The Role of Transformative Body Ornamentation in Human Sociality: An Essay from Evolutionary and Ethnographic Perspectives

Ikuya TOKORO

ILCAA, TUFS

1. Introduction

This paper analyzes the role of body ornamentation and decorative behavior in the evolution and/or transformation of human sociality. To do so, I will consider the topic from evolutionary as well as ethnographic perspectives. "Body-ornamentation" (or self-ornamentation, decorative behavior of the human body) in this paper includes the wearing of personal ornaments, clothes, masks, body paints, makeup, costumes, jewelry, tattoos, and so on.

Some may find it strange to approach the evolution of human sociality at a macro level by starting from the topic of body decoration. The impression is not necessarily baseless. Disciplines such as archeology and the history of technology often emphasize the practical or pragmatic "things" appearing throughout the evolution of human material culture, like fire, stone tools, and weapons. We may call this tendency to focus on practical objects a "Homo Fabel" view. Conversely, ornaments are seen as "trivial" or "secondary" because of an implicit bias against body ornamentation and decoration, assumed to be "un-necessary" or "un-useful" for human survival.

However, with progress in prehistoric archeological and (paleo-)anthropological studies since the latter half of the 20th century, body ornaments and decorative behaviors have attracted increasing attention from researchers, especially those involved in the so-called "Cognitive Revolution" (or "Human Revolution") debates (Klein, R. 2008, Mellars 1991, Mithen 1995, etc.). This theory of cognitive revolution has been followed in many studies, such as Harari's book (2015), which remains a global bestseller, even after some criticism in recent years (Harari 2015, Ikeya 2020).

2. Critical Re-examination of "Cognitive Revolution" theory on body ornamentation

Some scholars have argued that revolutionary new kinds of human behavior emerged (like the "Big Bang", according to Mithen) at some point during the Pleistocene (debate ranges from 50,000-40,000 years ago, to much earlier). This "revolutionary" change involved the rapid sophistication and evolution of human cognitive ability, exemplified by the emergence of language, abstract thinking, behaviors such as planned hunting, and various symbolic behaviors such as the use of art and symbolic culture. Some researchers call this the "Cognitive Revolution (Human Revolution)" (Mellars 1991, Mithen 1995, Tattersall 1995, White 2007, etc.). Regarding causation, some scholars suggest a change in the cranial nerve system (Klein 2008, Mithen 1995). According to these arguments, "modern human" characteristics such as symbolic behavior including sophisticated language, art,

religion, etc. suddenly appear in Homo sapiens backgrounded by changes in the nervous system at a specific time during the Pleistocene in Europe. In contrast to Homo sapiens, it is argued that Homo neanderthalensis (Neanderthals) did not have a complete language (Tattersall 2009, Lewis-Williams 2002). Mithen also pointed out "cognitive fluidity" and the emergence of language, including in post-cognitive revolution Homo sapiens, which appear in modern human behavior (Mithen 1995).

Despite substantial criticisms, the cognitive revolution theory retains a certain degree of influence even among recent studies on body ornamentation and decorative behavior of the human body (See, for example, Ikeya (2020), Harari (2015) and so on). Body ornaments and decorations are also seen as indicators of "modern human behavior", and are classified as art or symbolic behaviors in these debates (White 2007, Malafouris 2008).

In my opinion, the Cognitive Revolution theory drew valid attention to the role of symbolic behavior, including body decoration and body ornaments, but not without bringing its own problems. One of its drawbacks is that it tends to emphasize the disconnection and discontinuity between Homo sapiens and other hominins, as well as the exceptionality of Homo sapiens, due to its "revolutionary" characteristics. In this regard, the cognitive revolution theory has been discussed, critiqued, and reexamined during the last two decades as advances have been made in (paleo-)anthropological and/or archeological studies (McBrearty & Brooks 2000, D'Errico et al. 2012, Hoffmann et al. 2018, etc.). McBrearty and Brooks, for example, argue that the theory is fundamentally wrong. They proposed that what appeared to be a "revolutionary" technological and cultural leap in Europe was actually the product of a few migrations of new people from Africa into a technologically stagnant Europe (McBrearty, S. & Brooks, A. 2000: 454).

Through careful re-examination, the view that the relationship between Homo sapiens and other hominins (such as Neanderthals) was more continuous than the irreversible disconnection suggested by cognitive revolution theory has become increasingly influential (Zilhão 2012, Finlayson 2019). In recent years, excavations have produced growing evidence that Neanderthal body ornaments including pigments and marine bivalves were used in the Pleistocene, before the advent of Homo sapiens in Europe (Hoffmann, D. et al. 2018, Sykes 2020:249-260). For example, based on the findings of their excavations in Gibraltar, Spain, Finlayson argues that the Neanderthals carved abstract and symbolic inscriptions on cave walls, as well as on their bodies. It is assumed that body decorations such as body painting and accessorized eagle feathers were also used (Finlayson 2019: 193-195). Based on these facts, he argues that the "cognitive revolution" theory of a major cognitive divide between Homo sapiens and Neanderthals can no longer hold (ibid).

In any case, I would agree with the point made by McBrearty and Brooks that behind researchers' repeated claims of "revolution" is the implicit desire to distinguish humans from other animals (or hominins). The claim that Homo sapiens is unique (typical of the "human exceptionalism" discourse) is to obscure the fact that every other life form is unique by definition and has its own unique form of consciousness (McBrearty & Brooks 2000: 533). In this regard, there is a need to inquire for an alternative view which is free of the anthropocentric bias (human exceptionalism) which is still immanent in arguments based on "Cognitive Revolution" theories and the like.

3. Re-thinking Body Ornamentation and "honest signal" arguments

Towards finding such an alternative non-anthropocentric view, this section analyzes body ornamentation and behavior to place it in a broader context comparing body decoration behavior between human and non-human animals. Regarding the (dis-)continuity of body decoration and aesthetic consciousness in humans and non-human animals, C. Darwin actually made relevant points in his book "The Descent of Men" (Darwin 2004). In recent years, studies on animal behaviors have accumulated knowledge about the display behavior of non-human animals such as the beautiful decorative feathers used to court females by several species of male birds, such as peacocks. The evolution of these sexual decorations and flaunting behaviors have been discussed in so-called "honest signal theory" and the "handicap hypothesis" argument, which claim that these body decorations in general display true and transparent information about the qualities and conditions of the males seeking female mates. This kind of argument has been hotly debated and discussion, including substantial criticism, continues to this day (Plum 2017).

Generally speaking, "mainstream" evolutionary biologists (mainly using Neo-Darwinian adaptationist frameworks) tend to adopt the so called "honest signal" hypothesis that sexual decoration and flaunting behaviors evolved to provide genuine and clear information about the qualities and conditions of mating candidates (Hasegawa 2005). For example, a male bird's display is supposed to act like a profile on a dating site. Specifically, it conveys information on attributes related to its male body (gene) such as its male pedigree, early environment, diet, health, and presence or absence of venereal disease. In the "honest signal" hypothesis, beauty is nothing more than practicality.

One of the criticisms of the "honest signal" hypothesis is made by Plum who refers to Ronald Fisher's two-step model of sexual selection. Fisher developed Darwin's theory of beauty-based sexual selection and developed a mathematical model of genetics (Plum 2017). In the first stage, the preference for traits (honest signals) that accurately and honestly indicate health, vitality, and viability evolves. In the second stage, the exact spouse choice creates sexual attraction in the display trait itself, which is the driving force for evolution, and the display trait, which should show honest information on qualities, deviates from its original state. It will evolve along a "runaway process" that creates new unpredictable and arbitrary beauty display traits. In this context, Plum emphasizes the concept of "arbitrary" display traits (ibid.). It refers to a trait that is isolated from other external criteria that indicate spouse qualities (genetic quality, disease resistance, food quality, etc.). The word "arbitrary" in this context does not necessarily mean that it is accidental, random, or unexplained, but that the flaunted trait does not bring any information other than its existence. Arbitrary traits are neither honest nor dishonest. It does not convey any information to the deceived object, but is said to be simply attractive or beautiful (ibid.).

Another variant of adaptationist hypotheses relating to "honest signal" theory is the so-called "handicap hypothesis" proposed by ornithologist Zahavi (Zahavi & Zahavi 1997) in which a handicap functions like a test or examination. The larger the handicap, the more severe the test, and the more excellent the candidate who clears it. Peacock feathers, for example, are a signal-handicap that is costly to maintain and can be detrimental to survival. Females attracted to males with such costly trait handicaps are said to respond to information that indicates the male's ability to overcome the cost, rather than the subjective beauty that accompanies the cost (Hasegawa 2005: 95-102).

In this regard, both Plum and Menninghouse make strong counter-arguments to this (costly) signal theory. According to them, (costly) signal theory (including Zahaby's handicap theory) reduces stunning decorative feathers and singing and dancing skills to mere "indicators" of the birds' inherent biological traits. In other words, in the honest signal theory framework there is no such thing as "beauty", only representations/expressions of practical adaptive advantages in body decoration.

However, there is no conclusive evidence that the "capriciousness" of sexual selection is not based on some sort of arbitrary beauty, but an indication of adaptation such as physical health fitness (Plum 2017, Menninghaus 2019: 14).

4. Body Ornamentation in Human Sociality

This section rethinks body ornamentation in the context of human sociality by critically reviewing an assumption of the "honest signal" theory, particularly following attempts to apply it in explaining the role of body ornaments in human society (for example, Kuhn 2014, Rossano 2015). Presented first is Kuhn's archeological study on the relationship between development of personal ornaments and human sociality (Kuhn 2014).

Between 300,000 and 250,000 years ago, early humans and hominins in Africa and Eurasia began to use durable materials as media with which to signal. Initially limited to ocher and other pigments, other materials such as beads were added to the media (ibid.). Body painting with pigments, the earliest signaling technology, can be said to be low-cost. Moreover, since there is a limit to the surface of the body, there is a natural limit to the cost and quantity of expressions made by only painting the surface of the body. Signaling techniques at these stages are generally suitable for egalitarian societies, that is, small societies where the difference in hierarchy is not noticeable. Beads, on the other hand, are more suitable media for expressing quantity and cost. As societies become larger and the network of social interaction becomes wider, cheaper signals can no longer be adjusted, at which point the cost becomes the only credible signal (Kuhn 2014: 45-47).

I have several reservations regarding Kuhn's application of the "honest signal" model to human society. While the focus on the difference in the materiality of the media between pigments and shells is anthropologically significant and interesting, the broader application is still questionable. One question concerns the validity of the standpoint based on the signal theory of body ornamentations: the implicit premise of personal ornaments remaining "expressions" and "reflections" of social status as the scale and complexity of society grows and expands.

For a long time in archeology, personal ornaments have been regarded as prestige items, displaying one's prestige, status, and social identity within society (Baysal 2019: 6). However, as already examined in criticisms of honest signal theory in evolutionary biology, the possibility of "arbitrary displays" that do not necessarily communicate qualities and information such as fitness seems relevant to the evolution of human sociality as well. In other words, as previously mentioned, "arbitrary beauty" that cannot be reduced to practicality in natural selection may also be important in thinking about human sociality (Plum 2017, Menninghaus 2019, etc.).

Another question concerns the code model itself, which would be based on the Shannon-like information transmission model on which signal theory relies (sending and receiving specific clear messages between senders and receivers (Kimura 2018, Nishie 2021)). It seems that this kind of code model eliminates the arbitrariness, ambiguity, and diversity of beauty by reducing the value of body ornaments to mere transmissions of (practical) values and meanings. While the function of displaying information about personal traits and identities played by body ornaments/decoration is not deniable, the relevance and significance of body ornamentation is not wholly reducible to this function. In this regard, I would like to consider body ornamentation and decoration more concretely through examining ethnographic examples of body transformation practices including cosplay, etc., in the next two sections.

5. The practice of body processing and transformation

In the history of anthropology, M. Mauss describes the practical use of the body, whether individually or socially, through what he calls "body techniques", a concept later refined and expanded by Bourdieu to become more widely known as *habitus* (Mauss 1973, Bourdieu 1977). With regard to "body techniques", it is noteworthy that it includes both the unconscious care for our own bodies and, conversely, the potential to transform the body. For example, even in routine choices such as the common act of cutting one's hair or nails, or the daily choice of clothes, or how one does (or does not) wear make-up or styles oneself. While this is simultaneously a kind of reproduction by means of acting on the body, in the case that no interventions are carried out, this also leads to the processing, transformation, and reproduction in the wider sense of another possible body (a kind of untouched, non-operative body).

Although common acts such as altering the body shape by dieting or creating a different impression using contact lenses instead of glasses may not be referred to as drastic physical processes, as would better describe cosmetic surgery or tattoos, they are still a kind of body transformation by means of intervention on the body. Identity is influenced by such common body intervention in various ways, including gender, and such intervention may even constitute (re)production (Cornwell 2012). The spectrum of techniques for altering external forms and impressions by means of body intervention ranges from common hairstyling and cosmetics, wearing clothes, accessories, glasses, sunglasses, or contact lenses, and image alteration through to dieting, drug use such as hormone injections, and major and irreversible alterations to the body's outward appearance by means of surgical procedures.

Of these, "body modification" in the narrow sense is a concept that centers on direct, physicochemical or medical intervention on the body. In light of this, "body transformation" is used in this paper to refer to acts operating on the impression made (or the information given) by the body in the wider sense, including soft and indirect body interventions and operations (for example, wearing clothes and accessories, and processing/altering image data for one's own body), which does not necessarily correspond to "body modification."

By making use of materials gathered during my fieldwork in Southeast Asia with regard to "cosplay" (costume play), I will re-frame cosplay and related behaviors in general as techniques (practices) of "body transformation" in the wider sense, and in doing so demonstrate the importance of such "un-honest" signals.

6. Case Study: Cosplay as body transformation practice

While discourse has it that the word "cosplay" originated in Japan as a pseudo-English phrase in the mid-1980s, the actual act of cosplay in a wider sense (depending on the definition) has existed for a very long time in the West (at least prior to World War II). Note that "cosplay" as discussed in this chapter is the narrow meaning of the term, describing fans dressing as characters primarily from Japanese anime, manga, and video games, sometimes adopting that persona's mannerisms, which grew in prominence from the 1990s. The main scope of this study is cosplay among fans in two Southeast Asian countries (Philippines and Malaysia), where I have been conducting fieldwork for several years since 2018. Although various approaches may be taken when discussing cosplay, in this paper the discussion centers on the "practice" aspect, or "technology" in the wider sense.

¹ Refer to Winge (2019) regarding the historical roots of cosplay and the status of cosplay in other countries. Also, refer to Tokoro (2021) regarding cosplay culture in Southeast Asia.

Before starting the main discussion, the characteristics of the cosplay mentioned above should be established. First, I consider the typical characteristic of cosplay (in its narrow sense) as inciting a change or transformation in the identity of the normal, everyday person (the provision of meaning and self-regulation by the individual to the question, "What am I?"), or to put it another way, inciting a "metamorphosis" to a greater or lesser extent.

For example, one particularly important factor in cosplay is, "I will become someone with a specific, characteristic name who is different from my normal self," which goes beyond simply wearing clothes or accessories that are a little bit different from normal, or losing weight through dieting. The important point is the opportunity to dress up as a specific and particular pop culture character, to act as that character would act, and by doing so metamorphose into the performance target, even if only at certain places and times. Examples include students or female office workers temporarily suspending their names and identities to dress like, pose as, and effectively become manga, anime, or video game characters like Rei Ayanami, Izuku Midoriya, or Pikachu at cosplay events.

From here, the discussion will be based on the insights gained from cosplay-related fieldwork that the author is currently conducting primarily in Southeast Asia (the Philippines and Malaysia).² The author has attended cosplay events of various sizes in the Philippines and Malaysia, and while many co-attendee cosplayers perform as characters from Japanese anime, manga, and videogames, other fans like to cosplay characters from American comics and movies, such as the Marvel series. Also, at cosplay events in both the Philippines and Malaysia, the number of fans acting as characters from Chinese anime have been increasing recently. In any case, if one looks closely, the majority of cosplayers aim for "faithful reproduction" by wearing clothes and make-up to imitate the character as accurately as possible. However, on the other hand, it is not unusual by any means to see cosplayers who have added many creative revisions and changes to the appearance of the character to adapt and customize it to their own style.

Something that made an impression after attending various cosplay events in Southeast Asia is the considerable frequency and complete normalization of cosplay in which female cosplayers perform as male characters ("FtM" (Female to Male)) and vice versa ("MtF" (Male to Female)). This kind of cosplay is generally referred to in the English-speaking world as "cross-dressing", which is a term that has become common in Southeast Asia, and is also used in this paper. The author's fieldwork also gives a certain amount of quantitative support to the frequency of cross-dressing at cosplay events in Southeast Asia. In a sampling survey conducted by the author among cosplayers participating in a certain cosplay event in the Philippines in 2018, around 65% of valid respondents (n=40) said that they had experience of cross-dressing in the past. When the same survey was conducted in Malaysia, the results showed that approximately 40% of the respondents had experience of cross-dressing. In any case, as stated above, it is noteworthy that this kind of cross-dressing is by no means exceptional at cosplay events held in the Philippines or even in the Muslim-majority country of Malaysia.³

In the last 20 years, academic research on so-called "otaku culture" elements such as manga and anime has rapidly progressed, and while there has been an accumulation of research based on a variety of approaches, one of the most important references in the context of this paper is a book

² The ethnographic description in this chapter is based on materials, etc. from fieldwork, etc. conducted intermittently by the author in the Philippines and Malaysia from August 2018 to January 2020, when this paper was written. During this period, the author attended regular cosplay events, etc. in several countries including the two mentioned above. The author primarily conducted interviews and made observations of cosplayers, and also carried out online (via social media and email) interviews and information-gathering exercises with relevant cosplayers. Refer to Tokoro (2021) for more details on cosplay in the Philippines and Malaysia.

³ Incidentally, the results show a much higher proportion of MtF than FtM cross-dressing at events in both the Philippines and in Malaysia.

by S. Napier (Napier 2007). This book mainly discusses the current state of acceptance of Japanese subculture, such as anime and manga, in the West (mainly in the U.S.), but Napier also makes mention of cosplay, identifying the process of practicing cosplay as a place of visual fantasy that allows individual cosplayers to demonstrate originality and ingenuity in specific areas. Napier also points out that as a result, despite the troublesome situation of a real world increasingly defined by ethnic, national, religious, or other identities, anime cosplay, though temporary, provides a place of possibility, free from such restrictions (ibid). Additionally, an important point made by Napier in terms of the technique of body transformation is that anime cosplay gives fans the potential to go beyond the limits of inherent physical characteristics. In other words, it is possible for cosplayers to transform themselves beyond the boundaries of race, gender, nationality, and even species. This claim made by Napier is mostly consistent with what I have observed at overseas cosplay events and on other occasions, and I would say it is a reasonable starting point for the discussion.

As previously mentioned, cosplay generally allows a person to go beyond apparent gender boundaries through the practice of cross-dressing (even though it is only temporary and imaginary). Additionally, like Filipino and Malaysian cosplayers who act as Japanese and Chinese anime characters, it is possible to hypothetically cross natural national and ethnic identities. Furthermore, transformation into nonhuman characters such as animals, robots, Japanese folk monsters, monsters, ogres, mutants, and aliens is not impossible. In short, cosplay is generally a technique for transforming into "another person" with attributes and identities that are completely different from one's ordinary self by breaking loose from the restraints of identity usually defined by the attributes of one's body (e.g. gender, nationality, race, and many other traits or identities).

7. Transformative Function of Clothing and Body Ornamentations

A. Gell's famous book *Art and Agency* (1998) might be relevant and suggestive when considering the cosplay and fashion cases discussed in the previous section. The book is often cited as one of the most important recent contributions in the field of anthropology of art. This work influenced not only anthropology but also other fields including archeology and art history. One of the important points raised by Gell is the perspective of seeing art as "a system of action" (Gell 1998: 3,6). He emphasized that it is important to grasp art not from "meaning" but from the direction of "doing" (or modifying, re-constructing) "social relations" in a given social context. In doing so, he provided a theoretical breakthrough to established art study that approached art as a communication system which emphasized the "meaning" of art works. Gell instead asserts that art objects were produced to influence the thoughts and actions of others. In general, his argument is significant in advocating the perspective of art as an agent that (re)constructs, modifies, manipulates, and intervenes in given social relationships.

Though Gell's argument is mostly focused on art objects (art works) in traditional societies, I think his point might be also relevant in discussing body ornamentation/decorations including clothing, costumes, masks, cosmetics, jewels, etc. In this regard, it is important to look at social relationships and body ornamentations, including clothing and costumes, as actants to change,

A similar point could be made about so-called "kawaii-fashion" and the like. First, even in the unique context of Japan's "cute culture", creepy, ugly, and "cute" are not exclusive but rather overlap, lead, and depend on each other. According to Saito (2014: 98-99), "cute" can mean "small", "young", and also "grotesque", "cruel", "obedient", "cheeky", "stupid", "wise", and "artificial". It is said to contain various contradictory elements such as "Eros" and "Thanatos". The important point is that in "kawaii fashion" the ambiguity and arbitrariness of the signal (and its message) are prominent features, and these properties are not well analyzed by the paradigm based on the Shannon-like code model mentioned above, because the fashion does not "honestly" display the traits and identities of the wearer, but might distort, modify, and multiply them in often ambiguous and contradictory ways.

modify, (re)construct, and transform the given identities of the wearers. In this context, the philosopher Inoue's argument that the essence of "wearing" is not limited to "using" could be helpful. He states that wearing clothes is, in a sense, a mysterious act that changes the user even though only clothes are used (Inoue 2019: 89). Kono also points out that clothing has more than just practical and/or representational functions that express attribution or status in a group. Rather, clothing has another significant function of metamorphosis and transformation (Kono 2020). These arguments support the notion of ornaments and clothing as actants which transform the wearers themselves. Borrowing from Gell, it would be appropriate to now propose a conceptual framework of the "agency" of body ornaments which includes clothing, costumes, masks, cosmetics, and jewelry.

In this regard, I would also emphasize clothing's transformative function, as exemplified by cosplay. Cosplayers putting on their costumes transform into fictional/imaginary characters that are quite different from their real and ordinary identities and characters. However, clothing's transformative function is not necessarily limited to cosplay. In 2019, I conducted several interviews of Muslim women wearing "niqāb" (a kind of head scarf which covers most of the face) during my field work among the Muslim minority community of Davao City, in the southern part of the Philippines.

One informant told me in an interview, "If you wear niqāb, you can't go back anymore." Meaning that once you start wearing the niqāb, considered in the community as a sign of strong Muslim piety, you would become very reluctant to stop doing so. This example clearly shows clothes being more than mere tools or objects, and having the ability to transform the people who wear them. For women wearing the niqāb, their social relationship with their surroundings also changes. For example, men are less likely to approach them rudely. In this way, body ornaments and/or costumes change not just the physical appearance of the wearers, but also the social relationships surrounding them. In some situations, body ornamentation and related behavior could even play a role in constructing and creating a kind of "extended sociality", including imaginary/fictional non-human others or quasi-human others, rather than simply expressing or reflecting the existing social order.⁵

8. Conclusion

From daily routine acts such as eating, wearing clothes, and hair styling, through to acts such as taking medicine when sick, or even undergoing surgery when necessary, we care for our own bodies. Whether we are aware of it or not, the body is first established as our own and then reproduced as a result of these perpetual physical actions. In writing on anthropological history, M. Mauss paid attention to the practical use of the body, through what he called "body techniques" (Mauss 1973), which notably include both the unconscious care for our own bodies and conversely the potential to transform the body.

Regarding this point, I have tried in this paper to analyze the role of body ornamentation and related behavior in the context of evolution and/or the transformation of human sociality. In doing so, I approached the topic from both evolutionary and ethnographic perspectives. Through critical re-examination of debates about the evolution of human sociality and the role played by body ornamentation, I have suggested a need to explore an alternative view which is free of the

⁵ A typical example of the (re)construction and creation of so-called imaginary / fictional sociality is that of metamorphosis into non-human divine characters through wearing special kinds of masks and costumes. For example, in Noh (Japanese traditional performing art), the performer is considered to play the role of a non-human spiritual character through wearing a special and particular mask and costume embodying the corresponding spiritual character. Noh originates from a traditional divine ritual. Besides Noh, there are many examples of these kinds of traditional shamanistic rituals in which shamans would metamorphose into or be possessed by supernatural spirits, gods, or other divine agents.

anthropocentric bias present in previous studies based on "honest signal" theory. To this end, I have produced findings from my ethnographic fieldwork on body ornamentation and related behavior such as cosplay. By making use of materials gathered during ongoing fieldwork in Southeast Asia with regard to cosplay, etc. this paper presents the practice of cosplay as a technique (practice) of "body transformation" in the wider sense. Through these ethnographic examples, I propose an alternative view of body ornamentations as actants that change human attributes and transforms them rather than simply "reflecting" or "expressing" existing physical and social attributes and identities. In light of this, there is a need to re-consider that body ornamentation is not "secondary" or "trivial" in human culture, and that it plays an important role in constructing human sociality through the (re)onstruction and (re)creation of so-called imaginary/fictional sociality.

Acknowledgement

This paper is based on the research findings of two study projects which are financially supported by JSPS grant 20H01403 and 17H06341.

References

Baysal, E. (2019) *Personal Ornaments in Prehistory—An exploration of body augmentation from the Paleolithic to the Early Bronze Age.* Oxford: Oxbow books.

Bourdieu, P. (1977) Outline of a Theory of Practice. Cambridge: Cambridge University Press.

Cornwell, A. (2012) "Transforming Bodies: The Embodiment of Sexual and Gender Difference." In Farrdon, R. et al. (eds.) 2012 SAGE *Handbook of Social Anthropology* Vol.2. p.377-388.

Darwin, C. (2004) The Descent of Man (Penguin Classics). London: Penguin Books.

D'Errico et al. (2012) "Early Evidence of San material culture represented by organic artifacts from Border Cave, South Africa." *PNAS August* 14, 2012 109 (33) 13214-13219.

Finlayson, C. (2019) The Smart Neanderthal. Oxford: Oxford University Press.

Gell, A. 1998 Art and Agency: an anthropological theory. Oxford: Clarendon press.

Harari, Y. (2015) Sapiens: A Brief History of Humankind. NY: Random House.

Hasegawa, M. (2005) Why Peacock Male is beautiful? (in Japanese). Tokyo: Kinokuniya Syoten.

Hoffmann, D. et al. (2018) "Symbolic use of marine shells and mineral pigments by Iberian Neandertals 115,000 years ago." *Science Advances* 2018 (4).

Ikeya, K. (2020) History of Homo Sapiens through Beads (in Japanese). Tokyo: Shyouwado.

Inoue, M. (2019) *Philosophy of Fashion* (in Japanese). Tokyo: Minerva Shobo.

Kimura, D. (2018) *Encounter with Unknown: Interaction theory of the First Contact* (in Japanese). Tokyo: University of Tokyo Press.

Klein, R. 2008 "Out of Africa and the evolution of human behavior." Evol. Anthropol. 17: 267-281.

Kono, T.(2020)"Clothing as an extension of the body: A Phenomenology of clothing under transcultural conditions" A paper distributed at the International Symposium on *Performing the Self and Playing with the Otherness: Clothing and Costuming under Transcultural conditions* (ILCAA&LIPI: 2020.10/26).

Kuhn, S. L. (2014) "Signaling theory and technologies of communication in the Paleolithic." *Biological Theory* 9: 42-50.

Lewis-Williams, D. (2002) *The Mind in the Cave: Consciousness and the Origins of Art.* London: THAMES & HUDSON.

- Mauss, M. (1973) "Techniques of the Body." In: Economy and Society, 2: 70-88.
- Malafouris (2008) "Beads for a plastic mind." Cambridge Archaeological J. 18.3: 401-414.
- McBrearty, S. & Brooks, A. (2000) The revolution that wasn't: a new interpretation of the origin of modern human behavor. *J. Hum. Evol.* 39, p.454.
- Mellars, P. (1991) "Cognitive Changes and the Emergence of Modern Humans in Europe.", *Cambridge Archeological J.* 1:63-76.
- Menninghaus, W. (2019) *Aesthetics After Darwin: The multiple origins and functions of the arts.* MA: Academic Studies Press.
- Mithen, S. (1995) *The Prehistory of the Mind*, London: ThamesandHudson.
- Napier, S. (2007) From Impressionism to Anime—Japan as Fantasy and Fan Cult in the Mind of the West, London: Palgrave Macmillan.
- Nishie, H. (2021) "Culture' as an art/ technology of life among the Chimpanzees (in Japanese)." In Tokoro, I. (ed.) (2021) *Anthropology of Art/ Technology* (in Japanese), pp.257-286. Kyoto: Kyoto University Press.
- Plum, R. (2017) *The Evolution of Beauty: How Darwin's Forgotten Theory of Mate Choice Shapes the Animal World—and Us.* New York: Doubleday.
- Rossano, M. J. (2015) "The Evolutionary Emergence of Costly Rituals." *Paleo Anthropology* 2015:78-100.
- Saito, T. (2014) Psycho-analysis on Characters: Manga, Literature, Japanese (in Japanese). Tokyo: Chikuma Bunko.
- Sykes, R. 2020 Kindred: Neanderthal Life, Love, Death and Art. London: Bloomsbury Sigma.
- Tattersall, I. (1995) *The Fossil Trail: How We Know what We Think We Know about Human Evolution*. Oxford University Press.
- Tattersall, I. (2009) "Human origins: out of Africa." *PNAS September* 22, 2009 106 (38) 16018-16021.
- Tokoro, I. (2021) "Cosplay as an Art-Technology of Body Transformation: beyond Art/Technology dichotomy." In Tokoro, I. (ed.) (2021) *Anthropology of Art/ Technology* (in Japanese), pp.67-91. Kyoto: Kyoto University Press.
- White, R. (2007) "Systems of personal ornamentation in the Early Upper Paleolithic: Methodological challenges and new observations." In P. Mellars (ed.) *Rethinking the Human Revolution*, pp.287-302. Cambridge: McDonald Institute of Archaeological Research.
- Winge, T. M. (2019) Costuming Cosplay, Bloomsbury Visual Arts.
- Zahavi A. and Zahavi, A. (1997) *Handicap Principle*. Oxford University Press.
- Zilhão, J. (2012) "Personal Ornaments and Symbolism Among the Neanderthals." *Developments in Quaternary Science*. Vol.16:35-49.