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Work Ethic?　From a Perspective of Anthropology:

Batesonian Focus on the Relevancy of Play Framing in the Evolutionary Scope of Prototypical Development of "Work Ethic" in Small-Scale Societies

Keizo Miyasaka*

ベイトソン流人類学からみる「勤勉倫理」の起源

——小規模社会にあらわれた "work ethic" の原型の展開とそれに関与する遊びの枠組み

宮　坂　敬　造**

梗　概

　"work　ethic" というと，　プロテスタント流に内面化された倫理がまず想定される——マックス・ウェーバーの学説に照らしていっても，近代社会を導き発展の担い手となった集団の文化のなかで意味をもつ価値ともいえる。これをハトなど，動物の行動の場合に適用しようとすれば，いわば概念の近代社会的人間中心的ニュアンスをできるだけ，そぎ落として中性化しなくてはなるまい。中性化するのには工夫がいるし，問題点も生じる（たとえば，"work ethic" を動物や人間の学習行動の説明に用いるなら，「内発的動機付け」に近い心理学説と親和性があるので，行動分析派からの反論が当然予想される）。さらには，ヴェーバーの学説では，未来時間への志向により，現在時間での満足を禁欲するという人間がもつ長期間にわたる時間認識が前提とされている。近代的産業社会の担い手としての中流上層階級的価値観である "work ethic" 獲得に関して，社会心理学や心理人類学では達成動機による定位の概念が大戦後盛んに研究されたが，そこでは未来への目標達成のために現在の満足を遅延させるという時間認識能力がやはり前提とされていた。この認識能力について論ずる現代の進化心理学・認知学説に照らしていうなら，長時間にわたって未来と現在，過去を識別できる大脳神経系にかかわるモジュールがそもそも遺伝的獲得されているのか，という問題群が関係してこよう——そのような学説にたつなら，ハトにそのような能力はない，ということにもなろうし，ヒト以外の霊長類についてはないか，あるいは不明，ということになろうか。つまりは，"work ethic" 概念を類比的に，他の動物に適用することには多々困難がある訳である。

　それでも，長い未来時間ではなく，現在時間の近傍範囲のプロセス経過時間範囲に検討を限定し，個々の行動を律する内的機制に行動決定の主体的要因が宿っているとみて，その方向で，動物と人間を

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比較し，さらには人類の近代ならざる社会と近代化を進めて今日に至る社会を比較するという観点は可能であろう。その場合の行動とは本能的行動に律せられるばかりではない行動，即座の報酬や罰を離れて一見一番ショートカットな行動の道筋をとらず，一次的欲求の満足によっても減退しないで繰り返しおこなわれるような行動である。こうした探求の方向から，新しい視点や知見も生じると思われる。

　ただし，これに関連する研究のアプローチの類型そしてミニパラダイムの違いという問題を押さえておくことは必要であろう。個体や個人の内面に宿るものとして想定し，その個人の個々の行動を中断させないで継続させ，繰り返しその行動を発現させる動機づけに関連する内面的自律的行動原理とみるアプローチ。しかし，文化社会科学的にみれば，個々の行動は，きまって背後の文化社会的文脈に埋め込まれており，人間の場合は文化社会的意味づけを必ずともなうので，「行動」というより，「行為」というべきなのである。極端にいえば，個人は文化社会的規範との関係にしばられながら，「行為」しているわけである。"work ethic" をもっているので，他の人がもう怠けてしまうのに，自分だけは安直・安逸な生活に染まらずに，禁欲的に「仕事」をする。そうした価値観が実は文化社会的に奨励されていて，それを続けていれば，中長期的には，その「仕事」が社会的市場的価値をもつため——"work ethic" は，勤勉倫理，ないし仕事に励む刻苦勉励倫理とでもいうべき仕事観のことだが，これを「労働倫理」と訳したとたんに "work" も "labor" も含みこんだ日本語文化での独特のニュアンスがからまってしまう——経済的社会的地位などが上がって，もっと安楽な生活ができ，名誉の獲得によって社会的承認獲得の満足がえられる，ということかもしれない。とはいえ，社会的評価の低い「仕事」を勤勉にずっとやりつづける人はいるし，「仕事」に没頭すれば，社会的価値の如何にかかわらず，熱中してフロー状態になり，「仕事」をすること自体が報酬になる，といった場合もありえるであろう。そうした場合をなりたたせるような社会的文化的場面というものを他の場面とは比較独立に取り出せれば，個人・個体志向型アプローチと，文化・社会志向型アプローチの齟齬を最小化させることができるかもしれない。

　こうした構想にたって，シンポジウム発表原稿では，①近代社会の概念に由来する "work ethic" を比喩的に使う問題点をまずふりかえり，その点をふまえてから，上記の構想にそって，高等哺乳動物，小規模社会の事例を検討し，"work ethic" の発生起源とその段階的展開についての試論の提示を試みるアウトラインを示した。②グレゴリー・ベイトソンがおこなったイルカの研究から，個体の高次の学習行動に創発性が発現する場合に関連して，ベイトソンのいう「枠組み」の転調過程にそれが関係している点をふりかえった。そこから，「遊び」の枠組みに関連した相互作用関係場面において，個体が主体主導的行動に没頭する特色が宿る場合がある点を指摘した。③階層化の度合いで異なる小規模社会を対比的に類型化し，狩猟採集民の社会類型のほうが，「遊び」，さらには「遊び」と「儀礼」の転調移行関係に自由度が大きい点，またケネス・バリッジ説を簡単に引いて，個人による行為決定によって新しい価値創造の創造の担い手となりえる類型がみられる点に言及した。ここでの試論的構想としては，"work ethic" は，分業化された社会に移行する過程で展開していったが，原初的には「遊び」と「儀礼」の転調移行関係に関係し発現したとみたてうる点に着目した。④さらには，小規模社会における異なる社会類型間の相互関係の転変にも，「遊び」と「儀礼」の転調移行関係がみられる点にふれ，こうした複雑な事例も検討すべき課題群がふくまれていることを示唆した。粗放農耕民と狩猟採集民の相互のかかわりには，彼らの「仕事倫理」にあたるもののずれが現れるが，農耕民型に展開したともいえる近代社会の「仕事倫理」はそうした粗放農耕民と狩猟採集民の相互のかかわりによる遷移過程からその特質と駆動力を獲得してきたのかもしれない。この点を，ムブティ・ピグミーの民族誌を描いたコリン・ターンブ

ルの事例，メアリー・ダグラスのグループ/グリッド理論，ベイトソンとアルフレッド・シュッツとアーヴィン・ゴフマンを統合したドン・ハンデルマン理論を援用し，精密コード，創造性，個性化，内省性，達成動機に勤勉倫理を絡ませる視点を下敷きとし，試論的に論点を展開した。

　この報告はやや特殊な観点からのものであり，また，動物心理学者に対する文化社会科学分野からのとりあえずの反応，という域を超えるものではないかもしれない。ただ，シンポジウムが設定した研究課題は，まさにまだ始まったばかりであり，本発表のように，「労働（勤勉）倫理」を通常はそれとは対極とみなされる「遊び」に関連づけて考察する方向も検討する意義はあると思われし，ベイトソンにみられるような動物行動生態学を組み入れた議論はもっと検討されるべきではないかと思われる。更には最近の進化社会科学や進化心理学，医療人類学の先端的動向に照らした検討も必要となろう[1]。

1. Introduction: the outline of this presentation

The term "work ethic" first of all evokes the image of the internalized Protestant ethic discussed by Max Weber. Work ethic in this regard refers to an important cultural value system of the social group that played a central role in the rise of modernity. When we apply this term to the behaviors of animals such as pigeons, we would then have to neutralize the connotation of the term, which is usually associated with modern human society. Such an attempt at neutralization creates certain difficulties. (For instance, we can easily anticipate the criticism from behaviorists who would question the psychological theory of "intrinsic motivation" that this term may imply. Alternatively, another criticism would refer to the lack of "future-present-past time" perspective in animals such as pigeons, for the time perspective might only be operative with the particular neurological module that could be acquired genetically only for humans.) Despite such difficulties, however, we can still assume that agency resides in the internal mechanism of the decision-making process for any living animal and apply this approach to compare animals and humans or premodern societies and modern societies. The "behavior" in this regard refers to not only an instinctive behavior but also the kind of behavior that becomes repeated even after primary needs are satisfied. This may offer us a new avenue for further exploration.

It is important, however, that we recognize the epistemological differences of each approach before we take on such an exploration. The behaviorist approach, on one hand, presupposes that there is a set of internal autonomous behavioral principles, which reside within individuals. A socio-cultural perspective, on the other hand, sees individual behavior as always embedded in a broader socio-cultural context. From this perspective, human behavior cannot exist without socio-cultural meanings. For humans, "behaviors" are always "actions"; they are constantly taking "actions" while being constrained by socio-cultural norms. For example, an individual, even after others have taken time off, may choose to continue working stoically because of his or her "work ethic." This individual's ethic, however, is indeed a product of cultural encouragement; individuals engage in this kind of behavior because it would consequently bring socio-economic gains in the long run; e.g., rise in socio-economic status, affluent life, and psychological satisfaction from social recognition. If some one is overwhelmingly engaged in work for longer hours, and if it deviates from the socially or culturally acceptable range of "work ethic," he or she will be regarded as a psychopathological workaholics. Apart from highly regarded and rewarded working activities, there are others who diligently work in the kind of "work" that has low social recognition. For them, regardless of external social values, the psychological "flow" created by working itself may well serve as a reward. By closely examining these various cases, we may be

able to locate and take out certain socio-cultural contexts of "work ethic" that contains mostly psychological aspects affected least by variable social meanings. Through this close scrutiny, we may be able to better bridge the gaps between the individually oriented behaviorist approach and the socio-cultural approach.

From these perspectives, I firstly pointed out the inherent problems in the metaphorical use of the term "work ethic," since this is a concept that has a close association with our understanding of modern society. Secondly, I then suspended this problematization in order to focus on "work ethic" in a neutralized sense, and turned to the study of dolphins conducted by Gregory Bateson. I discussed his notion of "framing" as it is applied to understanding the emergence of creativity in their learning behaviors, and tried to relate this to the prerequisites for internal mechanism of "work ethic" which might be found in higher mammals or higher primates. Additionally, I pointed out that there exists the tendency even in the cases of otters and dolphins, for individuals to become absorbed in a certain set of social interactions that are related to the framing of "play." Thirdly, I categorized and compared small-scale societies and more socially stratified societies and pointed out that the hunter-gather societies tend to have greater flexibility in modulating between "play" and "ritual." I also referred to the idea of Kenneth Bridge and suggested a category of people who become creators of a new value by their own initiatives for action. In light of these studies, I argued that "work ethic," which developed in the formative process of the division of labor, might well have its origin in the shifts in transitional modulating modes between "play" and "ritual." Fourthly, I illuminated the fact that there are shifting relationships between "play" and "ritual" in different types of small-scale societies and suggested that these issues need further investigation. There are certain discrepancies in the "work ethic" of the people of horticulture or extensive agriculture and that of the hunter-gatherers. The "work ethic" of modern society, which largely evolved from agricultural society, may well have derived its characteristics and forces from the dialectical interrelations between these two groups that contradicted each other in terms of the prototype of "work ethic."

This report is merely an attempt from the viewpoints of socio-cultural studies to provide a response to the animal psychologists working on the origins of "work ethic". Since the research topics defined by this symposium are in their early stage of development, the kind of perspective that reexamines "work ethic" in light of "play" may come to offer a new insight. Particularly, the Batesonian perspective discussed above has the potential of bridging the ecology of animal behaviors and the socio-cultural studies of human behavior. The significance of the line of my argument may be evident, however, I would also like to know some limitations in my argument. I refer to the case of contemporary hunter-gathers rather than those in the Pleistocene in order, to develop my comparative viewpoints. To speak of the mind mechanisms in evolutionary terms, however, as Steven Mithen, an evolutionary archeologist, discusses, contemporary hunter-gathers with their anthropomorphic metaphorical/religious, totemic thinking are quite the same as Cambridge dons at a High Table on a ritual dinner occasion[2]. We may be able to talk about evolutionary comparison only in relation to the Paleolithic foragers and hunters who were exposed to the Environment for Evolutionary Adaptation, or EEA, the primary selective mover that exercised its pressure more than ten thousand years before. Since then, the human mind mechanisms have remained the same from evolutionary points of view. If so, my comparison in this article is not of an evolutionary kind in the above strict sense, but of a socio-cultural one focusing upon the prototypical development of socio-psychological dispositions associated with "work ethic" as it has derived from socio-cultural changes, rather than evolutionary changes with regard to the mind mechanisms.

2. Deconstructionist view of "work ethic"

At this initial paragraph, I would like to briefly mention deconstructionist orientation in contemporary anthropology: since 1980s onward, or even from the latter half of 1970s via reflexive ethnographic approach, deconstructionist perspectives in anthropology have grown up prevalent in contemporary scholarship of the field, and it criticizes the isolationist concept of culture, or cultures: the key concept in conventional anthropology for understanding the so-called primitive societies[3]. The idea of a culture as isolated from other cultures, or relatively free from the external influences by the industrialized forces was fictitious even before the 20th century. The idea has derived from hidden assumptions embedded in colonialist discourses.

To take a brief look at the nature of critical ideas and insights in this deconstructionist paradigm, we can see a possible reinterpretation of what was described in the work of the late British social anthropologist Evans-Pritchard. He described witchcraft and sorcery practices of the Azande in Sudan as inherently based on their religious cosmology and value-system in his *Witchcraft, Oracles, and Magic among the Azande*[4]. However, these cultural practices of the Azande would be reinterpreted as rather a new introduction, or to put it more mildly, a newly accelerated unfolding of a minimal base custom by the British colonial force of the day. The British colonialist compelled the indigenous people to relocate along the lines of newly arranged public roads. Accordingly, imposed crowded living conditions among the relocated Azande would contribute to accelerating social conflicts, which might have resulted in increased incidents with regard to witchcraft in its intensity and even in the degree of its elaboration.

A recent big debate in North American anthropology is another example along the line of the deconstructionist trend. Patrick Teirney with his publication of "Darkness in El Dorado" caused heated disputes in the American Anthropological meeting in November of 2000. The critical side of the debate accused once admired academic figures in physical and cultural anthropology, the late James Neel and Napoleon Chagnon, of their essentializing the Yanomamöe as fierce battlers constantly engaging themselves in warfare with neighboring tribal populations[5]. This research project was initiated by Need under the auspice of WHO and it included the collecting of database concerning the shifts in generational sequences with regard to the distributional pattern of blood types and other phenotypic characteristics. Using these, the research inferred the gene pool among the indigenous people on the basis of population genetics. Chagnon supplied sufficient genealogical data of the people and their neighboring peoples in order to estimate the shifting ratios of genetic exchange across the groups. The Yanomamöe case was relevant to the theory of rapid change regarding the stock pattern of gene pool in the process of microevolution as would occur in small-scale populations. Genetic exchange was considered in the case of the Yanomamöe to have resulted from warfare and its consequential kidnappings of reproductive females from neighbors. Chagnon's description conveyed the image of the Yanomamöe as being notorious for their fierce warfare-oriented cultural ethos. The image provided us with a strong counter-evidence against the romantic anthropological description of hunters and gatherers as egalitarians relatively free from competitive aggression. However, contemporary deconstructionist perspectives have cast grave doubt over what was postulated through the ethnographies of Chagnon, although the same perspectives have tended to deconstruct the once commonsensical views of hunters and gatherers as being free from social violence at least within each group.

From the deconstructionist perspective within anthropology, the concept of "work ethic" of course is doomed to be deconstructed in that the concept may be a by-product of the modern

value system of industrial societies, probably deriving from Protestant Ethic in the case of the West as Max Weber once scrutinized, or in the case of Japan, from the Tokugawa Religion as the sociologist Robert Bellah postulated by applying Weberian scheme to the pre-modern working ethos in the Edo period of Japan[6]. Thus, the concept of "work ethic" cannot automatically be applicable to societies outside the context of industrialization.

Given these circumstances from deconstructionist anthropology as well as cultural studies, I would like to point out the basic problematics with the scope for a study of the evolutionary origin of "work ethic." We have to adopt much more subtle and sophisticated approaches to the evolutionary research by taking the above critical views seriously. It might be possible to discuss the evolution only after we create a relevant investigational space by examining these unconditional tacit assumptions. In this presentation, however, I would just suspend these critical discussions, so that my presentation may be able to come up with some relevance to the topics of this symposium.

3. Activation and arousal of creative behavior in otters and dolphins: episodic examples taken from the studies by Gregory Bateson

I imagine that the chair of the symposium, professor Shigeru Watanabe, intends to think of the origin of "work ethic" by preparing comparative dimensions of evolutionary nature across species. As there is no speaker presenting ethological data of higher mammals, it might not be worthless if I start with episodic instances of otters and dolphins. I am not specialized in the field, and, all I can do here is simply to rely on Gregory Bateson, the anthropologist, the ethologist, and even the socio-pathological psychiatric theorist who developed the idea about the double bind relationship. His cross-disciplinary scholarship provides much insight for examining ethological behaviors in the context of social relationships and for comparing them with the "ethonomical" nature of human interactions in their evolutionary implications.

I would like to start with a rather sketchy observational episode of otters in the Fleishhacker Zoo, San Francisco, in March of 1953 by citing Gregory Bateson's view[7]. Otters are well known for their playfulness. However, those in the zoo had been very inactive and remained dull without pointed movements since Batson initiated his observation in the spring of 1952. No lively activities were observed throughout Bateson's occasional visits. Being frustrated and bored of the dull and inactive attitude of the otters, Bateson happened to lower a piece of paper at the end of a string into the animals' compound. The otters had just eaten and did not need more food. They seemed to get back to the listless state. Nevertheless, jiggling the string as he did, they unexpectedly ran toward the object. They began to seemingly compete for the "toy", an interaction which began to resemble combat, but it was not fighting. Bateson then lowered a fish the same way to "explore," as he put it in his paper, the contrast between behavior vis-à-vis a toy and behavior vis-à-vis food. Evidently, however, the otters lost their enthusiasm at this point. In subsequent days, the otters showed the resumption of active play. They dived and swam briskly, spinning over and over. Grooming each other, their coats, once dull, began to shine. This sort of rejuvenation continued until the season changed. Then, the animals returned to the listlessness as observed before Bateson's interference.

Although the change of the otters may be attributed to some other factors such as seasonal or hormonal ones, Bateson hypothesized that the dramatic change in behavior of the otters took place as a result of the intervention, and that his intervention functioned to give a sort of psychotherapeutic experience to the otters. Bateson presumed that the presentation of a toy, which was not food, created a context of interaction that was not combat among the otters. His concept of play frame is relevant here in that the otters could distinguish between the differences

of Russelian logical types, message and meta-message; the play frame defines activities in the frame as being not the same as that of message, i.e. combat. Otters distinguished the toy, which was designated as food, from the actual food, and playfully tried to capture the toy as if it were food. Primates among mammals especially can be socially engaged in play activities. According to some ethological reports, certain apes even play on sexual interaction, which suggests even a wider variety of playful behavior among primates[8].

Bateson later observed the learning behaviors of dolphins, and developed the idea of the distinction between the second-order learning, which is the classification of specific interactions, and the third-order learning, which is classification itself, i.e. the process of codification by which the second-order learning occurs[9]. The Sea Life Park trainers in Hawaii got frustrated with the monotonous repetitive dolphin shows for the visitors, and they set a new task for dolphins in that the animals would be rewarded only if they could show a behavior which they had never performed before; a behavior, enacted spontaneously and accidentally. That task annoyed dolphins considerably who were only familiar with the second-order learning by which they were rewarded through the second-order reinforcement once they mastered to repeat the same behavior. A female Steno dolphin, having been cast into the non-rewarded state, finally happened to slap her tail on the surface of water, as if annoyed. The trainers rewarded for this behavior, and eventually, the female Steno remarkably had become able to display a wider variety of creative behavioral sequences, which she had never showed before. She used to have a personality of a mediocre sort before exposed to the new task.

To follow a somewhat hypothetical speculation at the cost of objective analysis of a range of variable factors involved in the incidents—my presentation is at any rate tentative—the behavioral context as appears in this sort of a new break-through creative jump may be of non-negligible relevance to our "work ethic" issues. As in the case of the otters, the behavior of this sort appears over the abyss in-between frames of activities, between the lower-order message and the higher-order meta-message. That sort of behavior is firstly a motivational spontaneous behavior, and secondly a creative behavior; so was the behavior the dolphin performed. It was initially triggered accidentally in the process of frustrated states of the dolphin after her attempted reward-seeking but rewardless behaviors. Once reached the third-learning level, dolphins seemed to enjoy creating new behaviors for their own sake, which might not directly be related to reward seeking. Creativity and ability to be engrossed in play frame go together in the case of higher mammals, and the attainment to the level of creative variability in play behavior might be related to the ability to overcome the degree of difficulty in task learning as well as to the proneness to that level of difficult task learning.

In this line of argument, the origin of "work ethic", at least in some branch line of ascending, may be seen to be of relevance to the creative playful aspect of individual behavior. "Work ethic" in its neutralized sense can be interpreted as preferential choice of a more difficult task learning under the same circumstances in terms of getting a reward, or even those of no apparent reward. In other words, "work ethic" means behavioral proneness toward more prolonged engagement in more difficult tasks as compared to easier ones. Both tasks are functionally equivalent in terms of accessibility to the same reward within a short time span perspective. For this behavioral proneness, it is necessary for individual animals of particular species to be able to attain ability for a wider repertory of the second-order learning. Curiosity for new stimuli and creativity in enacting new spontaneous behaviors would provide prerequisites for that type of proneness[10]. As higher mammals such as otters and dolphins do not reveal direct evidence for that type of proneness to our present knowledge, we would focus on its prerequisites in order to understand its origin, and accordingly on the creativity triggered via play and the third-order learning. In

this line of a hypothetical discussion, the origin of "work ethic" may be traced to the circumstances in which play and the third-order learning reveals a psychotherapeutic function for higher mammals. With reference to different classes of learning as classified by experimental psychologists, Bateson hypothesized that socio-cultural differences in thematic human beliefs and attitudes—not those of animals—might derive from differential cultural selections of the types of learning[11]. For instance, in the case of a child whose training is bound to Pavlivian class of learning, Bateson argued that the child would see all events as preordained and he would see himself as fated only to search for omens, not able to influence the course of events, but at most to put himself in a properly receptive state, before the inevitable happened. In short, the child's worldview and attitude would become fatalistic, not only within a short time span but also with a long-term time perspective (as discussed earlier, the latter time perspective is supposedly available only for humans). The child would be deprived of developing creative ability to overcome the restrictions of the given Pavlivian learning contexts and might not go beyond some fatalistic version of shortsighted hedonism. Animals except for humans may lack the long-term time perspective that constitutes long-term expectations for possible future events, and in this regard, we cannot talk about fatalistic attitude of animals. However, by taking into consideration the above idea, we may be able to argue that "work ethic" in the neutralized sense could evolutionarily be related to the acquirement of ability for going beyond the contradictions of different learning tasks of the second-order, which would be a by-product of variable engagements in play framing activities of various sorts. The acquirement would be advantageous in terms of evolutionary adaptation.

So far, we have focused on individual animals in relation to the above circumstances. The aspects of creative behavior and its circumstances discussed above, however, implies underlying social interaction; in the case of the otters, play occurred within the context of involvement of Bateson and fellow otters. In the case of the female Steno, the behavior occurred within the context of conditioning by trainers as well as that of dolphin shows. Accordingly, it may still be necessary to consider social interactional context embedded in seemingly individualized behaviors attributable to the operation of "work ethic" of a sort in the above sense[12].

4. Small-scale societies: the locus of prototypical "work ethic"

Now, I would like to turn our attention from otters and dolphins to the so-called primitive societies, or small-scale societies. For a comparative and evolutionary view of the origin of "work ethic," hunters and gatherers subsistence economy provides a good contrast. Apart from those residing in the desert type of environment, such as the Bushmen, hunters and gatherers are generally considered to be optimists, in that they could easily get food with a relatively short time span, usually less than half a day. On the contrary, people engaged in farming particularly before the Industrial Revolution would have to work longer hours a day with much a longer time span that would extend as long as a year. Hunters and gatherers might be the least candidates to stoic hard workers with "work ethic," since their unit of time span for subsistence cycles does not necessitate the idea of accumulation or cumulative investment of preparatory works in longer-terms. As modern "work ethic" largely evolved from agricultural society in need of that type of cumulative investment, we may well pay attention to the transitory processes or some intermediate modes between societies for hunters and gatherers and those for agriculturalists, with reference to the argument on the origin of "work ethic."

Before dealing with this point, however, we need to pay attention to the issue of individuality and social hierarchy in different types of societies from the viewpoints of social evolution. Within the context of activities for subsistence, individualized activities would have rarely occur in small

scale societies, as adaptive subsistence economies of those societies would have deprived people of niches of subsistence on the basis of isolated individual economic activities to support and survive himself, merely for himself and by himself. In societies of hunters and gatherers, it is reported that indigenous people usually move around in groups, the seizes of which shift from that of the whole band, as instances for hunting big games, to that of one nuclear household, as instances for getting small animals or gathering fruits and nuts. In their working conditions—i.e. economic activities aiming at daily subsistence for the bare necessities of life in those hunters and gathers societies—organized group behaviors with group leadership become salient. Group behaviors segment each pivot of activities, however loosely structured they may seem from the eyes of observers socialized in industrialized societies. Even so, there is a sharp difference in the nature of social organizational settings in relevance to individuality and collectivity between societies for hunters and gatherers and those for agriculturalists. Following the group-grid theory of Mary Douglas, we can depict the difference as follows[13]: the group demarcation is high in the latter societies in that strangers outside the group tend to be marked to block out their intrusion into the group, where as the former societies are rated as low-group in that moving in and out of members across different hunting bands is relatively easy without much caution. The former is also characterized as low-grid in that role differentiation among members is not pronounced, i.e. with less social hierarchy, whereas agrarian societies are either of a low-grid type of a high-grid type. High-group and higher-grid societies tend to be ritual-oriented, whereas low-group and low-grid ones generally lack elaborated rituals and tend to engage in dyadic joking sessions instead of ritual sessions. From this point of view, hunter-and-gather societies have more room for individual-oriented activities with much less social hierarchy, at least outside the context of cooperative activities for subsistence. Agriculturalists as well as pastoral nomads in general tend to have extended notions of genealogies, clans, or lineages, and their ancestor gods or monotheistic deity may punish them with damages via supernatural power when people neglect their observance. Deities for hunters and gatherers tend to be more generous.

Tendencies for the lack of collective ritual activities in hunter-gatherers have been pointed out even in extreme cases; it is told that a certain indigenous group roaming around the hill areas in Sri Lanka used not to be able to sing in harmony with others in a group setting. That means they could not engage in coordinated activities when it comes to singing. The act of singing constitutes a certain form of ritual activities. It is true that hunters and gatherers in general are much less ritual-oriented with scarcity of elaborated rituals, as compared to agriculturalists, but, still, it is highly possible to postulate that there have been no small-scale societies without ritual activities. In ritual, people work together in harmony, forming a situated activity system, which prepares the framework of "working-together ethic" that would be replica or a proto-type of cooperative working as observed in collective hunting among hunters and gatherers. In some cases, ritual and game-like contest may be fused together, and competition will be controlled within the range of cooperative ritual, like in the case of log-carrying race among the Xavante in Amazon[14]. Two groups of males, representing the dual organization of kinship-focused social and cosmological structure of the Xavante, seem to compete by running with heavy logs on their shoulders in the forest. They run to reach their village; if one party gradually falls behind, however, the other party will slow down their speed so that the former can catch up and thus the two can go together within a range of desirable distance eventually to the goal. A sort of sabotage is needed at times in their running job, which may seem to deviate from what is expected with "work ethic." On the contrary, this sabotage is to be done diligently to make a ritually appropriate scene for a race between two dichotomous groups of the village. Individual achievement is not encouraged in this type of co-engagement.

Small-scale societies in general are eager to engage in co-joint ritual activities. Those

responsible for ritual enactment will particularly be diligent. We may be able to talk about diligence of people in those societies when they are caught up with ritual obligations. Diligence may imply some component of "work ethic." But, in this case, people are concerned with their roles for their community as well as with their relationship to their ancestral deities, whereas Calvinists were concerned with their callings from God who encouraged individual achievement on the basis of "work ethic." Thus, to speak of "work ethic" for the people in small-scale societies, we could hardly focus on the individualized aspect of ethos without reference to social international settings. In other words, "work ethic," or "ethical aspect of motivational activities" in small scale societies would inevitably create social contexts in which individual activities occur, usually with nuances of expected or even forced social attribution of individual roles by social authorities in power as well as religious leaders responding to their deities. So, the issue of "work ethic" in small-scale societies is of critical salience with respect to social morals associated with activities in group settings towards group goals rather than with isolated individual activities of a non-social nature which are irrelevant to any social context. Even if in personal activities performed alone, they might contain elements of attempted social deviation or even of countersocial aspect, or psychopathological adjustment to isolation.

The above discussion may be more congruent with high-group/ higher-grid societies. In social evolutionary perspective, it was agrarian societies where social stratification became much more developed and went beyond small-scale levels and reached the state formation. Given the limitation of technology for exploiting environmental conditions that would have restricted the possible ranges of surplus, those societies had relatively little affluence. There, almost all of human activities would have been contextualized in social hierarchical systems. In short, room for individualized activities out of social contexts seem to have become minimized as hierarchical systems developed at least to the level of pre-modern societies. It is notable, however, that Kenneth Burridge once depicted shamans or religious political leaders in small-scale societies as being able to relativize the underlying assumptions of social restraints, thus potentially prone to break through old regimes and normative experiential orders and reach a new horizon of experiences to elicit the momentum of a new reformation of societal organizations and values[15]; candidates to potential innovators still existed in those small-scale and traditional premodern societies, and this locus of individuated agency for potential societal change in those hierarchyoriented societies compensated scarce room for socially meaningful individual-based operation.

Ritual activities in collective settings and play activities in less collective or more individually oriented ones are the basic dichotomy in general activities of small-scale societies as compared to that of work-leisure in our industrialized societies. Hunter-and-gather societies have become reputed for those with affluent "leisure time"—the term now I use for the sake of convenience, but hastily to take cautions, too, of the problematic nuances of the term " leisure," as the social history of the term implies the ideological category of the work-leisure dichotomy that has been articulated through the process of industrialization. Hunter-gatherers, if they are fortunate enough to enjoy surrounding dietary environments as being relatively rich and stable, free of sever fluctuations leading to starvation, would "work" only for three hours or so a day, the rest of everyday they would be free from subsistent activities. They may be able to manage to live most of the time outside the context of co-joint ritual activities. This may be related to the fact that their social systems minimize hierarchical orders as compared to other societies. There would be room for individually motivated autonomous behaviors in the sphere of non-subsistence activities, which I would try to capture under the rubric of "play." However, even those in play in the foraging societies might usually be contextualized in social settings as is the case with instances of joking sessions. For this point, I would like to take up later, but, in contemporary circumstances in this age of increasing globalization, almost all of the small-scale societies are

now somehow or in other ways being incorporated at least partially in cash economy of the world system, and thus they can no longer be considered as autonomous self-contained societies.

In terms of the categories of experiential time-phase, people in small-scale societies live either in ritual or in play time-phase, as compared to those in industrial societies living in work- or leisure-time phase. In low-group/ low-grid societies of hunters and gatherers, they may engage in co-joint activities quite diligently, and they tend to spend play-time phase in less collective contexts, mostly in dyadic interactional contexts, with changeable divergent attitude, away from diligent concentration. "Work ethic" again may be related to contexts of internal social gatherings, rather than completely isolated individual practices. "Work ethic" is absorbed, so to speak, in "work-together ethic," with the aspects of social morals for cooperative working and ritual contexts. A possible path through which "work-together ethic" could be branching out and differentiated into "work ethic," that is, spontaneous individual-oriented behavior with motivational ethic, might consist in the momentum of individuation of potential agency that can go beyond ritual-religious collective restrictions. In this regard, as Burridge postulated, those individuals in special social categories such as shamans would be potential innovators to be able to acquire attitude associated with "work ethic" or its pre-evolutionary equivalent. Those potential innovators may be able to develop such an attitude by dialectical switching between ritual and play time-phase, to create a space for individuation capable of attaining agency for individually based decision-making.

In this line of argument, the aspect of original potential for acquiring pre-evolutionary "work ethic" may be dependent on the availability of socio-experiential dialectics between ritual framing and that of play that are embedded in experiential orders of small-scale societies.

My point in this section is mainly socio-cultural as well as phenomenological, following theories and discourses in symbolic and psychological anthropology. However, this perspective has certain congruence with that of Gregory Bateson, which I briefly discussed in the previous section. Accordingly, my tentative argument on evolutionary prerequisites for the neutralized "work ethic" for otters and dolphins reveals relevance to my point in this section.

5. Possibility of development of prototypical "work ethic" in inter-group interactions between those of different subsistence economies

I would like to discuss the possibility of development of "work ethic" by way of inter-group interactions between those of different subsistence economies. For this point, the ethnographic description of the Mubti pygmies by Colin Thurnbull provides relevant cases[16].

The Mubti pygmies during the period of Thurnbull's field work had become involved in complementary dependence on the neighboring Bantu speaking agriculturalists. The former would go and stay in the latter's villages to get grain and beer in exchange for their service of hunting games in the forests for the latter. The Bantu agriculturalists regard the surrounding forests as dangerous and polluted sites where evil harmful spirits haunt and cause disasters. Only the peoples such as the pygmies who are lowly ranked spiritually from the agriculturalists' perspective would be able to go inside the forests. Of course, the pygmies consider the forests as their beneficial habitats, the tropical rainy forests where games and fruits or honey are available throughout a year. They worship high deities residing in the forests for the benefit of pygmies, although they have not developed complicated ritual formats for worshiping those deities as compared to the Bantu speaking agriculturalists. The pygmies were forced by the government of Zaire (now, Republic of Congo) to deposit their children to the Bantu agriculturalists' villages where public education became available.

From the perspective of the Bantu agriculturalists, the Mubti pygmies are idle workers. A household in the former accepts some member of the latter as a freeloader for a month or two under the expectation that he will hunt some games in exchange for agricultural food and fermented local beer. However, the freeloader tends to sabotage with apologies that he encountered no game animal regardless of his repeated exploration into the forests or that he could not help returning away as he was frightened by the sights of demons in the forests. In fact, he secretly made fun of the Bantu villagers and their belief in forest demons as well as their imposition of lower symbolic status upon the pygmies. There might be an increasing power imbalance between the two groups, in that the Bantu agriculturists became more dominant over the pygmies. This would be partly due to the governmental transfer of its authority on the side of the villagers to encourage the Mubti pygmies to become sedentary. The government also began to impose some restriction against hunting animals for the sake of protection of animals from harm, which responded to Westerners' tourism-oriented interests in beasts. The increasing influences of cash economy might also come to be exercised over the localities through such practices as local projects for road construction, which began to attract those in need of cash among the villagers and the pygmies.

At any rate, interesting processes of somewhat odd, incoherent, and confusing or even funny interaction continued on between the Bantu villagers and the Mubti; the former behaving as masters or patrons try to make the latter work by entertaining with hospitable rewarding, coaxing, or alternating threats with flattery, whereas the latter try to extend free-load residency by exploiting the maximum range of patience on the side of the patrons since the latter would like to stay longer rather than go back to the band in the forests. Seemingly, the issue here may mostly concern a sort of bargaining game in pursuit of interests on both sides; the master side tries to minimize his investment in getting meats of forest animals and the servant side cleverly gets around to escape the master's control and maximize his gains with the least of his service. However, there are more than that in the game, for regardless of its apparent rational aspect of calculating gains and losses from both side, the driving force of the game also concerns cultural differences in "work ethic" embedded in each side's value orientation. Because of the discrepancies in "work ethic" between both sides, the game has to get started. In other words, the game contains some negotiating aspects that center around the discrepancies in the respective idea of "work ethic" under the circumstances of mutual contract into which both sides tacitly enter with reference to hunting animals in the forests. Cultural differences in time orientation among them play a role in the discrepancies. Both may be different from the modern type of linear time orientation as found in industrial societies, but still both differ from each other in regard to time orientation, which derive firstly from the basic difference in conditions of subsistence economy as discussed in the section 4. Furthermore, religious and cosmological differences with reference to the idea of ancestral deities and ritual elaborations concern both sides. Customs of ritualism practiced by the Bantu villagers also tend to be imposed on the Mubti when they stay in the villages, which cause the latter to try to ridicule supposedly holy symbols when the former are absent. For instance, Turnbull described ridiculing sessions as observed during the nights of rites of passage that were imposed on adolescent pygmies by the Bantu villagers. Parents of the imposed initiates dropped in a hut of ritual seclusion outside a village during the nights. The visit during the ritually marked nights itself was prohibited, but, the pygmies went further up to throw away holy ritual objects of the villagers or play catch with them in the hut. A joking atmosphere prevailed. Don Handelman elaborated Batesonian theory of ritual and play frame[17], and with reference to his elaboration, the joking sessions by the Mubti for ridiculing the sacred objects can be interpreted as play framing that is subversively juxtaposed to the ritually framed world of sacred meaning of the Bantu. This relativization of the Bantu ritualism may be regarded as

coming close to the process of secularization once taken place during the transition from pre-modern to modern era, particularly when we adopt Mary Douglas's point that one extreme aspect of modern societies resembles that of the Mubti from group/grid analysis—according to her, both are of a low group/low grid, although the increasingly mass-oriented aspect of modern societies transforms them into a low group/high grid type. In this sense, it is as if the Bantu villagers were almost dragged in teasing sessions in order to get rid of collectivist' and ritualist' shadow of their "work ethic" to upgrade towards the version of some measure of modernity, by way of the dialectical back-and-forth code-switching between ritual and play.

Thus, throughout the interesting juxtaposition of, and negotiation between, the different frames, ritual and play, in mutually interacting settings, discrepancies in versions of "work ethic" as found among the Bantu and the Mubti are to be negotiated.

The shifting relationships between "play" and "ritual" in different types of small scale societies can thus be described and analyzed as follows: There are certain differences in the "work ethic" of the people of horticulture or extensive agriculture and that of the hunter-gatherers, and thus there are certain negotiations that go on between them. With reference to the similarities between modern society and those of the hunter-gatherers from the standpoint of the group/grid analysis, the "work ethic" of modern society may well have derived its characteristics and forces from the dialectical interrelations articulated around prototypical different views on "work ethic" between the socio-culturally different groups, that is, the high group/high grid and the low group/low grid groups.

6. Summary and discussions

Among small-scale societies, especially as compared to more socially stratified agrarian societies, the hunter-gather societies tend to have greater flexibility in modulating between "play" and "ritual." For this point, I think the idea of the loci of individuality in small-scale societies elaborated by Kenneth Bridge becomes relevant if we focus on the alienating or pulling-out dialectical processes of individuation from collectivity-oriented activities that are typically inherent in the social of the ritual-religious frame. In my discussion of the prototypical "work ethic" among those in small-scale societies, I located this dialectics in the processes of code-switching between ritual and play framing as found in the ethnographic case of the interaction between the Bantu and the Mubti with reference to Colin Turnbull's ethnography. Accordingly, I argued that "work ethic," which developed in the process of division of labor and secularization, might well have its origin in the shifts in modulation between "play" and "ritual."

Serious activities such as "work" driven by "work ethic" in our modern period have tended to be opposed to unserious activities that typically appear in play. However, even religiously serious activities and their sacred meaning may be constituted by way of playful joking, according to my own anthropological and semiotic research on folkloristic ritual sessions in a small-town in Japan[18]. With these analytical foci, I argue that the origin or more precisely the formation of certain aspects of "work ethic" should be studied in part as spontaneous behavior arising in play, which occurs by breaking beyond everyday work frame.

Basil Bernstein characterized British middle-class individuals as based on elaborated code, while working-class members are based on restricted code in their social perception and conceptualization of everyday events [see (13)]. The modern version of "work ethic" is inherently associated with the former, and hence with elaborated code for the cognitive style of seeing events not only in their immediate context but also in relation to other contexts. This elaborated code with the ability for synthetic decontextaulization of immediate contexts may have been

developed by dialectical exposures to different modes of realities, such as different languages, religious cosmologies, et cetera. If we translate the dialectical exposures into the terms for communicational, socio-cultural interaction, we will reach the shifts in interrelationship between ritual and play in conflicting situations of encounters among groups of different backgrounds who had to form mutual relations. On this point, evolutionary development of the elaborated code may be the very vehicle for articulating versions of "work ethic." As the modern type of "work ethic" can be considered to have evolved from its earlier versions in traditional societies, its prototypical versions may well have been upgraded through the dialectics between different groups with different cosmologies. And again, if we focus on this dialectics through communicational frameworks in the context of socio-cultural interaction, we can reflect on impact of the developmental or social-evolutionary changes in modulating modes between ritual and play framing.

I mainly focus on the versioning-up of "work ethic" from the synthetic point of Durkheimian and Batesonian views. However, as Rodney Needham once discussed the necessity for relating psychological-cognitive capacity to the issue on the social origin of neo-Kantonian classificatory faculty [see (9)], cognitive and biological psychological scrutiny on the base and origin of the neutralized "work ethic" is also necessary. The latter may interact with experiences for higher learning in its manifestation or development. In this regard, Batesonian look at the learning processes of higher mammals with reference to play framing may provide an illuminating perspective, even if current evolutionary sciences require us to go much further than that.

Note:

(1)   This paper was originally presented at the Conference on "Work Ethic," at Keio University, held on Oct. 2, 2003. The present article is its modified version. I am grateful for comments on my presentation by the conference participants, and some editorial comments by Junko Kitanaka.

(2)   Mithen, S. *The Prehistory of the Mind: The Cognitive Origins of Art, Religion, and Science.* London: Thames & Hudson, 1996. There is a criticism against the last primacy of EEA in the Pleistocene in terms of selective pressure. Man-made artificial environments in the rise of agriculture and urbanization a few millennia ago might function to cause the most recent genetic change [see (9) Smith, E. et al. p. 131].

(3)   Since 1982, many works have been produced by drawing on deconstructionist approaches in ethnography and modern anthropological theories: e.g. Marcus, George E. *Ethnography through Thick & Thin.* New Jersey: Princeton University Press, 1998.

(4)   Evans-Prichard, E. E. *Witchcraft, Oracles, and Magic among the Azande.* Oxford: Oxford University Press, 1937. A different look at the nature of his ethnographic description is presented by Clifford Geertz in his *Works and Lives: The Anthropologist as Author.* San Francisco: Stanford University, 1988.

(5)   Tierney, P. *Darkness in El Dorado.* Norton, 2000.

(6)   Weber, M. *The Protestant Ethic and the Spirit of Capitalism.* Translated by Talcott Parsons; with a foreword by R. H. Taw. London: G. Allen & Unwin, 1930. cf. George De Dos, Socialization for Achivement Berkeley: Univ. of California 1973.
Bellah R. N. *Tokugawa Religion: The Values of Pre-Industrial Japan.* Glencoe: Free Press, 1957.

(7)   Bateson, G. "The massage 'This is play.'" In *Group Processes*; Transactions of the Second Conference. Ed. B. Schaffner. New York: Josiah Macy, Jr. Foundation, 1956. pp. 145–241. Idem. "The position of humor in human communication." In H. von Foester ed. *Cybernetics: Circular Causal and Feedback Mechanism in Biological and Social Sciences*; Transactions of the Ninth Conference. New York: Josiah Macy, Jr. Foundation, 1953: pp. 1–47. Idem. "A theory of play and fantasy." In *Steps to an Ecology of Mind: A Revolutionary Approach to Man's Understanding of Himself.* New York: Ballantyne Books, 1981 (originally, San Francisco: Chandler Press, c1972): pp. 279–308.

(8)   A juvenile of certain bonobo chimps, who was coming to the age of sexual maturation, was observed to

have participated in a copulating dyad. The juvenile seemed to be playfully imitating the act of copulation while placing himself in front of the adult male on the back of the female partner. Prof. Hisatoshi Kuroda's remark in response to my questions at the annual conference of Japanese society for semiotics, held at Osaka University, on June 15 of 2003.

(9) Bateson, G. "The logical categories of learning and communication." Op. cit.: pp. 279-308. Idem. "Double Bind, 1969." In ditto: pp. 271-278. The actual incidents of training for the female Steno are described by Pryor, K. *Las Before the Winds.* New York: Harper and Row, 1975.

Bateson's idea of frame and learning is relevant here to Durkheimian sociological and anthropological theories. It can simultaneously deal with cognitive modes of communication, and social relationships together, whereas Durkheimians tended to reduce the former to the latter. Rodney Needham once pointed out the necessity for clarifying the basic role of psychological cognitive faculty in supporting human cognition for socio-cultural classificatory system. Durkheim and Mauss rejected Kant's assumption of the apriority of transcendental judgment for human cognitive faculty. For the French sociologists, it was not an innate faculty but a byproduct of primordial social groupings, for socio-cultural survival of archaic societies in given environments. Social categorization in pristine small-scale societies had resulted in dualistic primitive classificatory systems and had been precedent to the acquirement of cognitive faculty, or at least to the manifestation of the basic categories such as time and space, and even dialectical cognitive/epistemological framework. Thus, the French scholars went further beyond neo-Kantonian stance. Rodney Needham criticized, however, the extreme socio-centric position concerning the social origin of dual categorical classification in that the position would not validate the postulation of the cause-and-effect relationship between primitive social classification and classifying faculty itself; it would only reveal correspondences between them: See the "introduction" by Needham in his translation of *Primitive Classification* written by Emile Durkheim and Marcel Mauss. Chicago: University of Chicago Press, 1963. As is discussed above, Batesonian approach can go beyond Durkheimian standpoint, by at least overcoming certain aspects of Needham's critical reservation. However, it may not be able to defy current backlashes concerning the mind-brain-culture debate from evolutionary social sciences that have developed since 1980s by trying to overcome the problematic shortcomings of what sociobiology assumed. In this regard, Steven Pinker's argument is relevant, as he goes much further than Needham. He criticizes that Alfred Kroeber's idea of culture as the superorganic mind was one extreme culmination of the idea of blank state of human mind, i.e. that of the greater malleable mind entertained by the cultural relativist school of the mainstream American anthropology of the 1920s and 30s. Pinker traces its cognate view in Emile Durkheim's theory of collective representation, which reveals a singular disguised version of the blank state view of human nature. Accordingly, Pinker criticizes Durkheim's model, the standard social science model, in that it neglected the mind-brain part of the complexly interacting whole between biology, psychology, the social institution, and culture in human experience. Thus, Durkheim only considered the collective representation as the output of the social, the social fact, deriving from the collective social mind mechanisms, and tried to find out the origin of the representational output within the reference to the structure of interrelated social facts (see Pinker, S. *Blank State: The Modern Denial of Human Nature.* New York: Viking, 2002. See also Young, A. "Evolutionary narratives about mental disorders." Anthropology and Medicine, Vol. 10, No. 2, [2003]: pp. 239-253, which shows us not only one of the promising projects in recent advanced elaborations in medical anthropological scholarship but also a new pathway for reintegrating it with subdivided anthropological disciplines under the holistic rubric of "anthropology."). Evolutionary social sciences have encouraging potentials for breaking through the dead ends of enclosed disciplinary paradigms, but, there are discrepancies in methodologies, research emphases, and underling assumptions among the two representative streams in the field: evolutionary psychology focusing on specialized cognitive modules through laboratory studies aims at uncovering the psychological mechanisms of the mind that underpin human behavior and the selective forces which shaped those mechanisms. Human behavioral ecology focuses on the application of animal behavioral ecology to human populations on the basis of naturalistic field tests of hypotheses, such as those in anthropological archeology, with respect to fitness-maximization game theory models, which concern humans' optimal conditional strategies for trading off contradictions among various types of

first-level advantages recurring around survival and reproductive success (see Smith, E. A., Borgerhoff Mulder, M. & Hill, K. "Controversies in the evolutionary social sciences: a guide for the perplexed." Trends in Ecology & Evolution, vol. 16, no. 3, [2001]: pp. 128-134.) Finally, we also take caution of the problematic nature of reductionisitic stance of evolutionary psychology as Steven Rose criticizes in his "Escaping evolutionary psychology" (in H. Rose and S. Rose [eds.] *Alas, Poor Darwin*. New York: Harmony Books, 2000: pp. 299-320.)

(10)   The creative ability that is triggered by way of the third-order learning may be related to cognitive flexibility. Creativity, greater cognitive flexibility of the human mind mechanisms has been a focal concern among evolutionary social scientists; for instance, the anthropologist, Dan Sperber (in his *Explaining Culture: A Naturalistic Approach*. Oxford: Blackwell, 1996) postulates the existence of module of metarepresentation, a new hypothetical module compensating the encapsulated nature in regard to enclosures of domain specific modularity that would be counter-active against creative cognition. Mithen formulates three phases of evolution in the mind mechanisms for acquiring higher cognitive flexibility that are similar to the tertiary orders of learning postulated by Bateson [Mithen, S. in (8), pp. 58-72].

(11)   Bateson, G. "Social planning and the concept of deutero-learning." In *Steps to an Ecology of Mind*. San Francisco: Chandler Press, c1972: pp. 159-176. Idem.

(12)   The social relations preparing the social complexity may be important for evolutionary development of the mind mechanisms of social animals. The complexity found among many primate social groups has been considered to function as a significant pressure in favor of the use of Machiavellian social manipulation for deception or cunning cooperation. Thus, in evolutionary cognitive terms, primates may have acquired the cheater-detector module as well as the theory of mind module. See Byrne, R. W. & Whiten, A. "Machiavellian Intelligence." In Andrew Whiten & Richard W. Byrne (eds.) *Machiavellian Intelligence II: Extensions and Evaluations*. Cambridge: Cambridge University Press, 1997: pp. 1-23.

(13)   Douglas, M. *Natural Symbol: Explorations in Cosmology*. New York: Vintage Books, 1973. Her group/grid analysis derived from the idea of the restricted and elaborated codes postulated by Basil Bernstein. See Bernstein's *Class, Codes and Control*. London: Routledge & K. Paul, 1971. Also, "Elaborated and restricted codes." In A. Smith ed. *Communication and Culture: Readings in the Codes of Human Interaction*. New York: Holt, Rinehart and Winston , 1966: pp. 442-455.

(14)   Maybury-Lewis, D. *Millennium: Tribal Wisdom and the Modern World*. New York: Viking, 1992. Graham, L. R. *Performing Dreams: Discourses of Immortality among the Xavante of Central Brazil*. Austin: University of Texas Press, 1995.

(15)   Burridge, K. *Some One, No One: An Essay on Individuality*. Princeton, Princeton University Press, 1979.

(16)   Thurnbull, C. *The Forest People*. London: Jonathan Cape, 1961.

(17)   Handelman, D. "Reflexivity in festival and other cultural events." In Douglas, M. ed. *Essays in the Sociology of Perception*. London: Routledge & Kegan Paul, 1982: pp. 162-190. His theory is actually a synthetic elaboration of the theories of Gregory Bateson, Alfred Schutz, and Erving Goffman (see his *Frame Analysis*. Penguin, 1974.) and from my point of view, integrates the phenomenological perspective on multiple experiential realities with communicational, framed interactions, which are embedded in group settings of encounters with structural social organizational articulation.

(18)   Miyasaka, K. "Rethinking Batesonian approach to humor: a critical reformulation with relevance to epistemological cognitive paradoxes of humor. Paper read at the 12th international conference on the study of humor held at Kansai University, Osaka, on July 24, 2000: 36289 words. Miyasaka, K. "Unusual Gestures in Japanese Folkloristic Ritual Trance and Performances." In M. Rector, I. Poggi, & M. Trigo (eds.) *Gestures: Meaning and Use*. Porto: Universidade Fernando Pessoa, 2003. pp. 293-300.