“Brain gender” talk and the relationship between science and narrative: Situations in Japan[1]

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Abstract

In many countries, discourse on “brain gender” has gained much attention in the popular media. Such discourse often exaggerates and over-interprets scientific knowledge. To find a way to cope with the negative social influence of such discourse, I will explore the background of its popularity. A crucial component of this discourse is that it contains factors irrelevant to science. Thus, a perspective other than a scientific one is needed. Here, I will examine such discourse from the viewpoint of narrative approaches. They can reveal the equivocal character of the discourse on “brain gender.” I will also deal with some unique situations in Japan, including the problem of the medicalization of transgender.

Keywords

Sex/gender differences; brain; popular science; narrative; gender identity disorder

Introduction

In Japan and in many other countries, discourses on the “male/female brain” or “brain gender” are commonly found in popular books, magazines, and television programs.

> Research shows that we are more a product of our biology than the victims of social stereotypes. We are different because our brain is wired differently. This causes us

to perceive the world in different ways and have different values and priorities. Not better or worse—different. (Pease & Pease, 2001, p. 10)

Any concept that insists on sexual uniformity is fraught with danger because it demands the same behavior from both men and women, who have quite different brain circuitry. [⋯] [W]hen you understand the origins of these differences, you not only find it easier to live with them, you can manage, appreciate, and end up cherishing them, too. (Pease & Pease, 2001, p. 285)

Men and women are different creatures. Their brain structures are different, and their body structures are also different. Particularly, the fact that their brain structures are different means that men and women see the world through entirely different filters. Their ways of thinking, such as what they are distracted by, what they feel comfortable with, what they want, what they protect, are all different. [Himeno, 2006, p. 14 (my translation)]

Of course, some of the male-female differences in ways of thinking and behavior are made by social systems. However, men and women react and behave differently rather due to their biological differences, such as those programmed in our genes due to longtime evolution or those formed by the evolution of the brain. [Yoneyama, 2003, p. 8 (my translation)]

Judging from their systems of cognition in the brain, men and women are never the same kind of human being. Men cannot understand women, and women cannot accept men because their systems of cognition are neurophysiologically different. [Kurokawa, 2006, p. 71 (my translation)]

These quotations are from the worldwide best-seller, *Why Men Don't Listen and Women Can't Read Maps*, which has been translated into different languages and read in many countries, including Japan, and also from similar popular books published

in Japan.

Many have read or heard discourse of this nature. Some might find it persuasive; others might feel it is dubious. Readers may feel relieved and comfortable about what is said, or the content may make them uneasy. Some might take it seriously and try to apply it to their relationships, career choices, child-rearing decisions, etc., while others could relegate the subject to a funny topic in small talk, without any serious commitment.

We must first note that popular discourse about sex/gender differences in the brain often exaggerates and over-interprets scientific knowledge. Hereafter, I call such discourse the "brain gender" discourse. The high popularity of the "brain gender" discourse raises concern about negative social effects, such as the misuse of neuroscientific knowledge or the prompting of gender inequality. In this paper, I will explore why the "brain gender" discourse has gained attention to find a way to cope with possible negative influences.

The discussion proceeds as follows. In section 1, I will summarize the major claims of the "brain gender" discourse and show its problems and characteristics. When perceived as a scientific discourse, the "brain gender" discourse has many flaws and raises concerns about negative social influences. The curious point is, however, that the characteristics of the "brain gender" discourse are much more similar to those of practical guides about human relationships than those of popular science. Therefore, a point of view that is distinct from the scientific one is required to examine why such discourse has gained popularity. The subsequent discussion in this paper offers such a viewpoint.

In section 2, I will focus on two features that raise people's sympathy to the "brain gender" discourse. One is that it contains many everyday anecdotes, which create a friendly mood. This point is related to the usage of the word "brain" in everyday language. The other is that it has a distinctive message: "The trouble is because of the brain, so it cannot be helped." This message gives relief to readers. Messages of a similar type are often seen in wellness books. I will focus on popular how-to works about premenstrual syndrome (PMS) here.

In section 3, I will analyze the features mentioned above using narrative approaches. The notions introduced here are the "explanatory model" by Arthur Kleinman (1988) and "externalizing of the problem" by Michael White and David Epston (1990). The former casts a light on the ambiguous character of the "brain gender" discourse, which has both biomedical and folk aspects. The latter helps to see that the message, "it's because of the brain, so it cannot be helped," has an effect on readers in constructing an alternative narrative.

The discussion about "externalizing of the problem" reveals the double meaning of the word "brain"; it can imply both essentiality and externality to a person, depending on the contexts. Section 4 addresses this point with a specific example, the medicalization of transgender in Japan in the 1990s. Here, a particular image of the brain has exerted an important effect. Section 5 contains the summary of attractions and equivocality of the "brain gender" discourse.

1. "Brain gender" discourse

What the "brain gender" discourse claims

In the "brain gender" discourse, it is claimed that misunderstandings between men and women are caused by sex/gender differences in the brain, which cannot be explicated by social influences. Such differences are said to be established through the evolutionary process and hard-wired into the human brain by the differences in the secretion of sex hormones during the prenatal period. According to the "brain gender" discourse, these hormones produce clear and fixed sex/gender differences in cognitive abilities or behavioral tendencies.

Problems of the "brain gender" discourse

The "brain gender" discourse has some questionable points. First, sex/gender differences in the brain do not always lead to differences in our abilities or personalities. In fact, it is inappropriate to think that there are large psychological differences between men and women that are innate and fixed. Janet S. Hyde (2005; Eliot, 2009, pp. 11–13) examined

the major meta-analyses that have been conducted on psychological gender differences and showed that, for many kinds of psychological traits, gender differences are too small to make predictions about individuals from one's gender, even for the most frequently discussed sex/gender differences, such as mathematics performance or verbal ability (pp. 582–586).

Second, there is controversy over the significance of evolutionary factors or sex hormones in relation to our abilities or behavioral tendencies. Brain differences or psychological differences are outcomes of interactions of various interrelated factors. It is questionable to claim that our behaviors and thoughts are mostly determined by the effects of sex hormones (Caplan & Caplan, 2009; Eliot, 2009).

Lise Eliot, a neuroscientist, briefly summarizes the multiple factors that affect the emergence of sex/gender differences as follows:

> [S]ex differences are not nearly as large or as fixed as this new wave of essentialism projects. The truly innate differences—in verbal ability, activity level, inhibition, aggression, and, perhaps, social perception—are small, mere biases that shape children's behavior but are not themselves deterministic. What matters far more is how children spend their time, how they see themselves, and what all these experiences and interactions do to their nascent neural circuits. (Eliot, 2009, pp. 302–303)

Indeed, in the "brain gender" discourse, it is often added that the sex/gender differences mentioned are mainly differences in people on average that do not always apply to all individuals.[3] However, such discourses often stress the largeness, fixedness, and innateness of differences.

Moreover, the problem of the science of sex/gender difference is not just an issue of popular science. Paula J. Caplan and Jeremy B. Caplan (2009) summarize problems in existing research on sex/gender differences as follows:

- Failing to address definitional problems

- Basing research questions on sexist or other biased assumptions or theories
- Using inappropriate, inadequate, or invalid tests and other methods of measurement (including content that is much more familiar or unthreatening to one sex than to the other)
- Investigating only certain kinds of people but claiming to have found a sex difference, as though it applies to all people
- Inaccurately or irresponsibly reporting and/or interpreting the data
- Inappropriately using (some) animals' behavior to "explain" humans' behavior
- Making "box score" errors (ignoring some studies when summarizing the research on a particular topic)
- Exaggerating the size and/or stability of sex differences
- Ignoring or downplaying of overlap in females' and males' performance or behavior (and of no-difference results)
- Assuming too hastily that a sex difference is innate
- Creating theories not supported by or inadequately supported by the available research data (including theories based on only some of the data)

(Caplan & Caplan, 2009, pp. 119–120)

The problems of the "brain gender" discourse, considered as a (popular-) scientific discourse, can be summarized as follows. First, it exaggerates and over-interprets scientific findings.[4] Second, it trivializes social issues and thus reinforces gender stereotypes.[5] Third, since it seems like a plausible scientific discourse, it might be applied to practical problems, such as employment or education, without sufficient scientific support.[6]

Characteristics of the "brain gender" discourse

Differences in the brain are not equal to fundamental differences in the mindsets or values of people. Nevertheless, the "brain gender" discourse equates differences in the brain to those of personality. This point illustrates the characteristics of the "brain gender" discourse as given below.

First, in the "brain gender" discourse, the brain is often treated as the essence of a person. Some researchers have pointed out such a tendency in popular discourses about neuroscience. Racine, Bar-Ilan, and Illes (2005, p. 160) point out "neuro-essentialism" in articles about fMRI in the popular media. Neuro-essentialism treats the brain as the person, the individual, or the self. According to their research, neuro-essentialism is shown in many expressions where the brain is used as a grammatical subject (such as "brain can…").

Japanese neuroscientist Katsuyuki Sakai (2009: pp. 149–153) points out that "personification of the brain" (*nō no gijinka*) and "stereotyping of the brain" (*nō no ruikeika*) are commonly exhibited in the popular media. Personification of the brain means treating the brain like a person by using it as a grammatical subject, a notion similar to neuro-essentialism; stereotyping of the brain is when the brain is identified as the typical, salient character of a person, as shown in expressions such as "love brain" (*ren'ainō*) or "arithmetic brain" (*sansūnō*).

Furthermore, the distinctive point of the "brain gender" discourse is its focus. The "brain gender" discourse is not so much about the brain or neuroscience but about human relationships and lifestyles. It tries to explain differences in characteristics or behaviors among people by referring to sex/gender differences in the brain. It is not like popular science, which stimulates intellectual curiosity, but rather offers a practical guide for concerns in everyday life, such as parenting, love, or developing good relationships.

The "brain gender" discourse, referring to brain differences, actually focuses on relationships and lifestyle. How is this possible? It could be because this discourse directly connects the brain to the person.

Here, we must note that the "brain gender" discourse has some aspects that go *beyond* the reach of the (popular-) scientific viewpoint. Although the discourse has inappropriate points in regards to science, it nevertheless has its own contexts and concerns. To see why it has gained popularity, we will need a different point of view to examine the characteristics of the discourse. The following sections offer an alternative point of view.

2. Explanations referring to "the brain"

Sympathy toward the "brain gender" discourse

In spite of the problems mentioned in section 1, the "brain gender" discourse has acquired general popularity. Why is this so? The "brain gender" discourse is distinctive in that it addresses familiar episodes in everyday lives. It describes lively anecdotes that are either fictional or based on the experience of the author. This point makes it easier for readers to empathize with the discourse. Note, however, that the anecdotes in the "brain gender" discourse repeat and reproduce strong gender stereotypes.

Another distinctive feature of the "brain gender" discourse is that it conveys the message that the trouble originates in the brain or with hormones, so it cannot be helped; that is just the way it goes. The explanation referring to the brain sounds plausible, and the message, "that's just the way it goes" provides a sense of relief. These two factors create a favorable impression on readers. Each will be discussed in further detail below.

"The brain" in everyday language

The "brain gender" discourse contains plenty of personal, everyday anecdotes. For instance, *Ren'ainō: Otokogokoro to onnagokoro wa naze kōmo surechigaunoka (Love Brain: Why Is There so Large a Discrepancy between Men's and Women's Minds)* by Ihoko Kurokawa (2006), a popular Japanese book, consists of essays on the author's marital relations and family life, containing references to sex/gender differences in the brain.

The Female Brain was written by neuropsychiatrist Louann Brizendine (2006). It contains episodes from the lives of her clients: a teenage girl under stress and her mother, a woman worrying about work-life balance, a woman having marital difficulties with her husband, etc. Each anecdote is a commonplace one that functions as a prototypical example of the troubles that women encounter in each stage of life.

Pink Brain, Blue Brain by Lise Eliot (2009) is a popular book about sex/

gender differences in the brain, yet it was written with careful attention to various factors related to the differences. It is notable, however, that this book also deals with child rearing as a major concern, including specific episodes. This point suggests that people's interest in the sex/gender differences in the brain is rather applicative; issues concerning the brain are presented as intimately linked with everyday concerns.

Despite its emphasis on rather technical words like "the brain" or "neuroscience," the "brain gender" discourse as a whole can be read as a story about everyday life. Notice that the word "brain" is quite commonly used in daily conversation, independently of topics related to neuroscience. Most people have probably used an expression personifying the brain in conversation as a kind of joke. Though such an expression is obviously funny and cannot be taken at face value, we can immediately see its implications.

For us, the neuro-essentialist "brain," the personified "brain," or the stereotyped "brain" are suitable words to express feelings in daily life. They are already ingrained in our lives and used in a much broader context than science or popular science. The "brain gender" discourse is broadly accepted not only because of the recent boom of neuroscience but also due to the familiarity of the term "the brain."[7]

"It's because of the brain; that's just the way it goes."

The "brain gender" discourse often contains messages such as, "Your trouble is caused by your brain, so it cannot be helped; that's just the way it goes." Similar messages can be seen in practical books or wellness books.

Popular how-to works about premenstrual syndrome (PMS) are suggestive here. PMS has become well known among the public, and it is often featured in media such as women's magazines. However, it has been pointed out that existing studies on PMS have many flaws, such as a lack of a standard definition of PMS or the inadequacy of methods (Caplan & Caplan, 2009, pp. 67-70, 72-73). Still, the idea that PMS is the cause of various troubles has provided relief for many women.

The message that "the bad conditions are due to female hormones, so women should not worry too much about them" is practically very helpful, regardless of the

extent to which it reflects the relation between hormone fluctuations and psychophysical condition in the case in question. The message that "it's because of the brain" must have similar effects.

3. Narrative approaches

The notion of *narrative*

Explanations referring to "the brain" have a peculiar kind of familiarity, persuasiveness, and attractiveness. Are these attributes present just because the explanations authorize itself by adopting the face of neuroscience? Here, the notion of *narrative* serves a useful role. It sheds light on aspects of the "brain gender" discourse that produce a convincing force, rather independent of the authority of science.

The notion of narrative has gained attention in fields of research such as humanities and clinical science. The usage of this notion differs among researchers. For the present use, the following definition by Lewis P. Hinchman and Sandra K. Hinchman (1997) is helpful:

> [N]arratives (stories) in the human sciences should be defined provisionally as discourses with a clear sequential order that connect events in a meaningful way for a definite audience, and thus offer insights about the world and/or people's experiences of it. (p. xvi)

Narrative is often contrasted with theories. The difference between the two is that, whereas a theory is an attempt to provide a general explanation that is not confined to a specific time and place, a narrative is not oriented to context-independent generality but structures an experience of a particular narrator and makes it understandable (Hinchman & Hinchman, 1997, pp. xv-xvi; Bruner, 1986). Examples of narratives can be found anywhere in our daily lives. An explanation about one's experience or a talk about how a particular event comes about shares the features given above. Thus, narratives put our experiences in order and make them meaningful.

Explanatory models (Kleinman)

Arthur Kleinman, a psychiatrist and anthropologist, proposed the concept "explanatory model" in his book *The Illness Narratives*. According to Kleinman (1988), "[E]xplanatory models are the notions that patients, families, and practitioners have about a specific illness episode" (p. 121).

The word "illness" refers to the experience of symptoms and suffering. Practitioners reconfigure illness as "disease" using their theoretical tools, such as biomedical ones. Explanatory models concern the illness. They are responses to the urgent life circumstances of illness, so they are justifications for practical actions more than theoretical, rigorous statements. Indeed, they are often tacit, containing contradictions and shifting in content. In addition, they are anchored in strong emotions and feelings (Kleinman, 1988, pp. 3–6, 121–122).

To put it briefly, explanatory models are understandings or ideas about the illness conceived by those involved: e.g., the patient, the family members, or the doctor. They can be seen as the backdrops against which one develops a narrative about the illness.

The following case given by Kleinman (1988) vividly shows a discrepancy between the explanatory model of a doctor and that of a patient. The patient, Melissa Flowers, is a 39-year-old black woman who has hypertension. The following is an excerpt from an interview with her doctor, Staunton Richards:

> DR. RICHARDS: Pickle juice? You've been drinking pickle juice? That's got a great deal of salt. It's a real danger for you, for your hypertension.
> MRS. FLOWERS: But I have felt pressure this week and my mother told me maybe I need it because I got high blood and—
> DR. RICHARDS: Oh, no. Not pickle juice. Mrs. Flowers, you can't drink that for any reason. It just isn't good. Don't you understand? It's got lots of salt, and salt is bad for your hypertension.
> MRS. FLOWERS: Uh huh. OK.

DR. RICHARDS: Any other problems?

MRS. FLOWERS: My sleep ain't been too good, doc. I think it's because—

DR. RICHARDS: Is it trouble getting to sleep?

MRS. FLOWERS: Yeah, and gettin' up real early in the mornin'. I been dreamin' about Eddie Johnson. Doin' a lot of rememberin' and cryin'. I been feelin' real lonely. I don't know—

DR. RICHARDS: Any other problems? I mean bodily problems?

MRS. FLOWERS: No, 'cept for tired feelin', but that's been there for years. Dr. Richards, you think worryin' and missin' somebody can give you headaches?

DR. RICHARDS: I don't know. If they are tension headaches, it might. But you haven' t had other problems like dizziness, weakness, fatigue?

MRS. FLOWERS: That's what I'm sayin'! The tired feelin', it's been there some time. And the pressure makes it worse. But I wanted to ask you about worries. I got me a mess o' worries. And I been feelin' all down, as if I just couldn't handle it anymore. The money is a real problem now.

DR. RICHARDS: Well, I will have to ask Mrs. Ma, the social worker, to talk to you about the financial aspect. (Kleinman, 1988, pp. 133–134)

In this case, the patient, Flowers, uses the terms "pressure" and "high blood." These refer to folk illnesses in lower-class black American society (Kleinman, 1988, p. 135). The idea that pickle juice is effective and that social and psychological pressure make high blood pressure worse are based on folk medicine of the patient's community. Furthermore, the patient makes claims about the death of her friend and her financial worries.

The doctor wrote the following in the medical record:

Impression: (1) Hypertension, poorly controlled
(2) Noncompliance contributing to (1)
(3) Congestive heart failure—mild (Kleinman, 1988, p. 134)

The social and psychological problems that the patient emphasizes are ignored here.

In this case, the explanatory models of the two differ widely. Whereas the patient grasps her illness in cultural, social, and psychological terms, the doctor thinks that his job is to treat "bodily problems" and to focus only on biomedical issues. Based on her own models, the patient finds it hard to understand the doctor's stance. Thus, their conversation does not go well, and the patient seems uncomfortable.

As for the patient's claim about folk illness, Kleinman (1988) writes:

> If Dr. Richards were to attend to this alternative belief system, he would have a more accurate understanding of Mrs. Flowers's behavior and would also have an opportunity to explain the biomedical view and negotiate with Mrs. Flowers to change potentially dangerous behavior. (p. 135)

The explanatory model of the "brain gender" discourse

How does the explanatory model of the "brain gender" discourse compare to the explanatory models shown above? This model has an ambiguous character. It is similar to the doctor's model in that it uses biomedical or neuroscientific, technical terms. On the other hand, it covers practical daily problems through the use of neuro-essential, personified, or stereotyped images of the brain. In this respect, this model comes close to the patient's model, yet its scientific validity is undermined.

Externalizing the problem (White and Epston)

Externalizing the problem is a therapy approach proposed by Michael White and David Epston (1990) in their book, *Narrative Means to Therapeutic Ends* (hereafter *NT*). This approach began in therapy for families who had children in which problems had been identified. In such cases, the problem is usually thought to be internal to the child. However, all family members are affected, lowering their self-evaluation. Members of such families often give their lives "problem-saturated descriptions," i.e., descriptions in which the problems are inseparably integrated. Such a description is posed as a dominant story of family life in White and Epston (1990). In the process of

externalizing the problem, a therapist helps family members separate themselves and their relationships from their problems and enables them to see themselves, each other, and their relationships from a different perspective. Thus, an alternative story of family life, which is more attractive to family members, develops (White & Epston, 1990, pp. 38–39).

A case given in NT concerns Nick, a 6-year-old child who had encopresis (feces incontinence) for a long time. He was brought to White by his parents, Sue and Ron. Nick evacuated in his pants every day and played with the waste. Attempts to stop the behavior had failed, even those by therapists. White called their problem "the poo" and clarified the influence of "the poo" in the lives and relationships of the family members through questions. Then he introduced questions that shed light on the influence of the family members and their relationships on the persistence of the problem. Through these questions, their experiences that contradicted the dominant story, i.e., when they could escape or resist the influence of "the poo," were discovered (White & Epston, 1990, pp. 43–48).

The dominant story of the family before White's therapy can be summarized as follows: Nick is a problem child, and his parents are incompetent.

By externalizing the problem as "the poo" through the therapy, the influence that "the poo" had had on each family member was clarified. For example, the poo isolated Nick from other children, made Sue miserable, isolated Ron from his friends and relatives, put a wedge between Nick and his parents, and so on (White & Epston, 1990, pp. 43–44).

By separating the problem from the people involved, it became possible to see how they have enabled the problem to persist or, conversely, how they have sometimes succeeded in resisting it. For example, it was discovered that there was an occasion when Sue had turned on the stereo and withstood the misery. By focusing on and sharing such occasions, the family came to be able to manage "the poo" (White & Epston, 1990, pp. 46–48). Here, an alternative story of the family emerged: one in which they could resist and counter "the poo."

Externalizing of the problem and personification of the brain

Remember personification of the brain in the "brain gender" discourse here. It has some aspects similar to those of externalizing of the problem. The messages that "it's because of the brain" or "it's due to the hormones" enable one to stop blaming oneself and to see one's own situation from a new perspective. For instance, one can shift from the dominant story, "I am weak, so I always make mistakes," to an alternative story, "I sometimes fail due to hormone fluctuations, but I myself am not weak and can cope with the problem." As another example, one can stop thinking, "My partner is really cold-hearted" and begin to focus on favorable aspects of the partner by adopting the idea that "it's because of the brain, so it cannot be helped."[8] "The brain" personified and directly linked to the problem is indeed mysterious, but it sounds likely that such a "brain" is the essential cause of the problems. Thus, "the brain" can play a role like that of "the poo," serving to externalize the problem.[9]

4. Double image of the brain and "brain gender"

Double image of the brain

In the previous section, I focused on an image of "the brain" that is equated to the person himself or his essential personality. On the other hand, the term "the brain" can also be used for the externalization of some features, as shown above.

The term "the brain" can imply *innateness*, *essentiality*, or *fixedness* in some contexts and *externality* or *controllability* in others. We can see a double image of "the brain" here.[10] Indeed, Sakai points out that the personalization of the brain is used both to equate the brain to the person and to separate the two.

> [T]here are double meanings of the brain here, the brain that can objectify or is just one of the body organs of oneself and the brain identical to the self, both being used tactfully according to time and circumstances. [Sakai, 2009, p. 153 (my translation)]

"Brain gender" and Japanese situation surrounding gender identity disorder

Considering the image of "the brain," the Japanese situation concerning gender identity disorder (GID) is suggestive. In the 1990s, the notion of GID gained public awareness in Japan through a movement in the medical community, followed by the GID-based self-support movement (Itani, 2011, pp. 289–290). Currently, the notion of GID is far more popular than that of transgender or transsexualism in Japan.

In the mid-1990s, the legitimization of gender reassignment surgery (also known as sex-change surgery) as a treatment for GID was encouraged by medical experts. In that process, a certain idea served as justification for the surgery. To put it briefly, the logic is as follows; GID is characterized as the inconsistency between one's sex and gender identity. Gender identity is essentially determined in the very early developmental stage, influenced by sex differences in the brain that emerge during the fetal period. Thus, the fact that one cannot select one's gender identity and that biological factors contribute to GID provides justification for medical intervention for GID. Here, the innateness and non-selectiveness of gender identity is emphasized (Sugiura, 2001, pp. 93–98).

However, the causes of GID are not yet clear. There is a well-known explanation that refers to a sex difference in a certain brain structure as the cause. Though it has been pointed out that the study on which the explanation was based has flaws, in Japan, this study is frequently cited by medical experts and people with GID (Ishida, 2008, p. 4, footnote 1).

The image of "the brain" as innate, fixed, and essential is involved in the Japanese situation concerning the medicalization of transgender issues and the social recognition of GID. This image enables a very simple explanation of GID—"being born with a body and a brain that are of the opposite sex"—and thus facilitates social acceptance. However, it also provides a dualistic thinking of gender that is too simple and static.

Ikuko Sugiura (2001, p. 99) makes an interesting point about the medicalization of GID in Japan. She claims that, even if differences in the brain had been referred to, gender identity might have been characterized as plastic rather than innate

and fixed if the plasticity of the brain had been put forward.

Satoko Itani (2011, pp. 291, 295–296) points out a diagnosis-identity fusion of GID as a peculiar phenomenon in Japan. "GID" has become not just a diagnostic and medical concept but an identity of many transsexual individuals in Japan. This situation, in which medical discourses are melded into and utilized as self-narratives, is very similar to that of the "brain gender" discourse.

5. Narratives of "brain gender"

Attractions of the "brain gender" discourse

There are various reasons that the "brain gender" discourse has gained popularity. First, it can offer a story that matches one's experience. Second, it has the effect of externalizing one's problem. The familiarity and equivocality of the term "the brain" function successfully in these respects. The "brain gender" discourse has flaws as a scientific explanation. There are also problems concerning its political correctness and social influences. However, the term "the brain" or "brain gender" is often used to represent our experiences humorously and spiritedly. It is not just a (pseudo-)scientific notion but a part of the self-narratives of people, whether for good or bad. We casually get involved in "brain" talks or "brain gender" talks every day in various contexts.

Narratives of "brain gender"

Consider what kind of narratives the "brain gender" discourse can be—or in what kinds of narratives it can appear. In many cases, it appears within and reinforces the dominant story of heteronormativity. On the other hand, the "brain gender" discourse can have different effects; it may help the emergence of an alternative story that relaxes our burden and empowers us. Moreover, the same "brain gender" discourse can contribute to different kinds of broader, inclusive narratives concurrently. For instance, a narrative such as "the trouble is because of the female brain and is not her fault" can both weaken the dominant story of harsh self-responsibility and strengthen that of pathologizing the female body.

The "brain gender" discourse can have different contexts and gain different concerns in each context. Ignoring this and viewing the "brain gender" discourse merely as sexism can result in serious miscommunication. However, we cannot lose our critical attitude toward the discourse and see only its helpful aspects. To cope with the negative effects of the "brain gender" discourse, we must recognize its equivocal character and shed light on different concerns, needs, and contexts from varying standpoints.

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Notes

1 This is the revised version of my presentation, "'It's because my brain is male/female': The 'male/female brain' discourse and narrative" given at the 8th Meeting of the Study Group "Philosophy of Disability and Co-existence": Feminist Phenomenology and Disability at the University of Tokyo in October 2012 (in Japanese). The preliminary version of this paper was presented at Feminist Technoscience and the Theory of the Body: Cases from Japan, Sweden and [elsewhere] at the Centre for Gender Research at Uppsala University in March 2013. I would like to thank all concerned.

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3 “When weighing up the differences between males and females discussed in this book, some people may say, ‘No, that’s not like me; I don’t do that!’ Well, maybe they don’t. But we are dealing here with *average* men and women, that is, how most men and women behave most of the time, in most situations and for most of the past” (Pease & Pease, 2001, p. 8). “The evidence presented here shows that the sexes are intrinsically *inclined* to behave in different ways. We are not suggesting that either sex is bound to behave or should behave in any particular way” (Pease & Pease, 2001, p. 9).

4 It is important to note, as part of the background of these problems, that there is a lack of critical thinking in the “brain gender” discourse. See Caplan and Caplan (2009).

5 Hyde (2005) states that overinflated claims of gender differences cost people a lot in many areas, including work, parenting, and relationships. For example, Hyde (2005) refers to research on the negative effects of gender stereotypes in evaluations or the treatment of non-stereotypical people. She also worries that emphasis on differences in communication styles may encourage people simply to give up on resolving conflicts (Hyde, 2005, pp. 589–590).

6 For the current situation and problems concerning single-sex education, see Eliot (2009). It must be noted that the Gender Equality Bureau of the Democratic Party of Japan conducted hearings with Ihoko Kurokawa, the author of *Love Brain* (discussed below), in 2009 (Minshutou danjyokyoōdōsankaku-kyoku, 2009, May 19)

7 The following research highlights historical cases in which the term “the brain” is rhetorically used. Tatsuya Mima (2010, Ch. 7) focuses on the rhetoric of “Japanese brain” used by the Allied Forces after World War II. Maika Nakao and Tomohisa Sumida (2010) show that, in modern Japan, there was a drug advertisement that emphasized good effects on the brain.

8 The expression, “It’s because of the brain” often connotes deprivation of one’s capacity for responsibility. Externalizing of the problem in NT is different; rather, it is emphasized that, through externalizing, people can assume responsibility for the problem (White & Epston, 1990, p. 65).

9 The brain gender discourse itself can be seen as an alternative to socio-cultural determinism about sex/gender differences as the dominant story. “Since the 1960s a number of pressure groups have tried to persuade us to buck our biological legacy. […] If women and men are identical, as these groups claim, how could men ever have achieved such total dominance over the world? The study of

how the brain works now gives us many answers" (Pease & Pease, 2001, p. 7). "Because I had gone to college at the peak of the feminist movement, my personal explanations ran toward the political and psychological" (Brizendine, 2006, p. 2).

10 Mima (2010, Ch. 7) focuses on the case of an educational film for United States soldiers after World War II in which the need to change the "Japanese brain" was conveyed. This is an example of a case where externality and controllability of "the brain" is emphasized.