gap is so stubborn. From this section onward, I seek to make sense of the sex/gender gap in parental leave usage and labor force participation rates with a biological/evolutionary framework; in other words, I will attempt to explain the stubbornness in the gaps in terms of biological sex and evolutionary fitness. In biological and evolutionary perspectives (Darwin, 1871), the premise is that behaviors are influenced by biology and evolutionary forces.

The Biological/Evolutionary Framework (BEF) that I use in this theoretical discussion is a conservative combination of biological and evolutionary perspectives. If we place sociocultural perspectives on one side of the spectrum of lenses with which to examine sex/gender differences, biological and evolutionary perspectives would be on the other side of the spectrum. I use the specific phrase *the Biological/Evolutionary Framework* instead of *biological and evolutionary perspectives* because the biological and evolutionary concepts that I use in this paper are limited to the ones that most people, on either side of the sociocultural vs. biological/evolutionary spectrum, will likely agree on. I will elaborate further on the specific concepts used after describing the perspectives in general.

The basic premise of evolutionary perspectives, when applied to human behaviors, is that individuals take behavior strategies to maximize one’s evolutionary fitness. Evolutionary fitness

refers to the contribution to the next generation's genetic pool, which is directly related to the reproductive success of oneself and one's biological offspring. Applying this premise, in order to maximize evolutionary fitness, a parent can allocate his/her resources to (1) producing more children, or (2) investing in the child he/she already has, in order to maximize the chance of the child's reproductive success.

Biological perspectives are based on the notion that (natal) sex is "a conceptually unproblematic, highly significant binary category whose relevance to all aspects of experience across the lifespan has strong theoretical support" (Worthman, 1995, p. 579). In fact, contrary to this quote, now it is more commonly understood that even sex is not strictly binary and there are people with differences in sexual development. Still, biological and evolutionary perspectives can be used to think through how those with anatomical parts related to being male or female cause different work and parenting behavior strategies to maximize each individual's evolutionary fitness.

Conceptually, a gender gap is something that was constructed by social and cultural influences, therefore could be deconstructed; on the other hand, a sex gap reflects "hard-wired" biological differences, which males and females are born with, and not something created by a society or culture. So, it can be said that biological and evolutionary perspectives are more pessimistic about the idea that social forces can dismantle sex gaps than sociocultural frameworks are about social forces dismantling gender gaps. However, when people discuss gender gaps in parental leave-taking, they are often conflating gender gaps and sex gaps. It may be this conflation of socially constructed gender roles and biologically determined sex characteristics that leads to ineffective policy. The optimism from sociocultural thinking may not be applicable to the portion of sex/gender gaps (however small this portion may be) that was

engendered by biological sex. The pessimism from biological and evolutionary frameworks may be more appropriate for devising measures to dismantle the part of the sex/gender gaps that was biological in origin. It is worthwhile to differentiate the two because the measures used to deconstruct a gender gap may not be suitable for minimizing a sex gap.

The BEF used in this theoretical discussion is conservative in that it does not go beyond unambiguous biological differences between males and females. The two unambiguous biological sex differences that this framework focuses on are that men cannot gestate or lactate, and that only women can identify their genetic offspring with certainty because of internal fertilization. Besides these two, there are other biological sex differences. One of such sex differences is in hormones (Worthman, 1995). Research has shown that expectant mothers as well as fathers experience hormonal changes (Edelstein et al., 2017). However, the BEF does not focus on hormones because it is less clear as to how much of hormonal changes can be attributed to biology or culture; one may argue that the sex differences in hormones exist because mothers and fathers were primed by cultural norms to behave differently. Clearing up this ambiguity is beyond the scope of this paper. So, the BEF, and thus this theoretical discussion, only focuses on unambiguous biological differences that most people can easily agree on, gestation, lactation, and offspring identification.

Why biological and evolutionary perspectives?

Biological and evolutionary perspectives have generated critiques in the recent decades (Confer et al., 2010); thus, one may wonder if this task of applying the BEF to analyze the sex/gender differences in parenting and labor force participation behaviors is a worthy undertaking. In this section, I explain that, despite the criticisms, biological/evolutionary

concepts broadly may still be useful for understanding the sex/gender differences and finding potentially meaningful policy implications.

One criticism of biological and evolutionary perspectives is that they are overly deterministic and reductionistic; they oversimplify human nature and argue that behaviors are caused solely by biology and instinctive motivation to maximize evolutionary fitness. However, this criticism may be based on a misconception that biological and evolutionary perspectives completely reject any interactionist perspective (Confer et al., 2010). It is true that biological and evolutionary perspectives do seek to explain human nature in terms of “hard-wired” mechanisms. The focus of the literature that employs biological and evolutionary perspectives tends to view sex/gender differences in parenting behavior and the childlessness phenomenon as a biological given, not one that can easily be legislated away with policies. Nevertheless, the perspectives still allow room for explaining behaviors in terms of interactions with the environment that influence human behaviors (Confer et al., 2010). The difference between sociocultural thinking (that focuses on environmental forces) and biological/evolutionary thinking may be that, according to biological and evolutionary perspectives, the societal force has to be rather powerful to counter biological and evolutionary mechanisms, in order to affect changes. So, although the focus is not on societal forces that influence human behaviors in biological and evolutionary perspectives, it does not completely reject the idea that social policy can impact the sex/gender differences in parental leave and labor force participation behaviors.

Another criticism of biological and evolutionary perspectives is that it does not do a good job at explaining individual-level variations in behaviors. For example, these perspectives are not very useful lenses through which to conceptualize meaningful kinship that is not biological, such as adopted children and stepchildren. This criticism reveals that these frameworks cannot explain

all human behaviors, especially on a micro level. According to Futuyma (2017, p. 3), “The basic process of biological evolution is a population-level, not an individual-level, process that entails change not of the individual organism, but of the frequency of heritable variations within populations, from generation to generation.” So, it is true that explaining individual-level variations is not the strength of biological and evolutionary frameworks. However, since we are talking about fertility, parenting, and labor force participation behaviors of a population as a whole (in societies like Sweden and South Korea), and policies to affect changes on a macro level, biological and evolutionary perspectives are still relevant to our discussion here.

One may also ask: “Why use the BEF as a lens through which to examine parenting, labor force participation, and fertility behaviors?” First of all, the topics of fertility, parenting, and labor force participation are relevant to biology because they involve gestation and lactation, which are biological processes that only females are equipped to do, and thus affect females’ labor force participation at least during early parenthood. Also, it appears that research endeavors tend to occur in (at least) two separate silos – one for sociocultural thinkers and the other for biological/evolutionary thinkers. However, policy discussions on promoting fertility and bringing equality to work and parenting behaviors seemed to have been happening almost exclusively through sociocultural lenses. So, it might be meaningful to dive into the opposite side of the spectrum to see if we were missing anything that could better inform policymaking. This addition may be helpful for those countries whose sociocultural-oriented policies are not working as well (or quickly) as they may like.

Applications of the BEF

There are two unambiguous biological differences between males and females that are pertinent to parenting behaviors. The first is that females are the only ones that can gestate and

lactate. The second is that males lack the biological capacity to identify their own children. In the following sections, I will describe how, according to the BEF, these two biological differences cause divergent parenting and labor force participation behaviors of males and females. For ease of language, I will use “males” and “females” to indicate those (born) with male and female reproductive organs respectively when discussing the BEF (while acknowledging that sex is not inherently binary and has many variations).

Gestation and lactation

Biological human males cannot bear children, give birth to children, or produce milk for their children. Naturally and inevitably, these are accomplished by females. Moreover, pregnancy and childbirth can be dangerous; females could get injured or even die in the process. Even when delivery is successful and poses few complications for either the mother or the infant, most mothers still need recovery time due to the physical exertion of childbirth, whereas fathers have none of these physical risks or consequences. According to the BEF, this difference is critical to understanding males’ and females’ investments in their children. For example, Fieder & Huber (2007) mention women’s “high reproductive investment during gestation and lactation” (p. 392) as a reason why females would want to have fewer children and invest more resources in each child to maximize each child’s fitness. As soon as a child is born, the mother’s sunk cost in the child is greater than the father’s sunk cost, since the mother took the biological costs of pregnancy and childbirth, whereas the father did not. This sex difference in sunk costs mean that mothers have a greater evolutionary motivation than fathers to be involved in the care of their children, which in turn explains females’ greater usage of parental leave and lower rates of labor force participation, even in countries like Sweden.

According to the BEF, breastfeeding is another biological reason why mothers are more likely to be involved in the care of their children than fathers. Breastfeeding mothers tend to become the first users of parental leave. In the article arguing for mandatory parental leave, Ayanna (2007) describes how breastfeeding mothers tend to become the first leave takers in Sweden. Ayanna writes: "... Swedish mothers almost universally breastfeed for at least six months. Consequently, mothers are almost always the leave-takers for the early months of a child's life ..." (2007, p. 306). The link between mothers' breastfeeding and being the first leave takers is one apt illustration of biological sex (females' ability to breastfeed) leading to behaviors (leave taking first).

Establishing paternity

Unless there was an arrangement before pregnancy utilizing egg donation or another form of reproductive technology, or rare genetic anomalies such as chimerism, a mother can be certain that her child is biologically hers. However, males do not have the ability to identify their own biological offspring without medical intervention such as DNA-based paternity testing. The assumption of the mother's fidelity and potential phenotypic resemblance provide the only information about biological paternity (Billingsley, Antfolk, Santtila, & Lieberman, 2018). Therefore, the biological connection between a father and a child can be said to be less certain than the connection between a mother and a child. According to the BEF, because the biological connection between a mother and her children is more certain than that between a father and his children, a mother has a greater motivation than the father to be involved in the care of her child, as it is certainly related to her evolutionary fitness.

In the BEF, identification of one's own offspring (or kin detection) is relevant to childrearing because investing in a biologically unrelated child can drain resources available for

a male's biological offspring, or for other mating opportunities (Buss, 2002). Research has demonstrated that partner fidelity, which is a paternity cue, is positively associated with the levels of paternal investment toward their offspring (Billingsley et al., 2018). This means that males tend to be more engaged fathers to children they deem likely to be their biological children. This finding is in line with the biological/evolutionary notion that when a male perceives that a child may not be his genetic offspring, he would be half-hearted about the well-being of the child; his better strategy to maximize his evolutionary fitness would be to produce another child that is surely his own biological child and invest in that one.

Some might say establishing biological paternity is irrelevant because when males become fathers, they would be able to tell that they are biological fathers; however, research suggests that there are cases where males are wrong in their perception of paternity. According to Anderson (2006)'s survey of 67 studies, the median nonpaternity rate was 1.7% among males with high paternity confidence (confidence that they are the fathers of their putative children), 16.7% among males with unknown paternity confidence, and 29.8% among males with low paternity confidence. This means that even among males who were sure that they were biological fathers, 1.7% were actually not biological fathers. From the BEF, this would represent a "false positive," in which males would be "wasting" their resources on a non-biological child, while missing out on other mating opportunities. Conversely, among males who were uncertain of their paternity, 70.2% were actually biological fathers. This would represent "false negatives," or false suspicion of infidelity, causing true biological fathers to be indifferent about the care of their biological offspring and to seek opportunities to produce another child with a different partner. So, for males, unknowingly investing in a biologically unrelated child is a true possibility; this

means even when males have high confidence in their partner's fidelity, their biological connection to the child is less certain than the mother's.

For males, the biological connection between to their offspring is through the mother, whereas for females, the connection is direct and unambiguous. Based on biological/evolutionary reasoning, females do not have risk of hurting their own evolutionary fitness by wasting resources on a someone else's child; a mother's care for her child is definitely a strategy to maximize her evolutionary fitness. So, females' higher usage of parental leave and lower rates of labor force participation (as we have seen even in Sweden) may be (at least partly) because mothers have a greater evolutionary incentive to be invested in the care of their children. This greater evolutionary incentive that mothers have is due to the higher sunk cost from pregnancy and childbirth, and the stronger certainty in identifying their offspring. Males, by contrast, have less evolutionary incentive to participate in the care of their putative children, because of the greater uncertainty that such care would in fact contribute to their evolutionary fitness. When this uncertainty is strong, fathers may be reluctant to invest in their putative children, since the resources invested in another man's child can be used to secure mating opportunities elsewhere to maximize his evolutionary fitness (Buss, 2002).

Biological/Evolutionary Thinking Guiding Policy Discussions

Because the BEF proposes that these differences between males and females as a biological given, it may seem like nothing can be done to mitigate the behavioral consequences of these differences. This is true only to a certain point. Although biological differences themselves cannot be undone with policy, the socioeconomic costs that arise from the biological differences can be minimized with careful (though potentially draconian) policy design. In this section, I explore two policy ideas which are based on the BEF. The first is mandatory parental

leave for mothers and fathers, and the second is a policy that provides strong incentives for paternity testing. These two will be used to illustrate potential policy measures that can be used to counter the socioeconomic costs that arise from the two biological sex differences described above, and thus minimize sex/gender gaps in parenting and labor force participation behaviors. These policy ideas are illustrations of how the BEF could be useful in policy discussions, rather than arguments for or against any specific policy, with the intent to stimulate creative new lines of inquiry.

Mandatory parental leave policy

In this section, I illustrate the BEF-based conceptualization of mandatory parental leave, or requiring all new parents (both mothers and fathers) to take a minimum amount of time off. This is a potential policy measure that can offset the socioeconomic costs engendered by the fact that only females can get pregnant, give birth, and produce milk. Mandating leave usage is not a completely novel idea; for example, in Sweden, women are obligated to take two weeks of maternity leave (Duvander & Löfgren, 2020). Also, it appears that people are noticing that the sex/gender gaps in parental leave usage is rather stubborn. As a stronger measure to incentivize fathers' leave usage than simply giving both parents the choice to use leave, non-transferable, "use-it-or-lose-it" parental leave system, where a certain duration of leave is reserved for each parent, is often mentioned (Janta & Stewart, 2019; Sawhill, 2021). Taking a step further, mandating fathers' leave usage is also being discussed more frequently in various nations in recent years. Starting in 2021, fathers in France are required to take at least one week of paternity leave ("France doubles paid", 2020). In South Korea, the country with the lowest fertility rate in the world, a bill to mandate men's parental leave was proposed (Jeong, 2019), but did not pass.

Legislators appear to be noticing that simply offering a choice is not enough; males and females do not take equal amounts of parental leave just because the option is available to them.

Even the discussion around mandating parental leave seems to be heavily based on the sociocultural framework, and not the BEF. In a paper arguing for a compulsory parental leave system, Ayanna (2007) attributes the sex/gender differences in parental leave usage to “trenchant gender norms” (p. 323). The idea that sex/gender differences in parental leave usage is caused by gender norms and stigma can be found in other writings (Bergmann, 2021; Rosenblum, 2020). It is clear from the changes in parental leave usage over the last 30 years that gender norms and stigma drive much of the differences between men and women’s behavior; as social norms have changed, so has parental leave usage. However, in this theoretical discussion, I consider the possibility that the differences in parental leave usage go beyond gender norms, to the biology of males and females. In other words, applying the BEF, I agree with these articles (Ayanna, 2007; Bergmann, 2021; Rosenblum, 2020) on that the sex/gender gap in parental leave usage is intractable; however, I disagree with them in that I believe that this stubbornness is at least partially rooted in biology, beyond socially and culturally created norms.

In the BEF, since it takes the stubbornness of biological sex differences into account, the idea of mandating leave usage is a greater imperative than in the sociocultural framework. In the sociocultural framework, since it is believed that gender differences were created and can be deconstructed, mandating parental leave is not the only conclusion it leads to; other options based on the sociocultural framework include, for example, South Korea’s policy of increasing the monetary benefit when the second parent (usually the father) uses parental leave. In the BEF, on the other hand, it is believed that the sex differences in work and parenting behaviors are based on biological sex, which is less malleable than gender. So, according to

biological/evolutionary reasoning, in order to counter the influences of biological sex, a greater social force (such as a mandate or powerful incentives) is required. If there is a part of sex/gender gaps in parental leave usage that is biologically driven, as the BEF emphasizes, that part of the gaps may only be closed by mandating behaviors or incentivizing behaviors so strongly that biological influences can be overridden. In biological/evolutionary thinking, since mothers have a greater biological investment in children, they have a greater motivation to look after them, compared to fathers, who did not bear the same biological sunk cost. Moreover, mothers are the only ones who can produce milk for their children; males can feed children mother's milk out of a bottle, but they cannot make the milk. So, if parents decide that they would like to breastfeed, which is known to be beneficial (Victora et al., 2016; Work Group on Breastfeeding, 1997), mothers have to be a part of the caregiving, at least in terms of pumping milk. The idea of mandating parental leave is a stronger imperative in the BEF than in the sociocultural framework, where there may be other options to increase males' leave usage.

The biological costs that mothers bear cannot be shared; however, the socioeconomic costs of motherhood or parenthood that arise from this biological investment can be shared by fathers, if they are imposed on them. As aforementioned, when mothers use parental leave (which they are more likely to do due to biology) they take a penalty in their career, because an employee's leave usage is a cost to employers (Asai, 2019). To eliminate this biologically driven socioeconomic penalty of motherhood, mandatory parental leave policy can be used. If all fathers (are forced to) take the same length of parental leave as mothers, the relative socioeconomic cost of motherhood would become zero, because every parent has to bear the same cost. So, in the labor market, motherhood (and the possibility of motherhood) would not

put females at a relative disadvantage, since males (fathers and potential fathers) would bear the same disadvantage.

It may seem like fathers' parental leave usage only affects the early parenthood months. However, studies from Europe and the U.S. have illustrated that duration of paternity leave is positively associated with fathers' involvement or engagement in childcare (Huerta et al., 2014; Petts & Knoester, 2018). Moreover, another study (Knoester, Petts, & Pragg, 2019) demonstrated that among socioeconomically disadvantaged U.S. fathers, paternity leave usage is positively associated with fathers' responsibility (measured in terms of how often fathers took responsibility for looking after their child) over the first 5 years of the child's life. So, when fathers use parental leave, mothers are less likely to be sole or primary caregivers beyond the first year, which would alleviate the relative socioeconomic disadvantage of motherhood beyond the early months of a child's life.

According to the pessimism of BEF, since the stubborn gaps are biological in origin and are unlikely to completely close if left to personal choice, mandating usage may be the only way to eliminate the socioeconomic costs of motherhood. This discussion of mandatory parental leave is an illustration of how mandatory parental leave policy that could potentially narrow sex/gender gaps in work and parenting behaviors can be conceptualized through the biological/evolutionary lens. About the policy itself, there remain important questions about policy design, such as for the duration of mandatory parental leave, measures for parents who are self-employed and/or in informal labor market, and for the potential side-effect of discouraging parenthood, should a nation choose to pursue this option. I hope further discussion around parental leave policy based on the BEF follows to address these and other important questions.

Policy that provides strong incentives for paternity testing

A policy that providing powerful incentives for paternity testing is a measure that can equalize fathers' and mothers' levels of certainty of their biological connection to their children and can bring levels of fathers' direct involvement in childrearing closer to mothers'. Marriage and monogamy function as a social mechanism of establishing paternity; however, with the recent increase in children being born out of wedlock or in non-monogamous households, biological determination of paternity has become more important. In most OECD countries, the proportion of children born outside of marriage has increased in the past decades (OECD, 2020). In 1970, only 7% of children were born outside of marriage in the 28 OECD countries, whereas in the same 28 countries, this average has grown to 41% by 2018. Paternity testing is more relevant now than in the past to establishing a strong biological connection between fathers and their children. According to the BEF, bringing the biological connection between fathers and children to a level closer to that between mothers and children could potentially help narrow the sex gaps in work and parenting behaviors.

In biological/evolutionary thinking, it is difficult for males to be as certain in paternity as females are in their maternity. According to Anderson (2006), the median nonpaternity rate was 29.8% among males with low paternity confidence, and 1.7% among males with high paternity confidence. This means that high paternity confidence does not necessarily guarantee biological paternity. Moreover, Anderson (2006)'s survey tells us that even among those males with low paternity confidence, 70.2% were actually biological parents of their putative children. For these 70.2% of cases among low-paternity-confidence males, establishing the biological connection to their children through paternity testing could work to strengthen the motivation to be involved in the care of their children, instead of seeking to produce biological children elsewhere.

A policy that makes more parents take paternity testing is a measure that can mitigate the sex differences in parenting behaviors over the years children are in their parents' care. As described above, unlike females, males lack the biological capacity to identify their genetic offspring. So, partner fidelity is one of the non-biological mechanisms through which males identify their offspring. It is possible for males to be deceived into investing in another male's child, and this is a real statistical possibility among humans, and even among males who have high confidence in paternity (Anderson, 2006). Research has demonstrated that fathers who perceive partner fidelity, and thus are more certain of paternity, are more likely to have higher levels of paternal investment toward their offspring (Billingsley et al., 2018). Moreover, it has been shown that establishing paternity is positively associated with fathers' involvement in unmarried families (Argys & Peters, 2001; Mincy, Garfinkel, & Nepomnyaschy, 2005). If fathers' involvement in the care of their children is a function of how certainly their biological paternity is established, as prior research suggests, it might also be possible to motivate (biological) fathers to be more involved in parenting by providing them with strong paternity cues. So, the idea of paternity testing comes in. While we cannot change the fact that there is no biological means to establish paternity, it is possible to utilize the most certain biotechnological means to establish paternity, such as DNA-based paternity testing.

According to the BEF, eliminating the doubt about paternity in males' minds that they may be wasting their resources by investing in their children may be helpful in narrowing sex gaps in work and parenting behaviors. For males, sacrificing career prospects to look after children may be easier to do when paternity is clearly established. This is because males' labor force participation preserves mating opportunities elsewhere, whereas being directly involved in the care of children limits such opportunities. For men, financial prospect is a desired trait in the

mating market (Fales et al., 2016). So, when males do not divert their resources to childcare, they are maximizing their financial prospects, and thus potential mating opportunities.

This examination of paternity testing policy provides an illustration of how biological/evolutionary concepts can be used to formulate policy ideas to address sex/gender gaps in work and parenting behaviors. Again, should a policy like this be implemented, there remain important questions about policy design, such as how to incentivize paternity tests, and what to do when paternity tests reveal a negative result. While paternity testing policy is not the ultimate solution to eliminate sex/gender gaps in work and parenting behaviors, it shows how biological/evolutionary thinking challenges us to think beyond sociocultural influences alone in our consideration of future policies. I hope further discussion around policies paternity testing policy based on the BEF follows to address these and other important questions.

Setting goals and choosing paths

Regardless of whether the policy examples sound appealing or not (making the policies sound appealing was not the purpose of these examples), there is something we can learn from this task of applying biological and evolutionary concepts to understanding the sex/gender differences in parental leave and labor force participation behaviors. Perhaps the most important contributions of the BEF to the discussion around work and parenting behaviors are twofold: (1) the skepticism about reaching perfect gender equality when left to individuals' choices and only based on sociocultural perspectives, and (2) the idea that a society needs to consider the pessimism that the "sex" gap part of the sex/gender gap may not close easily. The BEF curbs the optimism that sex/gender differences in parenting and labor force participation behaviors will completely dissolve soon when left to individuals' choices. To paraphrase, according to the BEF, getting to perfect sex/gender equality (in terms of parental leave uptake, labor force participation,

wage, etc.) may be possible only by prescribing certain behaviors. Regardless of whether a society chooses to exert firm control over individuals' certain behaviors or not, the choice would need to be a conscious one.

Conclusion

In many societies, the ideas of mandating parental leave or incentivizing paternity testing (or anything, actually) would be perceived as an unnecessary infringement of personal freedom. This negative reception will be stronger if the society does not perceive a serious issue with its fertility rate or sex/gender equality. These rudimentary policy ideas may sound more appealing to people or countries who are willing to pay a cost to reach perfect equality and to boost fertility; and even to those, these ideas may seem too radical. Needless to say, the decision to implement strong policies with the intention of reaching perfect sex/gender equality or not, is up to each society. However, the wisdom that can be drawn from this theoretical application is that such decisions would need to be made, not out of inertia or overly optimistic projections, but with the recognition that males and females may continue to behave differently at least partly because of their biological differences. So, if a society decides that they would take Sweden's path of minimizing culturally constructed gender differences, it should make that decision with some of the pessimism of the BEF in mind. In other words, even if it successfully eradicates culturally constructed gender differences, stubborn sex differences that stem from biology, such as in parental leave usage, part- and full-time labor force participation, and other differences that happen consequently, will likely remain (although in real life, it would be difficult to distinguish gender and sex differences in numbers). Therefore, a society that decides to take the path of fighting gender differences only should be prepared to accept sex differences and/or devise other ways to counter the gaps that remain due to sex differences. When devising measures to counter

sex gaps, one should take into account the biological/evolutionary ideas that females and males are different biologically but the socioeconomic costs of parenthood can be shared by having fathers be as engaged in parenting as mothers.

This theoretical discussion paper can be summarized into three points. First, sociocultural reasoning did successfully put us on a trajectory toward sex/gender equality in work and parenting behaviors; however, policies based on sociocultural thinking may only get us as far as where Sweden is now, which is impressive, but not perfect. Second, the BEF, with its consideration of innate sex differences leading to divergent behaviors to maximize evolutionary fitness, makes a unique contribution to making sense of stubborn sex/gender gaps in work and parenting behaviors. Last, the BEF can be useful in formulating policy ideas and thinking about what each society is willing to give up for sex/gender equality and fertility promotion. As a closing remark, it is worth reemphasizing that the sociocultural reasoning has made and is making great progress in bringing about gender equality. Adding some compatible ideas from the BEF may even accelerate this great progress that sociocultural thinking has made.

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Chapter 4:

Study C: A Case Study of South Korea's Parental Leave Policy Discourse: Exposing the Implicit Values and Assumptions in Policy Debates

Introduction

Low fertility is a concern for countries like South Korea due to the inevitable impacts on economic and military power that population decline entails, as well as an ensuing imbalance between the number of workers and those needing care. Fertility rates, defined as the average number of children born to a woman over her lifetime per country, vary around the world, from 6.9 to 0.8 births per woman for 2020 (World Bank, 2023). Many developed countries have below-replacement (below 2.1 births per woman) rates, while developing countries have higher numbers (World Bank, 2023). South Korea ranked the lowest for fertility rate among 200 countries and territories in 2020 (World Bank, 2023). The rate of population decline is projected to be so rapid that current levels of immigration will have only a minor impact (Westley, Choe, & Retherford, 2010).

Childlessness is an important phenomenon to understand in the study of fertility. According to Aarssen and Altman (2006), fertility decline is largely attributable to the fact that many more people today do not have children at all compared to the past. Within the childless population, those that are childless by circumstances (meaning those who did not purposefully plan to be childless) form the largest group (Buhr & Huinink, 2017), implying that it may be possible to promote fertility by minimizing barriers to having children.

While both men and women experience circumstantial childlessness, men and women appear to have disparate barriers to parenthood. Existing literature on childless / voluntarily childless (childless for non-biological reasons) people demonstrates that the reported reasons for

being/choosing childlessness are different by gender in industrialized nations. Women reported worry and stress about childcare, career, and physical consequences of childbearing, whereas men reported financial burden and not being able to make major purchases as reasons for childlessness (Avison & Furnham, 2015; Park, 2005; Seccombe, 1991; Sung, Choi, & Lee, 2015a; Sung, Choi, & Lee, 2015b). Moreover, in industrialized nations, studies have shown that men with low socioeconomic status are more likely to be childless, whereas for women the impact of socioeconomic status on childlessness tends to be inconsistent (Abma & Martinez, 2006; Berrington & Pattaro, 2014; Fiori, Rinesi, & Graham, 2017; Kanazawa, 2014; Keizer, Dykstra, & Jansen, 2008; Kneale & Joshi, 2008; Kreyenfeld, 2005; Kreyenfeld & Andersson, 2014; Miettinen, 2010; Miettinen et al., 2015; Miettinen & Szalma, 2014; Parr, 2010; Ravanera & Beaujot, 2014; Seiz, 2013; Seo & Stotzer, 2021; Vignoli, Derefahl, & De Santis, 2012; Waren & Pals, 2013). We can see from these studies that pathways into childlessness are different by gender in industrialized nations (Keizer, Dykstra, & Jansen, 2008).

Due to a staggering decline in fertility, the South Korean government has been trying to implement policies since 2005 to increase birth rates (Sung, Choi, & Lee, 2015a) but to no avail. Some of the policy measures implemented by the South Korean government have included providing varying degrees of affordable housing, maternity leave, spousal maternity leave, reduced medical costs for children, flexible and/or reduced work hours, a monthly child benefit (of about 88 US dollars), accessible childcare, and extra-curricular activities at school (Jang, 2018). However, the fertility rate has been falling consistently to 0.92 births per woman in 2019 (Heo, 2020). From this ongoing decline we can say that the existing policies have not (yet) been effective in encouraging fertility in Korea, but it is unknown whether the ineffectiveness of South Korea's approach is attributable to the policies' direction, strength, or both. A better

understanding of the implicit values and assumptions in the discussions around fertility-promoting policy would be helpful in designing more effective measures to promote gender equity and fertility.

South Korea has a distinctive culture around marriage and parenthood. Marriage is a very common path toward procreation in Korea. According to the OECD (2019), only 1.9% of births happened outside of marriage in 2014; this is the lowest rate among OECD countries. It appears that both fertility rate and marriage rate are declining together; South Korea's marriage rate fell steadily from 1970 to 2020 (OECD, 2022). South Korea and other East Asian countries also have unique cultures around children's education; Anderson and Kohler (2013), using South Korea as a case study, examine the link between the low fertility rates of East Asian countries and the culture of the region that places high emphasis on children's education. They suggest that the cultural norm of 'education fever' raises the cost of childrearing in East Asian countries, such as South Korea, compared to other nations that may also be experiencing fertility declines. These educational costs may act as deterrents to young people, who may not feel like they can opt out of some of the demands of "education fever," making childbearing and rearing seem too expensive to pursue.

Gender inequality in the work-family structure in South Korea is still rather problematic (Dynam, Kirkegaard, & Stansbury, 2022). South Korea's average work hours are one of the highest in the OECD and part-time work is relatively uncommon, making it hard for parenting women to stay in the workforce. Furthermore, women in South Korea are overrepresented in the non-regular work sector, where employment is less secure. Also, the gender gap in time spent on household labor and childcare is very large in South Korea. These structural inequalities and cultural characteristics are factors that dissuade young adults from having children.

Premised on the notion that policy decisions are the product of value arguments (Stone, 1997), this policy case study is an attempt to uncover implicit values and assumptions in debates around parental leave policy in South Korea. Using public sources as qualitative data, I intend to reveal implicit values and assumptions behind the current parental leave policy and a bill for mandatory parental leave that was proposed but did not pass. Exposing the implicit values and assumptions behind each policy argument will enable us to see what we are emphasizing and overlooking in the current policy discourse, and what may be driving uptake of the current voluntary policies, as well as points of resistance to stronger policies such as mandatory paternal leave. It is expected that this study will offer valuable insights into current policy struggles and the failure of policy options to increase fertility by highlighting the value tensions inherent in the current policy debate. Moreover, understanding the tensions in values makes it easier for policy entrepreneurs to address people's concerns in their policy designs.

This policy case study is based on the idea that policy making is a political process where values clash, sometimes explicitly and other times implicitly (Stone, 1997), rather than a rational quest to find a technical solution to a problem. In other words, policy making is a process of deciding what is important, as much as (if not more than) evaluating and projecting outcomes of policy approaches. Prior to conducting policy analysis that examines the efficacy or effectiveness of policy choices, one has to first determine the values, or criteria with which those policies should be judged. So, this study is an attempt to expose the implicit values that drive policy debates around parental leave in South Korea.

I intend to uncover the assumptions and values undergirding the arguments for two different parental leave policy approaches in South Korea. One approach is the current parental leave policy is voluntary parental leave for parents. The other policy approach is a bill for

mandatory parental leave for fathers that was proposed but did not pass in the National Assembly that would have mandated paid parental leave for fathers as a possible means to promote fertility by getting fathers more invested in their families and distributing the economic consequences of parenthood more evenly between mothers and fathers. This study focuses on the narratives that undergird parental leave policy approaches; so, this study will not touch upon other policy measures (such as shortened work hours or sexual harassment prevention) even when the analyzed documents mention them. The research questions of this policy case study are “What values and assumptions are embedded within narratives around parental leave policies in South Korea?” and “Given prior research that showed different gender barriers to becoming parents, are any of these values and assumptions also gendered?” Uncovering the implicit values of each approach will enable us to consciously examine the value trade-offs of each policy idea and help develop better social policies to promote gender equality and address declining fertility.

Why Parental Leave?

There are many reasons why people are choosing to have fewer children or no children in industrialized nations. One important reason is that in many of these nations it is hard for women to have children and keep careers at the same time. If women did not have to sacrifice their careers when becoming mothers, the costs (and opportunity costs) of motherhood would be lower, offering one possible option for increasing fertility. In Korea, most children are born to married couples; according to OECD (2019), only 1.9% of births happened outside of marriage in Korea in 2014. This finding suggests that both men and women have equal stakes in mothers paying an economic consequence, in addition to the biological consequences, of having children. If mothers could continue to bring in income to the family, fathers would not have to be sole breadwinners of their families. In other words, if it was easy for mothers to keep their careers,

and the financial burden of fathers would be reduced, increasing the opportunity for them to invest their time in their families and childrearing. Keeping mothers in the labor force also means that there are more workers to vitalize the economy and taxpayers to support the welfare system. Therefore, it is important that policy measures aim at making it easier for mothers to keep their careers, and in the late 20th century, parental leave policies were developed in part as a measure to encourage female labor force participation and promote families/fertility (Haas, 1992).

Among the many policies created in an attempt to address declining fertility rates, I focus on parental leave policies because high and equal usage of parental leave has the potential to minimize gendered barriers to parenthood. I mention equal usage of parental leave because mothers' disproportionately high usage of leaves makes hiring women more expensive, as employees' leave usage is a cost to employers (Asai, 2019). The additional costs of hiring potential mothers can exacerbate the gender wage gap, which can further discourage women from pursuing careers and continue to force men out of family life and into breadwinner roles. However, creating policies that allow, and encourage, both men and women to take time off to care for children have the potential to make men and women represent equal expenses for their companies (rather than perpetuating the idea that women are more expensive employees) and is intended to promote fertility by providing financial parenting support to both mothers and fathers, making childbearing seem a more reasonable option for many families.

Two Different Approaches to Parental Leave Policy in South Korea

An analysis of more than one policy approach reveals the competing values and assumptions that are at the root of how a social issue is being defined and conceptualized. Approach A was selected because it is the current policy and its analysis would reveal values that are generally acceptable in contemporary South Korean society. Approach B was selected

because the idea of mandating fathers' parental leave is being discussed more frequently globally in recent years. For example, fathers in France are required to take at least one week of paternity leave from 2021 ("France doubles paid", 2020). Approach B is a similar policy in the context of South Korea and its analysis would reveal how such an idea is received by the South Korean government and public.

Approach A: The Current Policy – Voluntary Parental Leave

Passed initially in 2007, and subsequently amended multiple times (Ministry of Employment and Labor, 2023). South Korea currently has a system of incentivized voluntary parental leave for mothers and fathers (Approach A). In this existing policy, each working parent can have up to a year of paid parental leave, and women have maternity leave in addition to parental leave. For the first three months of parental leave, he/she can receive 80% of their regular monthly salary within the limits of 700,000 to 1,800,000 South Korean won (approx. \$550 to \$1,500). From the fourth to twelfth month, he/she gets paid 50% of salary within the limits of 700,000 to 1,200,000 won (approx. \$550 to \$1,000). The benefits for the later nine months used to be slightly lower until 2019, with 40% of salary with lower limits. Also, if the second parent uses parental leave after the first parent, the benefit for the first three months is increased to 100% of regular salary with the upper limit of 2,500,000 KRW (approx. \$2,000). This is to encourage fathers to use parental leave (Ministry of Culture, Sports and Tourism, n.d.).

Preliminary results suggest that Approach A has failed to achieve the intended outcome of creating equality between men and women in their decision to take leave, in order to increase fertility. The gender distribution of parental leave usage is still unequal. According to Statistics Korea (n.d.), 105,165 people used parental leave. Men account for 21.2% of the total usage (22,297 father users), whereas women account for 78.8% (82,868 mother users). Although the

proportion of father users has been increasing, the gender distribution of usage is still unequal, with a difference of 57.6 percent point. The difference becomes even larger if we include women's maternity leave usage. Moreover, the fertility rate has been falling consistently even after increasing the benefits in 2019. From 2018 to 2019, the fertility rate decreased by 0.06, to 0.92 births per woman. Hence, it can be said that the existing policy has been unsuccessful to date, although it is possible the gap may shift more in the next few years as more people take advantage of the 2019 changes.

Approach B: Mandatory Parental Leave for Fathers

A second approach was a 2019 bill that proposed to mandate parental leave usage for fathers (Approach B). In 2019, Mr. Maeng Sung Kyu, a member of the National Assembly, proposed a bill to mandate men's parental leave usage of at least a month before their child reaches the age of 3 years old (Jeong, 2019). The idea that parental leave usage needs to be mandated has emerged more than once in recent years because of the relatively low numbers of fathers taking levels of parental leave similar to mothers. Approach B is the most recent (2019) version of policy approaches that mandate parental leave. There was another bill that was proposed in 2017 that mandated parental leave usage of both parents; this older bill also did not pass. The fact that similar bills are being proposed repeatedly shows that mandating parental leave is not an aberrant idea in parental leave policy discussions.

The 2019 bill document states that it is important to build an institution and environment to stimulate male workers' parental leave usage. It also stated that it is important to mandate a certain duration of parental leave for male workers, given that men's parental leave usage is conducive to raising the fertility rate. The bill was put on the table for discussion in the Environment and Labor Committee of the National Assembly in February 2020, but it was never

discussed in a legislative session to be considered for a vote. The bill died automatically when the term for the 20th National Assembly ended on May 30th, 2020.

When considering possible policy solutions to a social issue, it is important to consider both the existing policy landscape and proposals to change policies to better understand the values and assumptions driving policymaking. It is worth examining the arguments for the current policy of voluntary parental leave because in order for a different system of parental leave to be adopted, the new one would have to be considered “better” than the current one. An examination of what determines whether or not something is “better” reveals the competing values and assumptions that are at the root of how a social issue is being defined and conceptualized, in this case, what values/assumptions are being expressed and challenged in parental leave policy debates.

The current policy approach of voluntary parental leave and the proposed idea of mandatory parental leave represent two large streams of opposing parental leave ideas. To be clear, though, this study is not an attempt to compare and contrast the two large streams to determine their potential effectiveness; the aim of this study is to uncover the underlying values and assumptions in the discourse around parental leave as a whole that inform why these policies have been proposed in the first place. It is anticipated that examining the arguments for and against these two policy approaches will reveal the hidden values and assumptions behind parental leave as a mechanism to try to increase fertility in a nation with severely declining fertility. This analysis can help future policy decisions be based on a conscious examination of the value trade-offs, rather than the (faulty) belief that such decisions were made objectively on a technical basis. The exposure of the unspoken value conflict inherent in policy decisions will

help shape parental leave policy in South Korea that reflect the current situation and people's opinions.

Methods

Policy decisions are the product of arguments, rather than a rational quest to find the most effective solution to an objectively existing problem (Stone, 1997). Using a policy case study methodology, I intend to identify the implicit values and assumptions in the discussion around parental leave policies in South Korea. In order to do that, data sources on two parental leave policy approaches (the current system of voluntary paid parental leave as well as the failed bill for mandatory parental leave for fathers) will be examined. Even though the purpose of this study is not to compare and contrast the values and assumptions behind parental leave ideas, I utilized both the data on the current policy and the bill that did not pass because the failed attempt illuminates what is not accepted in the current policy discussion. It is expected that understanding what is not tolerated in the policy discourse provides a clear delineation of unspoken values and assumptions.

I used the case study method for three reasons. The first reason is that this study is highly idiographic; it focuses specifically on the parental leave policy discussion that cannot be divorced from the context of contemporary South Korea. The case study method, both in general and in policy analysis, enables us to examine a phenomenon within the context (Pal, 2005). The second reason is that this proposed study is an investigation of the values and assumptions behind parental leave policy approaches, rather than “fashioning some technical solution to a problem” (Pal, 2005, p. 239). The focused and holistic nature of case study makes it possible to uncover the “meaning system” (Pal, 2005, p. 239) that is hidden in policy approaches. The third reason is that this is an examination of the “processes that result in certain outcomes” (Pal, 2005,

p. 237), rather than the outcomes themselves. Processes are deeply rooted in the context, such as the time, space, and culture. Therefore, the holistic nature of case study suits the purpose of this study.

Data Sources

The data for this policy case study comes from public sources for both Approaches A and B that represent values expressed by both politicians and the public. All of this information is publicly available on government websites as a part of the policy-making process.

Data on Approach A

The sources from which to infer values and assumptions behind the arguments for Approach A include public documents on the National Assembly Bill Information System website and a policy brief on a government website. I analyzed the original document of the bill titled Gender Equality in Employment Act - Partial Revisions to the Bill (Alternative) (2007; bill number: 177914, Approach A – Bill; 77 pages) that passed and established the backbone of the current parental leave policy in South Korea.

In addition, the report of the legislative committees that discussed the 2007 bill was also examined. There were two committee reports for this bill, one from the Legislation and Judiciary Committee and the other from the Environment and Labor Committee. However, only the report from the Legislation and Judiciary Committee was analyzed because all of the content of the latter committee's report made it to the bill itself after a partial revision. The bill itself and the report of the Environment and Labor Committee are identical. So, the Legislation and Judiciary Committee's evaluation report on constitutional conformity, legal system, and wording (Legislation and Judiciary Committee of the National Assembly, n.d.; Approach A – Committee Report; 4 pages) was analyzed.

Finally, since amendments have been made to the parental leave policy since 2007, I used a 2018 public policy brief that describes the newly added elements to the existing parental leave policy that encourages fathers to take leave (Ministry of Culture, Sports and Tourism, n.d.; Approach A - 2018 Policy Brief; approximately 500 words). The 2019 revision of the existing parental leave policy increased the upper limit of parental leave allowances. Also, it introduces “fathers’ parental leave bonus,” which increased the upper limit of the allowance for the second parent using parental leave, which according to the brief (2018) is usually fathers. The additional elements were introduced after the original bill by the executive branch through the president’s enforcement ordinance; so, National Assembly documents do not discuss these new elements. The policy brief is publicly available on a government website called “Policy Briefing.” This policy brief was used to examine the values hidden in the argument for the newly added mechanisms of the policy introduced by the executive branch.

Of note, there were no public comments publicly available on the National Assembly Bill Information System website for analysis on the original 2007 bill for the current voluntary parental leave policy.

Data on Approach B

For Approach B, which was a bill that was proposed in 2019 to mandate fathers’ usage of parental leave for a certain duration, public documents and public comments on the National Assembly Bill Information System website were used as data sources. I analyzed the original text of the bill titled Gender Equality in Employment and Support for Work-Family Balance Act - Partial Revisions to the Bill (2019; bill number: 2022738 Approach B – Bill; 4 pages),

There was only one committee report for this bill from the Environment and Labor Committee (2020; Approach B – Committee Report; 6 pages), which was included in this analysis.

In addition to these official documents, I also analyzed the public comments on this bill on the Bill Information website (National Assembly Bill Information, n.d.; Approach B – Public Comments). There were 252 public comments on this bill. These public documents and comments provided sources to qualitatively analyze to uncover the implicit values and assumptions behind the arguments for and against each of these policies in the South Korean context.

Qualitative Analysis

The data sources for Approaches A and B were analyzed using a constant comparison (Dye, Schatz, Rosenberg, & Coleman, 2000) method. Constant comparison is an iterative process where the researcher examines data as they are collected without a priori codes. I, as the researcher, started creating initial codes as data were being collected. As I progressed to other sets of data, the new information from the additional data was integrated and the codes were modified to accurately reflect new data. When similar codes emerged as data collection and analysis progressed, categories were created to capture multiple codes in a concise manner. Existing codes and categories were constantly tested and updated to integrate significant elements of new data.

Constant comparison does not mean comparing the values and assumptions behind arguments for each of the two parental leave ideas. When a code emerged in the analysis of one narrative, I examined if a similar thread can be found in the narrative on the other side. For example, if individual choice emerged as a code in the analysis of narratives in support of

Approach A, I also investigated the element of individual choice in the analysis of narratives in support of Approach B. This process of contrasting the two revealed the values and assumptions of each approach, but also these policy approaches overall. The objective of these analyses was to uncover the large pool of values and assumptions in the parental leave policy discourse.

The constant comparison analyses were divided into two Parts based on the characteristics of the data sources. Table 1 describes which data were used for Parts 1 and 2. Part 1 was an analysis of official documents, whereas Part 2 was an analysis of public comments. The official documents used as data sources Part 1 reflect official and formal voices of the government, and thus the values and assumptions of the government. On the other hand, the public comments used in Part 2 enable us to see the raw, informal voices of people, and thus the values and assumptions of the general public.

Still, it may seem odd that Part 1 used five documents on both Approaches A and B as data sources, and Part 2 only used the 252 public documents on Approach B. Though it may seem like the documents on Approach A and the documents and comments on Approach B are in two camps that are against each other, the true picture is more complicated than that. For example, the Environmental and Labor Committee Report (2020; Approach B – Committee Report) is about the bill for Approach B but is in fact against the ideas of Approach B; rather, the report is in support of the ideas of Approach A, the current voluntary parental leave policy. Similarly, the among 252 public comments on the bill for Approach B (National Assembly Bill Information, n.d.; Approach B – Public Comments), there are comments that are for and against the ideas of Alternative B. Therefore, it was decided that the analyses would be divided into two Parts that are different in terms of where the narratives are coming from; Part 1 is on narratives of the government and Part 2 is on narratives of the general public.

Table 1. Data Sources for Parts 1 and 2 of the Constant Comparison Analyses.

	Approach A (Voluntary Parental Leave)	Approach B (Mandatory Parental Leave for Fathers)
Data Sources for Parts 1 and 2 –	The original bill document titled Gender Equality in Employment Act - Partial Revisions to the Bill (Alternative) (2007; bill number: 177914, Approach A – Bill; 77 pages)	The original bill document titled Gender Equality in Employment and Support for Work-Family Balance Act - Partial Revisions to the Bill (2019; bill number: 2022738 Approach B – Bill; 4 pages)
The cells shaded in green were used in Part 1, and the cells shaded in orange were used in Part 2.	The Legislation and Judiciary Committee report on this bill (n.d.; Approach A – Committee Report; 4 pages)	The Environment and Labor Committee report on this bill (2020; Approach B – Committee Report; 6 pages)
	The public policy brief that describes the elements added by the executive branch to the existing parental leave policy (Ministry of Culture, Sports and Tourism, n.d.; Approach A - 2018 Policy Brief; approximately 500 words)	The public comments on this bill on the Bill Information website (National Assembly Bill Information, n.d.; Approach B – Public Comments; 252 comments)

Part 1 of the analyses was on the three documents about Approach A and two documents on Approach B. The three official documents about Approach A were: the original document of the 2007 bill (Approach A - Bill) that passed and established the backbone of Approach A, the Legislation and Judiciary Committee report on this bill (Approach A – Committee Report), and

the 2018 policy brief that describes the newly added elements to the existing parental leave policy that is meant to encourage fathers to use leaves (Approach A - 2018 Policy Brief). The two documents about Approach B were: the original document of the 2019 bill (Approach B - Bill) that was proposed in 2019 to mandate fathers' usage of parental leave and the report of the committee (Approach B – Committee Report).

Part 2 of the analyses focused on the public comments on the bill for Approach B on the Bill Information website (Approach B – Public Comments). It was anticipated that the public comments, given their informal nature (especially compared to the sanitized nature of official documents), would shed light on how the public conceptualizes parental leave policies. There were 252 public comments on this bill. However, it was decided that it would not be meaningful to count the number of comments for or against the bill or behind each code, since the comments are not from a representative sample of Koreans; the comments were from any Korean citizen who knew about this bill and decided to leave a comment on it. Also, many of the public comments appeared to be duplicates; the exact same wordings appeared multiple times in different comments. This could mean that there were organized efforts to bring people to comment for or against the bill. Given this background, counting the numbers of comments would only reflect the power to mobilize commenters from each camp (for or against the bill). Still, in the constant comparative analysis of public comments, codes emerged only when there were at least two commenters mentioning the same element. In other words, if only one commenter mentioned something, it did not qualify as a code. There were also comments that some could find offensive, depending on values and perspectives. Whenever feasible, I tried to use the most refined comment as an example of data for the code. However, it is still possible that some may find some comments displeasing.

Owing to their informal nature, the public comments data required a second reviewer; the comments data were much more complex than official documents data used in Part 1. For Part 2 of the analyses on public comments, I invited a second reviewer to analyze all of the data with the tentative codes, categories, and concepts that I had created in order to increase the reliability and validity of the final codes. The second reviewer has an economics background, is proficient in the Korean language, and familiar with the context of South Korea. I gave the second reviewer my tentative coding and the original public comments, without telling him from which data the codes emerged. This was to ensure that the codes faithfully reflect the data, rather than my subjective lens. The second reviewer suggested that we combine some redundant codes and categories. He also suggested that I create a new code. Most of his suggestions were incorporated into the final coding. And for some other suggestions, I described to him how the codes emerged referring to the original data. The second reviewer and I agreed that the final coding faithfully reflects the original data.

Part 1 of the analyses did not involve a second reviewer because the official documents put forth their narratives in a more organized manner. Unlike in Part 2, in Part 1, it was possible to count the frequency of appearance of data that corresponded to each code. The data analysis of Part 1 is easily replicable because one can open the official documents and do a text search for the words (the data) that corresponded to each code. The comments data in Part 2, on the other hand, were often pithy and did not allow for this counting because there were many omissions in sentences (which are already more common in Korean than in English); therefore, the analysis required more inference and interpretation based on the context than in Part 1. Therefore, it was necessary to have a second reviewer involved in the data analysis of Part 2, but not for Part 1.

Translation from Korean to English may not be perfect; so, whenever translations are used, the original Korean wording first appears first, and English translation follows in parentheses. Also, in Korean, omissions are more commonly used than in English. So, when translating from Korean to English, the English sentence may seem incomplete without adding the omitted words or phrases. In such instances, I will add the inferable omitted element in brackets.

Results from Part 1: Constant Comparative Analysis of Official Documents

From the constant comparative analysis of the official documents, two main concepts emerged, namely: Sex-Targeted Nature of Policies and Equality vs. Liberty. Table 2 shows final codes, categories, and concepts for Part 1. There were up to four layers of grouping between a concept and data. All original data were processed into codes. The level under concepts was categories or codes; codes were placed right under concepts when the codes could not be grouped. When doing so revealed more about the narratives of the official documents, sub-categories and sub-sub-categories were made between categories and codes.

Before presenting the findings, I would like to remind readers that the results from Part 1 may seem somewhat dry and sanitized (especially compared to Part 2). This is because of the formal and organized nature of the official documents, especially in comparison to the wide variety of comments from the public. However, the findings from Part 1 are still pertinent in that it is still possible to extract implicit values and assumptions from formal narratives. Moreover, the official narratives provide an important context for the findings in Part 2, where public comments were analyzed.

Table 2. Final codes, categories, and concepts for Part 1.

<u>Concept</u>	<u>Category or Code</u>	<u>Sub-Category or Code</u>	<u>Sub-Sub-Category or Code</u>	<u>Code</u>	
<u>Sex-Targeted Nature of Policies</u>	<u>Male-specific elements</u>	Environmental mechanisms to encourage males’ parental leave			
		Males’ parental leave and fertility rate			
	<u>Female-specific elements</u>	<i>Female biology</i>	Motherhood protection		
			Career breaks (caused by pregnancy and childbirth)		
			<i>Leave before and/or after delivery</i>	Mothers' leave before and/or after delivery (maternity leave)	Spousal maternity leave
		<i>Environmental factors</i>	Career breaks (caused by childrearing)		
			Encouraging female labor force participation		
			Proactive measures to improve employment (affirmative action)		
	<u>Equality vs. Liberty</u>	Equality			
		Mandating the permission to use parental leave			
Autonomy/freedom/violation of freedom					
<u>Preventing disadvantages in employment</u>		Carrot for employers			
		Stick for employers			

Sex-Targeted Nature of Policies

Perhaps the most prominent concept that emerged from the constant comparison analysis of the policy documents was Sex-Targeted Nature of Policies; it was apparent that there were male-specific and female-specific elements in both parental leave policy approaches.

Male-specific elements

Within the category of male-specific elements under the concept, Sex-Targeted Nature of Policies, two codes emerged. The first was **environmental mechanisms to encourage males' parental leave**. Two different environmental mechanisms to encourage males' parental leave were mentioned. The first was to increase incentives for fathers' parental leave usage. In Approach A - 2018 Policy Brief, there were mentions of policy elements like “fathers' month” (아빠의 달), which is increased allowance for fathers' parental leave (or the second parent using parental leave; 아빠육아휴직 보너스제). Increasing monetary incentives can be seen as an effort to tackle environmental barriers to fathers' parental leave, such as financial difficulty.

The second mechanism was to mandate parental leave for fathers. Approach B - Bill mentions mandating male workers to use parental leave (남성근로자 의무육아휴직). In Approach B - Bill, it is clearly mentioned that mandating parental leave is a measure to create an environment to promote fathers' parental leave. The original wording was: “남성근로자의 육아휴직을 일정 기간 의무화하는 등 남성근로자의 육아휴직 사용을 촉진하기 위한 제도와 환경을 조성할 필요가 있음 ([We] need to create an institution and environment to promote male workers' parental leave usage through measures such as mandating male workers' parental leave for a certain duration).” In a mandatory parental leave system, fathers do not have to make any choice about parental leave usage because they are not able to; this environmental is mentioned as one where men can use

parental leave freely, without worrying about social pressure from work. Narratives about social pressure appear in Part 2.

Some differences between the narratives around this code and the narratives about females' parental leave were noticeable. First of all, the mentions of environmental factors to promote males' parental leave uptake was in contrast with the sub-category under female-specific elements named *female biology*, which will be elaborated on in a later section. It appeared that male-targeted policies focus on taking environmental factors into account, rather than biological factors. Also, although Approaches A and B use different mechanisms to have males' use parental leave, it was apparent both Approaches had the similar goal of promoting males' parental leave. Similar narratives did not appear around encouraging females' use of parental leave.

The second code that emerged in this category was **males' parental leave and fertility rate**. This code also emerged from Approach B - Bill. The original wording was “남성 육아휴직 촉진이 출산을 향상에 도움이 된다는 점을 고려할 때 (Considering that promotion of male parental leave usage is helpful for fertility promotion).” It was clear that it is believed that an increase in males' parental leave uptake will lead to higher fertility rates.

Female-specific elements

The other category under the concept, Sex-Targeted Nature of Policies was female-specific elements. Two sub-categories emerged right under this category, namely *female biology* and *environmental factors*.

Female biology.

The first sub-category was *female biology*. The first code that emerged under this sub-category was **motherhood protection**. Motherhood protection (모성보호, 모성 보호, 모성을 보호) was

mentioned 21 times in Approach A - Bill, and once in Approach A - 2018 Policy Brief. The Korean word “*moseong* (모성)” can be either translated as motherhood or maternity, but in this context, I used the term motherhood to avoid confusion because motherhood protection means more than just maternity leave. In Approach A - Bill, it was explained that “*moseong* (모성)” in this context meant it included pregnancy, childbirth, and breastfeeding, which all have relevance to female biology. On the other hand, the Korean phrase “*chulsan hyuga* (출산 휴가),” the literal translation of which would be childbirth leave, is usually translated as maternity leave. So, the term motherhood was used to mean pregnancy, childbirth, and breastfeeding, whereas maternity (as in maternity leave) was used to mostly mean childbirth.

To clearly understand the meaning of “motherhood protection” in South Korea’s policy context, a glossary by a government ministry was used in addition to the original data. According to an entry on “motherhood protection laws” in the Glossary of Terms for Current Events and Economy (*Sisagyeongjeyongesajeon*) by the Ministry of Economy and Finance (2020), motherhood protection means “Social measures to especially protect females in the workplace, in consideration of females’ physical and biological traits. The need for motherhood protection measures is widely recognized because giving birth to and raising healthy children are a basic right of females, and a necessary condition for the sustenance of life of the child who was born. ... (여성의 신체적·생리적 특성을 감안하여 근로장소에서 여성을 특별히 보호하기 위한 사회적 조치이다. 건강한 아이를 낳아 기르는 것은 여성의 기본적 권리이고, 동시에 태어나는 아이의 생존유지를 위한 기본적 조건이기도 하므로 모성보호 조치의 필요성은 널리 인정되고 있다. ...)” Motherhood protection appeared to be conceptualized as a biological necessity. Also, it can be inferred that motherhood protection is about giving mothers a chance to raise their own children (free from the [pressures or threats] of the workplace). It is true that pregnancy, childbirth, and breastfeeding can only be done by females;

however, other tasks relevant to “the sustenance of life” of children, can be done by males as well. It was interesting that the concept of paternity protection did not appear in any of the official documents.

Another code that emerged within this sub-category was **career breaks (caused by pregnancy and childbirth)**. Career breaks of females were mentioned 11 times in Approach A - Bill. This document talks about “females who relinquished careers due to pregnancy, childbirth, childrearing, et cetera.” Since pregnancy and childbirth are unique to females, **career breaks (caused by pregnancy and childbirth)** fits under female specific elements and female biology. The two codes in this sub-category, **motherhood protection** and **career breaks**, reveal that motherhood is conceptualized as a period of time when females require protection, and that the narrative of the current policy is to provide the help that females need, in terms of helping them secure their careers and the chance to raise their children.

A sub-sub-category called *leave before and/or after delivery* emerged under this sub-category of female biology. Under this sub-sub-category, two codes emerged. The first was **mothers' leave before and/or after delivery (maternity leave)** which appeared in Approach A - Bill (3 times). The second code was **spousal maternity leave** which appeared 12 times (배우자 출산휴가, 배우자의 출산을 이유로 휴가를 청구하는 경우) in Approach A - Bill. These two codes in this sub-sub-category all point to the fact that motherhood has biological aspects in ways that fatherhood does not, and policies consider this biological aspect. This was in clear contrast with male-specific elements in policy design, which focused on environmental factors only to promote fathers' parental leave usage.

The second sub-category was environmental factors. The first code that emerged within this sub-category was **career breaks (caused by childrearing)**. Career breaks of females were

mentioned 11 times in Approach A - Bill. This document talks about women who relinquished careers due to pregnancy, childbirth, childrearing, et cetera. Childrearing is not something that females are better capable of doing due to biology; men are capable of taking care of children (except for producing milk). Therefore, **career breaks (caused by childrearing)** fits under the sub-category of *environmental factors*. It was also of note that males' career breaks caused by childrearing do not (probably because they are rarer) get mentioned in these documents.

The second code was **encouraging female labor force participation**, which appeared 16 times as “female employment (여성고용),” “women workers’ participation in economic activity (여성 인력의 경제활동 참여)” or “women’s use of their skills (여성의 능력 발휘)” in Approach A - Bill. The last code was **proactive measures to improve employment (affirmative action)**, which appeared 51 times in Approach A - Bill. All three codes under this sub-category appear to be based on the assumption that mothers need protection in terms of their career prospects. In addition to the “protection” narrative about motherhood, there appear to be another narrative about efficiency. Keeping women in the labor force is conceptualized as ensuring that women’s skills do not go to waste. It is hard to infer from the data whether this for the benefit of the women or the society (or both).

Equality vs. Liberty

The second concept that emerged from the constant comparative analysis was Equality vs. Liberty. Within the concept of Equality vs. Liberty, three codes and one category emerged. The first code was **equality**, which appeared in Approach A - Bill (98 times) and Approach A - Committee Report (11 times). It was apparent that the intent of the existing parental leave policy was about promoting gender equality in employment. The second code was **mandating the permission to use parental leave**. This appeared in Documents Approach A - Bill (17 times),

Approach A - 2018 Policy Brief, and Approach B – Committee Report. From these two codes, it can be seen that the objective of the current voluntary parental leave policy is to promote equality. Nevertheless, the logic of the current parental leave policy is that individuals' liberty should also be respected and mandating employers to give their employees the permission to use parental leave is as far as the government can go without overstepping.

The third code was **autonomy/freedom/violation of freedom**, which appeared in Approach B – Committee Report. As mentioned earlier, Approach B – Committee Report is a document that argued against Approach B, the mandatory parental leave proposal. Here, the value tension between equality and liberty is highlighted; the argument against Approach B is based on the value assumption that individual's right of choice should not be violated.

The one category that emerged under the concept of Equality vs. Liberty was preventing disadvantages in employment. Two codes emerged under this category, **carrot for employers** and **stick for employers**. **Carrot for employers** describes measures that incentivize employers' gender-egalitarian employment practices whereas **stick for employers** means measures that punish employers who penalize employees for using parental leave. The first code was **carrot for employers**. In Approach A - Bill (18 times) and Approach A - 2018 Policy Brief, there were mentions of rewarding employers who do a good job at preventing women's disadvantages in employment. Approach A - Bill provides the legal basis for providing monetary incentives for gender-egalitarian employment practices. Approach A - 2018 Policy Brief talks about specific policy measures such as providing monetary support to employers who allow maternity leave or parental leave and hire replacement workers. The second code was **stick for employers**. Also, in Approach A - Bill (72 times) and Approach A - 2018 Policy Brief, there were mentions of strengthening labor supervision and penalizing employers who fire or put disadvantages on

employees for using parental leave. The penalty can be up to 3 years of imprisonment or up to 20 million South Korean won.

Interestingly, some protective measures were for female workers only. Also, in Approach A - Bill, it was clearly stated “the penalty for making a contract where female workers’ marriage, pregnancy, and childbirth are reasons for resignation is under 5 years of imprisonment or under 30 million won. (여성 근로자의 혼인, 임신 또는 출산을 퇴직사유로 예정하는 근로계약을 체결하는 경우에는 5년 이하의 징역 또는 3천만원 이하의 벌금에 처한다.)” However, there was no mention of protective measures for male workers who may be the primary homemaker and/or caregiver of their children.

It can be said that these “stick” measures limit the freedom of individual employers to a certain extent, but it seemed that this form and amount of violation of individual choice was considered tolerable by policymakers (and the general public who influences policymakers). It appeared possible that the infringement of the freedom of employers may be more easily accepted than that of employees.

Results from Part 2: Constant Comparative Analysis of Public Comments

From the constant comparative analysis of the 252 public comments, two major concepts emerged: Arguments for Mandating Fathers’ Parental Leave and Arguments against Mandating Fathers’ Parental Leave. Table 3 shows the final codes, categories, and concepts for Part 2.

Table 3. Final codes, categories, and concepts for Part 2.

<u>Concept</u>	<u>Category</u>	<u>Code</u>
<u>Arguments for Mandating Fathers’ Parental Leave</u>	<u>Benefits for the society</u>	concerns over fertility rate / low fertility
		female labor force participation / dual-earner family society
	<u>Benefits for women</u>	sharing women’s disadvantages caused by biology
		preventing sole childrearing
	<u>Benefits for children</u>	fathers’ bond with children
	<u>Policy vs. norm</u>	policies shaping social norms
		social pressure
	<u>Benefits for men</u>	giving men a chance
		preventing lonely death
	<u>Fathers’ responsibility as a parent</u>	giving men the responsibility of childcare
distrust of fathers as motivated parents		
<u>Arguments against Mandating Fathers’ Parental Leave</u>	<u>Conservative ideologies</u>	against government overstepping
		laziness
		skeptical of the cost-benefit ratio of mandatory parental leave

Arguments for Mandating Fathers' Parental Leave

There were six categories under the concept, Arguments for Mandating Fathers' Parental Leave. The six categories were: benefits for the society, benefits for women, benefits for children, policy vs. norm, benefits for men, and fathers' responsibility as a parent.

Benefits for the society

The first category under the concept Arguments for Mandating Fathers' Parental Leave was benefits for the society. There were two codes under this category. The first code was **concerns over fertility rate / low fertility**. There were many comments that cite fertility rate and low fertility concerns as reasons for supporting fathers' mandatory parental leave.

Commenter #15 wrote: “저출산은 국가적 문제입니다. 여기서 저출산을 초래하는 이유로 결정적인 것이 독박육아에 대한 부담이죠. 일과 육아를 모두 감내하는 것은 여성의 몫도 아닐뿐더러 사람이 해낼 수 있는 일이 아닙니다. ... (Low fertility is a national issue. One critical reason that causes low fertility is the burden of sole childrearing. Enduring both work and childcare is neither women's work nor something a person can possible handle. ...)” This code could fall under another category, benefits for women; however, I placed them under this category of benefits for the society because this commenter is talking about the burden of sole childrearing as a cause for low fertility.

The second code under the category of benefits for the society was **female labor force participation / dual-earner family society**. Commenter #246 wrote “... 남성이 육아에 도움을 주면서 여성의 복직에도 큰 도움이 될 것이라고 생각되어 요즘같은 맞벌이 사회에 꼭 필요한 정책이라고 생각합니다. (... I think men's assistance with childcare will be very helpful for women's return to work; I think this is a necessary policy for today's dual-earner family society.)” This code could also fall under the other category, benefits for women; however, I placed them here under this category of

benefits for the society because this commenter suggested that mandating fathers' parental leave is suitable for today's Korean society. Moreover, considering that low fertility is a concern because of the shortage of workers that it will bring about in the future, women's return to work and female labor force participation can also be categorized as a benefit for the society.

Benefits for women

The second category under the concept Arguments for Mandating Fathers' Parental Leave was benefits for women. There were two codes under this category. The first code was **sharing women's disadvantages caused by biology**. Commenter #141 wrote “이미 출산만으로 여성은 선택권없이 최소 휴직해야합니다. ... 육아 혹은 출산 휴가, 휴직의 보편화로 여성만이 불이익을 받지 않도록 바뀌어야합니다. (From childbirth alone, women have no choice but to at least take leave. ... [Policy] should change so that women are not the only ones who bear the disadvantages from parental or maternity leaves.)” This is very similar to the sub-category of female biology from Part 1: Results from Constant Comparative Analysis of Official Documents in that they mention the inevitable biological aspects of motherhood.

The second code under the category of benefits for women was **preventing sole childrearing**. Commenter #96 wrote “... 법적으로 제도가 마련되지 않으면 계속해서 독박육아를 하게 될 것이고 ... (... Without a legal system, sole childrearing will continue to happen ...)” From the context, it can be inferred that the commenter meant that women will be the one in charge of sole childrearing. And, Commenter #131 wrote “함께 육아하는 환경 조성에 도움이 될 것 같습니다. ... (I think it will help create an environment of raising children together.)” The comments in this second category appeared to be based on the assumption that mandating fathers' parental leave is beneficial for women.

Benefits for children

The third category under the concept Arguments for Mandating Fathers' Parental Leave was benefits for children. There was one code under this category. The one code was **fathers' bond with children**. Commenter #196 wrote "... 쌍팔년도식 한국 가정에서 흔했던 아버지의 부재는 더이상 없길 바랍니다. (... I hope that the absence of fathers that was common in old-style Korean homes does not happen anymore)" And, Commenter #171 wrote: "사실 예전부터 아빠와 아기와의 유대감이 자녀의 사회성 발달에 얼마나 큰 영향을 미치는지 잘 알려져있습니다. ... (Actually, it has long been known how the bond between a father and a baby has big influence on the child's social development. ...)" While one might guess that there might be benefits to their children from their mothers not being the only one in charge of childrearing, the comments here only mention benefits for children from fathers' participation.

Policy vs. norm

The fourth category under the concept Arguments for Mandating Fathers' Parental Leave was policy vs. norm. There were two codes under this category. The first code was **policies shaping social norms**. Commenter #95 wrote "육아는 함께 하는 건데 의무화하지 않으면 사회인식은 절대 변하지 않을 겁니다. 찬성 (Childrearing is something that should be done together; if [parental leave] is not mandated, social norm will be never change. I am for it.)" And, Commenter #171 wrote: "이미 프랑스와 스웨덴에서는 사회적으로 의무화라고 생각하다시피 인식이 자리잡고 있지만, 우리나라의 경우 아직도 인식이 자리잡지 못하고 있기 때문에 이러한 부분을 정부차원에서 지원해주는 것에 대해 찬성합니다. (In France and Sweden, the idea that it [parental leave] is already established to the point that it is socially mandator, but in Korea, this idea has not been established; so, I am for the idea of government supporting this aspect.) This comment mentions that fathers' parental leave "socially mandatory"

in other countries; this is highlighting environmental elements that influence fathers' parental leave behaviors. This mention of environmental factors is very similar to the sub-category of *environmental factors* from Part 1: Results from Constant Comparative Analysis of Official Documents.

The second code under the category of *policy vs. norm* was **social pressure**. Commenter #100 wrote: “아이의 부모인 여남 모두가 눈치보지 않고 육아휴직을 사용할 수 있는 환경이 조성되어야만 출산에 대한 인식이 바뀔 수 있을 것입니다. (Ideas about having children will change only when an environment is created where women and men who are parents of children can both use parental leave without worrying about social pressure.)” Commenter #116 wrote: “육아휴직을 쓰고 싶어도 눈치가 보여 어렵다는 남성분들이 생각보다 많다고 들었는데, 이러한 법안이 생긴다면 그런 고충도 사라지겠네요. (I heard that many men are having difficulty using parental leave even if they wanted to because of social pressure; this policy will clear such difficulties.)” Social pressure was mentioned as a barrier to parental leave for both male and female workers. The comments in this fourth category appeared to be premised on the notion that policy should propel change in social norms.

Benefits for men

The fifth category under the concept Arguments for Mandating Fathers' Parental Leave was *benefits for men*. There were two codes under this category. The first code was **giving men a chance**. Commenter #110 wrote: “남성분들도 당당히 육아휴직하길 바랍니다 (I hope men use parental leave confidently)” And, commenter #192 wrote: “... 남성근로자에게도 아이와 함께할 시간적 여유를 보장해주는 것이 필요하다고 생각합니다. (... I think it is necessary [for policy] to secure men's time to spend with their children.)”

The second code under the category of *benefits for men* was **preventing lonely death**. A “lonely death (known as *godoksa* in Korean and *kodokushi* in Japanese)” is when someone who

has no social ties, dies alone. Commenter #189 wrote: “... 남성고독사의 원인 중 하나는 자녀의 육아에서 단절된 채 일만 한 것에 있습니다. 점점 더 남성 고독사가 증가하는 추세인 대한민국에서 남성들이 아버지로서 역할 할 수 있도록 하는 기회가 필요합니다. (... One of the reasons for men’s lonely deaths is that [they] were isolated from childcare and only did work. There is a trend of increasing lonely deaths; men need the chance to have a role as fathers in Korea.)” The assumption behind these comments in this category appeared to be that men want to use parental leave and be connected to their family but are not able to do it because of social pressure, mostly from their workplace. While one might guess that fathers’ participation in childrearing can also enrich the relationships with their spouses, the comments here only mention benefits for the men themselves from fathers’ participation.

Fathers’ responsibility as a parent

The sixth category under the concept Arguments for Mandating Fathers’ Parental Leave was fathers’ responsibility as a parent. There were two codes under this category. The first code was **giving men the responsibility of childcare**. Commenter #114 wrote: “... 우선 제도적으로라도 남성들에게 육아의 의무를 지도록 해야합니다. (... First, at least through policy, [we] need to have men take the responsibility of childcare.)”

The second code was **distrust of fathers as motivated parents**. Commenter #226 wrote: “독박육아 방지를 위해 남편의 육아휴직을 의무화하고 육아휴직 기간에 다른 일을 하는지 제대로 관리감독이 이뤄져야합니다. (To prevent sole childrearing, [we] should mandate husbands’ parental leave and supervise [them] to make sure that they don’t do something else during parental leave.)” And, Commenter #164 wrote: “의무 육아 휴직이 실시될 경우, 남편들이 일을 핑계로 육아에 대한 책임을 아내에게 전가하는 것을 조금이나마 방지할 수 있다고 생각합니다. ... (If mandatory parental leave is enforced, I think

[it] can prevent husbands from leaving the responsibility of childcare to their wives with work as their excuses. ...)“ The assumption behind these comments in this category of “fathers’ responsibility as a parent” appeared to be that men do not want to use parental leave or take care of their children. This assumption is in sharp contrast with the assumption in the category “benefits for men,” where it was presumed that fathers inherently want to look after their children.

Arguments against Mandating Fathers’ Parental Leave

There was one under the concept, Arguments against Mandating Fathers’ Parental Leave. The one category was conservative ideologies.

Conservative ideologies

There was one category under the concept Arguments against Mandating Fathers’ Parental Leave; it was conservative ideologies. There were three codes under this category. The first code was **against government overstepping**. Commenter #21 wrote: “독박육아에 대한 해결법과 남녀평등과 저출산 해결도 좋지만 이걸 법제화 시키고 의무화 시키는 건 아닌 가 싶습니다. (Solving sole childrearing, gender equality, and low fertility is good, but I don’t think it’s right to make this a law and mandate [parental leave].)” Commenter #39 wrote: “... 이런 것도 강제로 해야 하는 것인가? 무슨 공산주의나 독재사회도 아닌데, 어떻게 이런 발상을 할 수 있는지 의문이다. ... (... Do [we] need to do something like this mandatorily? Is this some kind of communist or dictatorship society? I don’t understand how one can come up with such an idea. ...)” There were tens of comments that use the identical wording as this comment. Commenter #193 wrote: “... 사회주의 무상복지 망국적인 개혁입법!! 악법절대반대!!~ 아이 키우는 것을 국가가 책임지는 것은 공산주의 국가에서 하는 것임. ... (... [I] oppose this socialist free welfare reformist bill that will ruin the country!! [I am] absolutely against this bad law!! Countries [governments] taking the responsibility of raising children is only something

that communist countries do. ...)” Commenter #176 wrote: “남자가 집에서 빨래하고 설겅이 하고 애돌보도록 사회풍토를 만들어 놓은 더불어 공산 페미당 자체를 폐기!!!! (Dump the Communist Feminist Democratic Party that made a social climate where men wash clothes, wash dishes, and take care of children at home!!!!)” This comment is referring to the Democratic Party of Korea as the Communist Feminist Party of Korea. (“Against feminism” is not a code because it only appeared once in the 252 comments.) The common thread among these comments is that they have strong aversion to government intervention.

The second code was **laziness**. Commenter #230 wrote: “... 열심히 일하는 사람들에게 희망을 주는 법안은 만들지 못할망정 자꾸 게으르고 핑계꺼리만 만들어주는 법안들만 입법하고 있으니 나라를 말아드릴려고 걱정하지 않고서는 이런발상이 나온단 말입니까. ... (... Instead of giving hard-working people hope, [you are] making bills that make [people] lazy and give them excuses; how can [you] even come up with this kind of idea unless you are trying to ruin the country? ...)” These comments appeared to be emphasizing the aspects of individual freedom and responsibility.

The third code was **skeptical of the cost-benefit ratio of mandatory parental leave**. Commenter #4 wrote: “무너져가는 외교, 안보, 경제나 되살릴 생각이나 하시죠. 일자리나 만들어주고 육아휴직을 언급하던가. ([Instead of this] why don’t you worry about restoring the diplomacy, security, and economy [of the country]. Talk about parental leave after creating jobs.) Commenter #162 wrote: “... 제발, 나라에 이득되는 일을 찾으시오. (... Please, find something to do that benefits the country.)” And, Commenter #193 wrote: “... 이런 악법안으로 국민의 혈세 낭비하지 말고, 탈원전 반대하는 법안 발의바람!! ... (... Instead of making this bad law that will waste taxpayers’ money, propose a bill against nuclear power phase-out!! ...) The code for these comments is about the cost-benefit ratio, rather than simply the benefit of mandatory parental leave policy because commenters

mention the cost the policy itself (i.e., taxpayers' money) and the opportunity cost of making such a policy; the opportunity cost would be lawmakers' time in coming with such a bill, which according to the commenters, should have been spent on other policies in diplomacy, security, and economy. These comments appeared to assume that the cost-benefit ratio of mandatory parental leave policy is undesirable.

Similarities and Differences between Results from Parts 1 and 2

Part 1 was an analysis of official documents, whereas Part 2 was of public comments. There were noticeable similarities and differences between the results from Part 1 and 2. The similarities between Parts 1 and 2 were: narratives about biological factors influencing females only, narratives about environmental factors influencing both males and females, and emphasis on individual choice and responsibility. The differences identified were that mentions of women's sole childrearing and men's lonely death were only found in Part 2 and that competing narratives about fathers' willingness to participate in childrearing were also only found in Part 2.

Similarities

Narratives about biological factors influencing females only

Both Parts 1 and 2 had findings about biological factors that influence females' leave-taking behaviors. In Part 1, *female biology* emerged as a sub-category under the category of female-specific elements. In Part 2, **sharing women's disadvantages caused by biology** emerged as a code under the category of benefits for women. These two are similar in that they both emphasize that biological factors that influence leave-taking behaviors for females only.

Narratives about environmental factors influencing both males and females

Both Parts 1 and 2 had findings about environmental factors that influence men and women's parental leave behaviors. In Part 1, one code under the category of male-specific

elements (**environmental mechanisms to encourage males' parental leave**), and all three codes under the sub-category of environmental factors (namely, **career breaks**, **encouraging female labor force participation**, and **proactive measures to improve employment (affirmative action)**) were relevant to environmental factors. In Part 2, codes such as **female labor force participation / dual-earner family society**, **preventing sole childrearing**, **fathers' bond with children**, **policies shaping social norms**, **social pressure**, **giving men a chance**, **preventing lonely death**, **giving men the responsibility of childcare**, and **distrust of fathers as parents** are pertinent to environmental factors influencing fathers' and mothers' parental leave and parenting behaviors. Unlike biological factors, environmental factors were mentioned as influencing both men and women.

Emphasis on individual choice and responsibility

Both Parts 1 and 2 had codes that are relevant to individual choice and responsibility. In Part 1, two codes under the concept of Equality vs. Liberty (namely, **autonomy/freedom/violation of freedom** and **responsibility**) were pertinent to individual choice and responsibility. In Part 2, too, two codes under the category of conservative ideologies (namely, **against government overstepping** and **laziness**) were similarly relevant.

Differences

Mentions of women's sole childrearing and men's lonely death in Part 2 only

Only in Part 2, there were mentions of women's sole childrearing and men's lonely death. **Preventing sole childrearing** emerged as a code under the category of benefits for women and **preventing lonely death** emerged under benefits for men. There were no mentions of sole childrearing or lonely death in official documents.

Competing narratives about fathers' parental motivation in Part 2

In both Parts 1 and 2, there appeared to be an agreement on the notion that fathers' need to use parental leave more; however, only in Part 2, competing narratives about fathers' willingness to participate in childrearing emerged. Under the category of benefits for men, **giving men a chance** emerged as a code. The assumption behind the narratives of this code was that fathers want to use parental leave but are unable to use it because of social norms and pressure. On the other hand, under the category of fathers' responsibility as a parent, **giving men the responsibility of childcare** and **distrust of fathers as motivated parents** emerged as codes. The assumption behind the narratives of these codes was that a significant portion of fathers do not want to be involved in childrearing, and therefore must be made to do it.

Discussions: Implications from Results from Parts 1 and 2

Different Narratives for Men's and Women's Parental Leave

It was apparent from in the data on both Approaches A and B that the narratives for parental leave differ for men and women. For males, the goal of parental leave policy was to increase their parental leave usage, either by incentivizing or mandating it. On the other hand, for females, it was to provide protection so that they can have a chance to raise their own children and keep their careers. In addition, there appeared to be another thread about efficiency in the narratives about mothers' parental leave. It was evident that one of the aims of the current parental leave policy was to ensure that women's skills are put to good use. It can be deduced that this efficiency piece is for the benefit of both the mothers themselves and the society. South Korea may have a greater interest in keeping mothers in the workforce because of the projected decline in numbers of workers due to low fertility rates.

There was no mention of protection for (engaged) fatherhood anywhere in the formal documents or public responses. This is interesting because, in Part 2, social pressure in the workplace was mentioned as a barrier to parental leave usage for both males and females. It is possible that the lack of paternity protection is one of the factors that make males' parental leave usage difficult. If we really want fathers to use parental leave and be involved in direct parenting as much as mothers, it might also be worthwhile to start devising measures to protect engaged fatherhood as much as motherhood. Protection for engaged fatherhood may be especially worthwhile because paternal involvement is known to be associated with a range of child outcomes, from higher mental health to lower rates of drug use (Reeves, 2022). Fatherhood may not include the biological challenges that motherhood entails (such as pregnancy and childbirth), but the socioeconomic penalty from childrearing would apply similarly to both mothers and fathers. It may be time to reconceptualize engaged fatherhood as one that requires as much protection as motherhood.

Environmental and Biological Factors

It appeared that the discourse around parental leave policy in South Korea focused much more on environmental factors than biological factors. As mentioned in the above section, in both Parts 1 and 2, there were far more codes pertinent to environmental factors that influence fathers' and mothers' childrearing behaviors than codes about biological factors.

Although not as frequently mentioned as environmental factors, biological factors also appeared as points of consideration, but only for females. In both Parts 1 and 2, there were codes about unavoidable biological aspects of motherhood. Interestingly, narratives about biological factors were limited to females; there were no mention of male biology in the data sources examined. The assumption appeared to be that, biologically, males and females have equal levels

of skills and motivation for childrearing. Since the logic of parental leave policies (especially voluntary parental leave) is built on this assumption, it may be worth investigating whether males and females have similar motivations and skills for childrearing when all environmental factors are equal. If this assumption of equal parenting capability is unwarranted, it may be necessary to think about novel measures to promote males' involvement in parenting.

Competing Narratives around Fatherhood

In Part 2, it was found that there are competing narratives about father's parental leave and childrearing. Some conceptualized parental leave and childrearing as something fathers would like to do but are not able to due to social pressures; however, others assumed that childrearing is a chore that fathers try their best to avoid by making excuses. It was believed that parental leave policy was giving fathers a valuable opportunity, but at the same time, there was skepticism that father may not actually take care of their children. This disparity raises the questions as to where this skepticism is coming from and how much of it is true. If fathers are truly uninterested in looking after their children, or unable due to a lack of knowledge, promoting parental leave usage itself may not be sufficient or even worthwhile. Those who are disinterested in rearing children may be the most challenging to intervene with, but for those who are interested but lack childcare skills, some additional environmental supports around training fathers and potential fathers basic parenting skills may be an interesting area for further support. Investigating how much of each of these two competing narratives are true reflections of reality may help conceptualize different policy directions.

Philosophical Tensions

It is probably no surprise to many that this study, based on Stone's (1997) notion that policy decisions are political in nature, illuminated the tensions between equality and liberty; in

both Parts 1 and 2, there appeared to be philosophical tensions between equality (and fertility promotion) and individual choice. Approach B was an attempt to push forward equality and fertility promotion at the expense of individual choice. Given that the bill for Approach B The bill died 2020, it can be said that value decision South Korea is defaulting to favors freedom over equality, at least around the idea of mandating fathers' parental leave.

In addition to the somewhat obvious tension between equality and liberty, constant comparison analyses of the official documents and public comments also revealed that narratives on gender equality appeared to have threads about making use of women's skills and moving toward the dual-earner family model. So, the arguments for gender equality were not only about equality in the home, but also included threads about employing as much of the increasing more limited human resources as possible. In some senses, the arrangements that facilitate the egalitarian dual-earner model like that of Sweden (Cooke & Baxter, 2010; Guo & Browne, 2022) are a means to make efficient use of female labor force. Though this narrative about efficiency does exist in discourse around parental leave policies, it does not seem to be the central argument. Because South Korea is and will be facing a shortage of workers, and thus taxpayers, it may be worthwhile to start policy debates with this supplementary goal of efficiency more explicit in the debate.

Also, it appeared that some forms of infringement on personal freedom may be more accepted than others. Approach A, the current voluntary parental leave policy, has measures that mandate employers to give the permission for employees to use parental leave and punish employers who put disadvantages on employees for using parental leave. These measures limit employers' choice, but since these made it to the current policy, it can be said that they are more generally accepted. Approach B, the bill for mandatory parental leave for fathers, on the other

hand, did not pass. Besides the target of violation of personal choice, the two Approaches differ in magnitude of disruption. So, it would be hasty to conclude that Approach A passed but Approach B did not solely because we are more accepting towards limiting employers' freedom. However, the differences between the attitudes toward infringement of freedom of employers and employees may be worth investigating, as it may help policymakers predict where they will face more public resistance.

Limitations and Future Research Directions

Limitations of this study must be discussed. First, as mentioned, this policy case study is on the parental leave policy discussion in the context of South Korea. Because South Korea has distinctive cultural characteristics, the findings of this study may not be generalizable to other societies. It may be worthwhile to conduct similar policy case studies in different societies to determine if what other values may be impacting the outcomes of parental leave policies.

In Part 1, I used official documents as data sources; one drawback of using official documents as data for an analysis intend to uncover values and assumptions is that they tend to be excessively sanitized. Diversity of viewpoints and clash of values are less apparent in official documents than public comments. Public comments, given their raw nature, were used as data sources in Part 2, to complement the refined nature of official documents. Still, public comments may not reveal the values and assumptions of those who are directly involved in policy decision making, limiting our understanding of the governmental values and assumptions despite the greater number of pages and words devoted to the topic.

Public comments themselves also have inherent flaws in that they come from people who knew about the bill for Approach B and decided to leave a comment on it. As a result, it is possible that most people who left comments on the bill have stronger opinions on the topic than the general

public. Moreover, there were many duplicate comments, and those similar comments were posted together in a short timeframe; this could be seen as a sign of entities that mobilized commenters to express their opinions. Although generalizability is not the paramount objective of this policy case study, these mobilizing forces at play may have skewed the findings of this study. Those comments also do not reveal what those other forces in the debates are, suggesting another area of study that may be of interest in these ongoing policy debates. Other actors in South Korea certainly have an interest in the issue (e.g., employers, unions, special interest groups) that are not represented directly in this study but may have still had an influence in both the government documents and the public comments.

I tried to reflect the voices of the government and the general public in the constant comparison analysis of this study. In doing so, I may have overlooked the narratives of certain groups, especially if their voices are not well reflected in government documents or public comments. For example, the constant comparison analysis revealed that there were policy measures in the current policy that restrict some freedom of employers. How employers think about these measures, and based on what values and assumptions, may not have been reflected in the findings of my constant comparison analysis. Given the ways that policy reflect certain values in a society, exploring the values and assumptions of employers who are caught between wanting high efficiency workers and seeing the decline in the available workforce is an area for future research.

Given the nature of the constant comparison analysis method, it is hard to say that this study is completely free from my own subjectivity. In Part 1 of the analyses, I tried to make the findings replicable by presenting the number of times certain words or phrases that appeared in the original data, or by presenting the original sentence. Still, it is possible that I emphasized certain

threads of values and assumptions in the official documents, while overlooking others. In Part 2, I had a second reviewer review the concepts, categories, and codes with me, so that they faithfully reflect the original data. Nevertheless, the possibility that I may have influenced the viewpoints of the second reviewer when teaching him how to code cannot be completely ruled out.

In this policy case study, I chose to code for the content of narratives about parental leave policies. In other words, I did not code for how things were said, or who said those things. Especially in Part 2, due to the informal nature of public comments, there may be more to learn from the tones, legibility, and speech levels (whether they use formal/polite language, or informal/casual language in Korean). Also, many comments were simple duplicates and many identical comments appeared to be posted at similar times. This could mean that there were entities that mobilized commenters to express their viewpoints. Finding out who these mobilizing entities may be was beyond the scope of this paper. Part 1 of this study was about formal, official sources and Part 2 was about informal, public sources; these mobilizing entities may lie somewhere between the lines of formal and informal and influence both sides. It would also be interesting to investigate how these forces operate and, if they do, sway public opinions and policy decisions.

Conclusion

There were three main findings that were uncovered in this policy case study. First, the narratives around parental leave policy were gendered. For males, the objective of parental leave policies was to increase their usage. For females, on the other hand, the goal was to provide protection to give mothers a chance to raise their children and keep their careers. Motherhood protection was mentioned frequently; motherhood appeared to be perceived as a period where females needed protection, both biologically and in terms of career prospects. On the other hand,

protection for (engaged) fatherhood was never mentioned, though engaged fatherhood may also cause penalty in fathers' career prospects. In addition to motherhood protection, there was a thread about efficiency in the narratives about parental leave for females; parental leave policy appeared to exist to counter predicted labor shortage by keeping mothers in the labor force. It may be worth investigating whether similar kinds of protection for engaged fatherhood would increase fathers' parental leave usage. Also, environmental factors appeared in narratives about both fathers' and mothers' behavior, whereas biological factors appeared only in narratives about motherhood. There appeared to be an assumption that, biologically, males and females have equal levels of skills and motivations for childrearing. Investigating whether males and females have similar levels of biological drives and skills for childrearing may help inform future policy directions.

Second, it was revealed that there were competing narratives about fathers' motivation for childrearing. Some narratives assumed that fathers want to use parental leave and bond with their children, whereas other narratives presumed that fathers try their best to avoid childrearing duties. It might be worth investigating where these competing narratives come from and how much of these are true reflections of fathers' motivations in South Korea.

Lastly, philosophical tensions between equality and individual choice were revealed in the discourse around parental leave policies. Somewhat predictably, one of the most common reasons against mandatory parental leave for fathers was the concern about violation of personal freedom; to many, liberty was not something that can be sacrificed. Besides this main philosophical tension, some threads about equality and efficiency emerged; narratives on gender equality appeared to have elements about making use of women's skills and moving toward the dual-earner family model. In addition, it was also speculated that policymakers' (and the general

public's) tolerance level of for measures that restrict employers' freedom may be higher than those that limit employees' freedom. In guiding future policy directions, understanding these tensions between values may be beneficial because it informs us what value choices we have been defaulting to, and thus what narratives may be needed to convince people who may be averse to certain policy elements.

This policy case study highlighted values and assumptions that were present but may have been overlooked in the narratives around parental leave policy in South Korea. Some findings (such as the philosophical tension between equality and choice) may be predictable, whereas others may be surprises. It is anticipated that the findings of this study will bring important but otherwise hidden threads in the discussion around parental leave policy, work and parenting behaviors of men and women, and fertility promotion to the foreground, so that we can have fruitful discussions with conscious examinations of implicit values and assumptions.

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Chapter 5: Conclusion

Purpose

Many industrialized societies have below-replacement fertility rates and many of their governments have made fertility promotion an objective in their policy (Sobotka, Matysiak, & Brzozowska, 2019). South Korea, the context of two of my three studies, has the lowest fertility rate in the world. A deeper understanding of pathways into parenthood and parental leave policy from a South Korean context may provide insights as to how to address the problems of declining fertility and gender inequality in South Korea and other industrialized societies, especially if and when they have ultra-low fertility rates. Moreover, stubborn sex/gender differences in parental leave usage and labor force participation rates raise the question as to whether we might be overlooking some important element in our conceptualization of the work and parenting behaviors of men and women. Studies A, B, and C of my dissertation sought to answer these questions.

Major Findings

Study A, the logistic regression study that examined the socioeconomic characteristics of childless men and women in South Korea, demonstrated that, for men, education, employment, and income were significantly positively associated having a child/children, whereas no significant association was found among women. This finding that men's fathering was related to economics could be a reflection of current norms for a man's role in the family: Men who are able to fulfill the normative expectation that fathers should be financially capable (Ravanera & Beaujot, 2014) to support a family had children, while those who could not fulfill this obligation were less likely to have children. The lack of association between economics and fertility among women could have also been related to this cohort (those born in 1947-1961). Fewer women

were career-focused in this cohort of adults than are in current cohorts of women of child-bearing age. The pressure of gender role norms could also be a reason that some people are childless in South Korea. Men face significant strain to fulfill breadwinner roles and women to fulfill homemaker and mothering roles. Family-friendly policies and change in culture that enable both parents to maintain careers and to share parenting roles could also be beneficial for encouraging fertility.

Study B, the theoretical discussion paper on the sex/gender gaps in parental leave usage and labor force participation rates, can be summarized into three points. First, sociocultural reasoning did successfully put us on a trajectory toward sex/gender equality in work and parenting behaviors; however, policies based on sociocultural thinking alone may only get us as far as where Sweden is now, which is impressive, but not perfect equality between the sexes. Second, the Biological Evolutionary Framework (BEF), with its consideration of innate sex differences leading to divergent behaviors to maximize evolutionary fitness, makes a unique contribution to making sense of stubborn sex/gender gaps in work and parenting behaviors. Last, the BEF can be useful in formulating policy ideas and thinking about what each society is willing to give up for sex/gender equality and fertility promotion. There are social and economic costs to allowing the inequality to persist, but there are also different types of costs in trying to attain equality that need to be fully discussed in these debates.

In Study C, the policy case study on the narratives around parental leave policies in South Korea, had five main findings that were revealed in the constant comparison analyses. First, the narratives for parental leave were gendered. Motherhood was perceived as a period when females needed protection; on the other hand, there was no mention of protection of career prospects for (engaged) fatherhood. Second, biological aspects of parenthood were only

mentioned for mothers and there appeared to be an assumption that fathers and mothers have similar levels of biological drives and skills for childrearing. Third, there were competing narratives about fathers' motivation for childrearing; some narratives presumed that fathers want to use parental leave and bond with their children, whereas other narratives assumed that fathers try their best to avoid childrearing duties. Fourth, there was pessimism in projections about how rapidly the gender gaps in parental leave usage will narrow. Lastly, philosophical tensions between equality and individual choice were present in the discourse around parental leave policies. It is anticipated that the findings of this study will bring to the foreground important but otherwise hidden threads in the discussion around parental leave policy, work and parenting behaviors of men and women, and fertility promotion, so that we can have fruitful discussions with conscious examinations of implicit values and assumptions.

Implications

In this three-study dissertation, I intended to make unique contributions in the topics of sex/gender differences in work and pathways to parenthood in industrialized economies. In Study A, I investigated whether associations between sociocultural measures and childlessness present in other industrialized economies were also present in South Korea. Also, I examined whether there were gender differences in the way socioeconomic status was associated with childlessness. The results demonstrated that there were clear gender differences in the way that socioeconomic status affected childlessness. It appears that those who did not fit into the gendered family norm tended to be childless. This trend was more salient for men than women in this cohort.

Study B is a theoretical discussion paper, where I applied a biological/evolutionary framework to understanding the sex/gender differences in parental leave and labor force

participation behaviors. Biological/evolutionary thinking can contribute to explaining the stubborn nature of the sex differences in work and parenting behaviors. Study B discussed how, and under what circumstances, the biological/evolutionary framework can be applicable in discussions around sex/gender gaps in work and parenting behaviors. This theoretical discussion helps us to reconsider what type of “equality” is the goal of our policies, and to consciously think about what each society is willing to give up (e.g., individual freedoms) for their specific sex/gender equality goals, with the ultimate goal being increased fertility. No policy decision is without costs, and this study highlights new ways to think of these costs and benefits as societies seek to increase their fertility rates through parental leave policies.

Study C is a policy case study on parental leave in the context of South Korea. This study is premised on the idea that policy making is a political process where different values compete against each other (Stone, 1997), rather than an effort to find a technical solution to a problem. From this perspective, I uncovered implicit values and assumptions behind the discourse around parental leave in Korea. Using data from public sources, I investigated values and assumptions behind the narratives of parental leave policy. The qualitative analysis uncovered, among others, that the narratives around parental leave are gendered and that it is projected that the gender gaps in parental leave usage will not completely close in the near future. The findings will allow for a more conscious discussion around value trade-offs in policy debates.

The three studies were on the topics of sex/gender differences in work and pathways into parenthood in industrialized economies. In the context of South Korea, Study A replicated clear gender differences in the childlessness phenomenon that were observed in other industrialized economies. In that sense, it contributes to the literature by examining the Korean context, when European and North American studies have dominated this literature. Study B was an attempt to

build upon the phenomenon of gender differences that was highlighted in Study A. Study B discussed which theoretical lenses could be utilized to understand gender differences in work and parenting behaviors in general, instead of focusing directly on the childlessness in Korea. Study B mentioned mandatory parental leave policy as an example of biological/evolutionary thinking guiding policy discussions. Last, Study C was an attempt to build on the discussion of voluntary and mandatory parental leave policies in the context of South Korea. Parental leave is important because it is one of the policy measures that can mitigate gendered barriers to parenthood. It is well known that many people cite the difficulty of balancing work and family as their reasons for childlessness; high and equal usage of parental leave can make it easier for both parents to have children and stay in the workforce. Also, Study C highlighted that biological characteristics, a major element in biological/evolutionary thinking discussed in Study B, only appear as points of consideration in the discussion of females. Study C elucidated that, in the discourse around parental leave policies in South Korea, protecting motherhood was a major concern, whereas protecting (engaged) fatherhood or alleviating the financial burden of fatherhood (highlighted in Study A) were never mentioned.

The implied assumption across these three studies may be that, even in policy discourses, we think women should be wives/mothers first and laborers second. When women take both professional and family roles (which has become more common), it is presumed that their family roles should not be hurt by professional roles. This assumption is conspicuous when compared against the narratives about fatherhood. That there was no mention of protection of (engaged) fatherhood may imply that we think men should be laborers first and husbands/fathers second. This normative assumption of paternal financial responsibility is highlighted in the findings of Study A, too. Therefore, in policy narratives, men's family roles are not deemed to deserve the

same level of protection as women's family roles. Also of note is that there is no mention of protection of men's professional roles, either. The implied assumption here may be that men do not need any protection, whereas women deserve to be protected. Further research should further explore this point of difference.

So, the assumption in policy narratives seems to be that we want women to be laborers who are more "like men" (in traditional sense) in professional roles, but we still want to protect their traditional family roles. This may not necessarily be a problem in itself, but when juxtaposed against the lack of efforts to protect men who pursue family roles (against traditional gender norms), an issue becomes more evident. It must be said that there are efforts to help men be more engaged in family roles; in the current parental leave policy, increased monetary benefits for second parents' (usually fathers') leave usage. However, job protection for engaged fathers did not appear to be in the foreground of policy narratives. So, there was a clear discrepancy in the levels of encouragement and protection for women who engage in the workforce and the levels of those for men who are trying to participate more in family life.

A practical issue with the reasoning that it is sufficient to help women fit more effectively in the labor force without helping men be more engaged in the family arises from the fact many (if not most) families are ecosystems that consist of both a father and a mother. When a child is born, there is a level of childcare and breadwinning that must be done. Therefore, when men are inactive in family roles, women naturally are more active in those roles. Likewise, when women cannot be active in professional (breadwinning roles), men must bear that much more of a financial burden for the family. This equation holds true for most parents who care about their children because the amount of childcare and income generation stay relatively constant; so, it is a matter of whom to assign the tasks of childcare and breadwinning to. Going back to the very

beginning of the problem identification of this dissertation, societies that are experiencing declining fertility are actually mostly concerned about the long-term societal and economic impacts of a declining number of workers. Because shortage of workers (or the prospect of it) is the driving force of these family policies, it is imperative that these social measures enable both parents to be active in professional roles by encouraging women to enter what is traditionally men's space. Although this is a necessary condition, this focus on women's labor force participation alone may not be sufficient because without men entering women's space at the same rate, this momentum for change will face formidable headwinds. Encouraging men to enter what is traditionally women's space and affording them the same level of protection, on top of helping women enter men's space, would be closer to a sufficient condition for true equity. The idea here is not at all to argue against the notion that women need to be protected, but rather to add the nuance that it is easier to protect women when we understand and help men at the same time, since most men and women are in an ecosystem where what men do influences women and vice versa, especially within heterosexual couples and families.

Further examination of the conflicted narratives about fatherhood and the implied assumption that women (motherhood) deserve protection, whereas men (fatherhood) do not need protection found in Study C reveals that we are generally conflicted about how to conceptualize men and women's work and parenting behaviors. In Study C's finding about conflicting narratives about fatherhood, it was demonstrated that some believed fathers deserved to be given the blessing of spending time with their children, while some others believed that fathers should be supervised and punished when they do not take on the burden of childcare. Fathers were perceived as both victims and culprits. Study B also reflected some implicit problematizing of choices, particularly men's choices, to take less parental leave than women. Women's usage is

often discussed as the standard, and men fail to meet that same standard when it is left to their individual/family choices. We are especially conflicted about men and fathers; this phenomenon may have its roots in the fact that men are relatively understudied in the research on fertility behaviors, as mentioned in Study A. More often than not, we also implicitly assign a nation's fertility responsibility to women, if through no other evidence than we use women's procreative numbers to quantify a national fertility rate. It may be that even the research and policy efforts that seek to undermine gender norms are too deeply entrenched in traditional gender norms.

Both sociocultural and evolutionary/biological frameworks have unique contributions to the conceptualizations of men and women's work and parenting behaviors. While not the focus of these three studies, many (if not most) of the differences in the behaviors of men and women are in fact caused by social and cultural influences. Many of the gender differences can be undone by social influences; the vast difference in the gender gaps between Sweden and South Korea are probably driven in large part by sociocultural forces. We should not lose sight of the importance of social and cultural influences and the efforts to create a more equitable social and cultural environment. Evolutionary and biological frameworks can be used to understand a comparatively smaller portion of gender gaps that sociocultural frameworks do not do an adequate job at explaining. Consciously putting biological/evolutionary factors explicitly to the foreground will minimize the risk of overlooking important biological aspects. There are clear biological differences that cause divergent work and parenting behaviors of men and women, and evolutionary and biological perspectives enable us to think about how this divergence can be addressed.

It is worth clarifying that high female labor force participation rates are beneficial for not only women, but also men, and the economy. It may seem like raising female labor force

participation rates only benefit women, but hurt the fertility rate, since Study A (and many similar studies in industrialized societies) showed that highly educated and/or employed women have fewer or no children. This result is likely only because it is hard to balance both work and family in the current institution. Adequate policies that support dual-earner families will counter this trend of high-SES women having fewer children. This is also why research on family policy is important; careful family policy will enable individuals to fully realize themselves in their professional and family roles, instead of having to sacrifice one. Moreover, high female labor force participation benefits fathers and potential fathers, too. In a society where mothers can maintain their careers, men who are partnered with women do not have to bear the full or primary burden of financial responsibility. The normative expectation of fatherhood was highlighted in the implications of Study A (and many similar studies in industrialized societies). Furthermore, high female labor force participation means that it mitigates the economic impact of shrinking workforce caused by prolonged low fertility rates. So, high female labor force participation rates are not at all something to be afraid of. The true concern, for both social justice and economic vigor, is the lack of adequate family support that enables both parents to realize their full potential in their professional and family roles.

Limitations of the three studies must be discussed. Study A was a cross-sectional design, and the respondents were aged 45 and over; thus, causality between socioeconomic status and childlessness could not be established, especially for the current young generation in Korea. Study B put forth arguments based solely on observations and some of the assertions, especially in the rudimentary policy examples, may seem unethical or simply unpalatable to some people. Study C has weaknesses stemming from the nature of the data sources used. The analyses may have been influenced by my own subjective views. Also, the data sources used, especially the

public comments, may have only reflected narratives from those who chose to leave comments in the National Assembly Bill Information website, rather than the whole population of South Korea.

This dissertation has limitations in the overall design, too. These studies do not focus on cultural variables, though cultural elements such as traditional division of labor, intense work pressure, and competitiveness of the education system were mentioned as reasons why fertility rate does not increase in South Korea (Sobotka, Matysiak, & Brzozowska, 2019). More research on these cultural factors and the measures to counter these influences on fertility decline is needed. Also, if South Korea's low fertility phenomenon is unique in its causes, the findings from the Korean context may have limited applicability to other industrialized societies. Caution must be taken when extrapolating the findings from South Korea to other societies, especially when the (cultural) contexts are different from South Korea. Moreover, two of my studies focused on parental leave as a measure to increase fertility. Parental leave is one of the many policy measures that could be used to promote gender equality and fertility. Considering that parental leave policy alone will not be sufficient to bring about changes in fertility, work, and parenting behaviors, other strategies (such as provision of affordable and high-quality childcare) should also be explored as potential ways to support family creation.

I anticipate that these three studies will help us better understand the characteristics of childless people, better explain sex/gender differences in parental leave usage and labor force participation rates, and highlight the clash of values in the policy debates around parental leave as a response to low fertility in Korea. Study A highlighted a gender difference in the childlessness phenomenon in Korea. Study B discussed which theoretical lenses could be utilized to understand the gender/sex differences in behaviors. Study C uncovered implicit gendered

narratives and pessimistic projections in the policy discussion around parental leave alternatives in South Korea. By highlighting the aspects of parental leave policy that have been overlooked, the findings of Study C will aid policymakers in persuading people who may be averse to certain policy elements and crafting more effective and palatable parental leave programs, with more realistic objectives in mind.

Taken together, I anticipate that my dissertation makes a unique contribution to advancing knowledge about sex/gender differences in work and pathways to parenthood in industrialized economies. By elucidating the normative expectations of fatherhood, bringing to the foreground biological sex differences in work and parenting behaviors, and highlighting the narratives around parental leave policies that have been overlooked, the findings and discussions of these three studies provide implications for how South Korea and other industrialized societies around the world could approach the issues of low fertility and sex/gender differences in work and parenting behaviors. I hope that Korea and other industrialized societies discuss the topics of fertility promotion and gender equality with conscious examinations of values and assumptions and realistic goals in mind. We may need to think hard about setting the short-term and long-term objectives for fertility promotion efforts, and about the sacrifices we are willing to make in order to achieve these goals.

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