Stéphane Rennesson

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In Northern Thailand, a game that builds upon an uncanny cooperation between human beings and rhinoceros beetles (*xylotrupes Gideon*) has developed at a high level of refinement and institutionalization. Beetle-fighting is even being widely presented as a marker of the local identity and a local ecological wisdom. In this paper, I will show how it is not so much the coleoptera that symbolize a harmonious connection built by human populations with their natural environment, but rather a question of what happens in the intimate relationship between human beings and insects. Following the way players build on the great alterity between them and the insects, this article will address how the technical and conceptual handling of the beetles shapes pragmatically an original cosmology. It will pay specific attention to the ways players try to connect with their coleopteran by projecting human traits on them and adopting their communication mode. Through these, we can examine how beetles force humans to reflect on their engagement in the world, up to the point where it brings this game onto the stage of political ecology.

Keywords: Northern Thailand, beetles, cosmology, ecology, cybernetics, analogy, nature, culture, pragmatism

In the campus of Chiang Rai Rajabhat University, one can visit a "museum of life" (*phiphithaphan chiwit*, พิพิธภัณฑ์ชีวิต). Designed at the end of the twentieth century by local academics, it aims to celebrate the traditional way of life of "Northern Thai people" (*khon müang*, คนเมือง). Interestingly the museum is structured in two parts where two different practices are exhibited. These practices, thought to be representative of the "Lanna (Thousands of rice fields) culture"—the local culture that flourished in the ancient Principalities situated geographically in the northern part of the contemporary Kingdom

* This article is based on three fieldworks. The main one was carried out with Emmanuel Grimaud and Nicolas Césard, with whom I co-authored four articles (2008; 2011; 2012a; 2012b) and an ethnographic film (2013).

** Research Institute on Contemporary Southeast Asia (IRASEC), French National Center of Scientific Research (CNRS), 179 Wireless Road, Lumphini, Phrathumwan, Bangkok 10330, Thailand
e-mail: rennessonstephane@gmail.com

of Thailand—consist of: the fishing of the famous "Mekong giant catfish" (*plaa bük*, ปลาบึก, *pangasianodon gigas*) in the Mekong River; and the fighting competitions of Rhinoceros beetles (*xylotrupes Gideon*), locally called *kwaang* กว่าง, *maeng kwaang* แมงกว่าง or *maeng khaam* แมงคาม. The Mekong giant catfish and Rhinoceros beetles are notably highlighted due to their dramatically decreasing populations: both species are endangered because of the rapid development of the region. It is widely assumed that the building of numerous dams in the Mekong basin negatively affects the well-being of the giant catfish, whereas the Rhinoceros beetles are becoming scarcer every year because of deforestation and the intensification of chemical use in commercial crops. The museum was thus designed to claim that the relations with the two species speak in favor of the local wisdom of a "harmonious relationship" (*khwaam klomkleun*, ความกลมกลืน, *khwaam saamakkhi*, ความสามัคคี) between human populations and their "natural environment" (*singwaetlom*, สิ่งแวดล้อม), as opposed to a more predator-like relationship in the western model of development.

Through the fishing of the biggest and most sought-after fish of the Mekong River (known for its famously unmatched fat meat and its scarcity), one can understand the regional social life. Fishing in itself is quite complicated and requires a certain level of cooperation among villagers to be effective, thus presenting a good opportunity to celebrate the village collectivity. Moreover, the giant catfish also symbolizes the nourishing role of the Mekong River, an idea that is discussed in Yos Santasombat's book, *The River of Life*.

But what about the beetles mentioned earlier that are not even eaten? They cannot be considered utilitarian animals whose force or part of the body would be useful to people. Further, they seem to have no special aesthetic, religious, or ritual value. Neither are the beetles considered pests that pose a nuisance to the peasants. How, then, could they embody an ecological issue or any local predisposition to a sustainable way of life?

Yet the local people emphasize the fact that contrary to the rest of Thailand, they do not eat the beetles but play with them (*Cf.* Fig. 1). In the local idiom, claiming to be respectful of that mere life form is a way to show a higher level of "civilization" (*khwam jaroen*, ความเจริญ). However, that strategy of differentiation is still thin, all the more because games involving insects can be found elsewhere, especially in Asia. In Japan for example, all kind of bugs are enrolled in games (Laurent 1997), notably Japanese rhinoceros beetles (*allomyrina dichotoma*), which are a cousin species of the one in question here (Hoshina and Takada 2012; Takada 2012). But coming back to our *xylotrupes Gideon*, it has to be specified that they are found all over Southeast Asia, in Southern Australia, and in the Solomon Islands. Many kids throughout these regions play with insects, notably beetles, especially rhinoceros beetles which are among the favorite

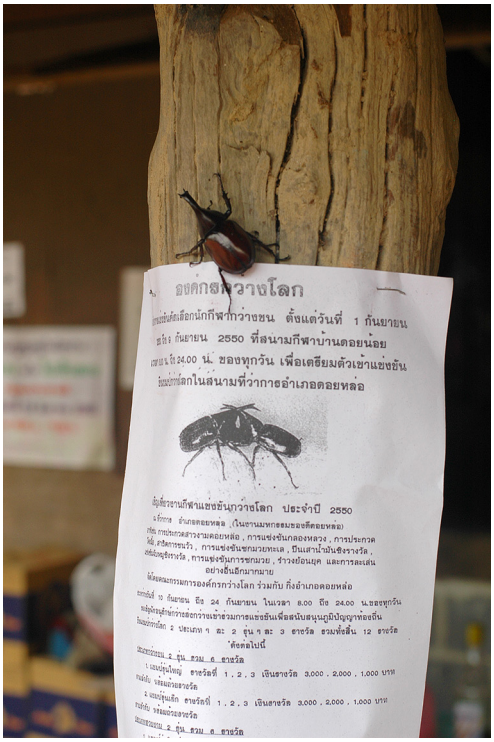

Fig. 1 An Advertisement for a Competition That Met Someone's Interest (Stéphane Rennesson)

bugs alongside stag beetles, for example. However, from the information gathered on the subject, it is only in Northern Thailand that the human–coleoptera relationship has reached such a level of refinement and institutionalization.

The great development of the rhinoceros beetle fighting game could support the claim made by all the players I met in Northern Thailand during my fieldwork—especially Khun Pairat, the chairman of an international association of *kwaang* fighting which he founded himself in the early 1990s—that only "people of Northern Thailand" (*khon müang*) know the "true and deep nature of the rhinoceros beetle" (*thammachaat thae khong kwaang*, ธรรมชาติแท้ของกว่าง). In that regard, the museum gives insights on the life cycle of the animal and the material culture that emerged from the institutionalization of the game. Visitors can thus appreciate the craftsmanship and the imagination of the locals in their designing of equipment meant to breed, take care of, and play with beetles. Yet it is still difficult to frame the real significance of Pairat's assertion—how the idea of life links, ecologically speaking, people's and beetles' own existences. It actually fails to suggest how the numerous competitions of *chon kwaang* (ชนกว่าง) can stir passions among

a fair part of the regional masculine population every year between September and November, which is the span of time during which these horned beetles finally emerge from eight months of growth in the soil—from eggs laid by their mothers, to adults ready to breed when they break out in the open air. It especially seems to come short of explaining how a game can build a bond between human beings and animals like beetles, such as being eligible to advocate a true ecological stake for local people.

As an anthropologist, the main reference in the field of animal fights is the interpretative approach Clifford Geertz (1972) put up to analyze Balinese cockfighting. Following Geertz, the game embodies at least a part of what being a Balinese is. Considering Thailand, it is also worth considering the work of Stanley Tambiah (1969), who committed a famous and comprehensive study on animal symbolism in Thailand. Both represent authentic landmarks to think how animals have a high potential for identification processes, and how they may be used as screen on which to project human, sociocultural issues.

These works did influence the very existence of this study. Yet, since *kwaang* amateurs insist on the intimacy one needs to build with their coleopteron for them to be competitive, it may prove too limitative to consider the animals as embedded in a human game and manipulated as symbols in a cultural context to which they are alien. The lines that follow will hopefully show that it is not so much a matter of animal symbolism as it is a question of what each actor of the game brings with him in the playful device. As such, the argument will build on and contribute to the recent development of multispecies studies that consider that humans are only one living form entangled in a web of communication and meanings (Candea 2010; Despret 2013; Haraway 2008; Helmreich 2009; Kohn 2007; Raffles 2010; van Dooren *et al.* 2016).[1] Following the players themselves, we shall thus be particularly attentive to the central piece of the game: the rhinoceros beetle and the specific communicational challenge they impose to human players. As it has been demonstrated elsewhere, their random behavior is the keystone of the game (Rennesson *et al.* 2011; 2012a; 2012b). By expanding the scope of scrutiny, not only observing technical and conceptual handlings of the *kwaang* during the fight, it will also question the broader meanings of the claim by the players that "they know the deep

1) Lewis Henry Morgan could be regarded as a remote precursor of the multispecies studies that started to flourish from the beginning of the twenty-first century. Strangely enough, it is one of the forefathers of social anthropology who conducted the first comprehensive monography of an animal to prove that every form of animal life shares a common principle of free intelligence. In 1868, Lewis Henry Morgan published *The American Beaver and His Works*. Not only does the Beaver adapt its behavior to its environment, writes Morgan, but it also actually shapes its environment to meet its own needs. The Beaver is ultimately part of the same American community of experience as much as the Iroquois communities that Morgan previously studied.

nature of beetles" with regard to the local cosmology and the ecological disposition of Northern Thais communities.

Undoubtedly such an immersion will force us to think afresh the categories that we are used to calling upon in order to describe and conceptualize the way humans form collectives and engage in their world such as nature, culture, environment, and milieu. What is a good beetle? What is a beetle action? What emergent meanings and virtues can produce the game beyond the immediate interest of both humans and insects? What can be the ecological value of the beetles, since it is not a question about the energy they can represent in the food chain or their participation to human production activities? These are a few questions that we shall try to answer with the amateurs and their beetles.

From Beetles' Fitness to the Fertility of the Land: Rhinoceros Beetles and "Thai Nature's" Co-authorship in Question

Let us start by trying to step into the player's shoes and pragmatically assessing what makes a good beetle. Actually, a kind of thorough ambiguity pervades in the network of *kwaang* fighting, from their collect up to the fights and through endless training and assessment sessions. One can never be sure when beetles are to appear, where, if they will be good at fighting, or if they will be evenly aggressive throughout their three-month career.

The game is notably built on a few putative ethologic characteristics of beetles. First, male specimens are said to be quite mutually aggressive as they would be obsessed with the idea of getting the right to disseminate their genetic factor. Competitions of *chon kwaang* are thus suitably organized everywhere in Northern Thailand each week between September and November, which is the span of time during which these horned beetles finally emerge after eight months of growth in the soil. Second, *kwaang* are thought to be unable to learn and develop new abilities. Considering that the three or four months of adulthood are dedicated to reproduction, each specimen is regarded to have fitness—a specific potential reproductive success sustained by fighting skills.

As mentioned earlier, one of the local names of rhinoceros beetles is *maeng khaam* (litt. grabbing bug). This designation is interesting since it describes the interest people take in the rhinoceros beetles. *Khaam*, "to grab," evokes the skill that this kind of beetles have to clamp one another, thanks to its two horns. When the upper horn is proto-thoracic and cannot move, the cephalic lower one is mobile—it can move up and down and a bit left and right to adjust some kind of wrestling or *jujitsu* holds and projections, much to the enthusiasm of the amateurs. Actually, there is a great sexual

dimorphism and only the male specimens grow horns. Females are also part of the competitions, but as we shall see, more as a stimulation device for males than as fighters. Aficionados will therefore select *kwaang* very carefully as each and every animal does not have the same fighting talents. They are attentive to a lot of physical and behavioral characteristics considered to be significant of their fighting skills but, to put it simply, they will generally keep big males with well-developed horns since these supposedly have an advantage in the reproduction arena. The beetles also have to meet a few requirements concerning the way they fight.

Nothing is more different from a beetle than another beetle. Coleoptera are sorted by size and development in three categories: large ones (called *kwaang song*, กว่างโซ้ง) and the medium ones (*kwaang saeem*, กว่างแซม) are eligible. Small and "flimsy" ones (*kwaang ki*, กว่างกิ) are not kept during collect.[2] When caught, they are either freed immediately or given to children. That way, beetles would not have any physical defects that may jeopardize their chances in the ring, such as a too-thin head, very short legs, one missing leg or claw, one or two short horns, not being straight, having not enough or too much curve, and so on. This paper does not exhaustively list and review all the criteria that amateurs pay attention to. One should acknowledge here, however, that *kwaang* assessment is a serious matter and that it takes time to become a real expert in this area.

We could sum up the whole idea of selection by saying that players are looking for the most fully developed, "perfect" specimen (*sombun*, สมบูรณ์). Players share the certainty that the fitness and thus the fighting skills of the beetles stem primarily from the soil substrate in which they grew up. This notably explains why it gets harder year after year to encounter the insects in question in the village area. The people remember with nostalgia the good old times when a good *kwaang* could be found in the garden under the first rays of sunlight. More recently, though, amateurs observe that beetles encountered in human dwelling areas are usually not very well developed. They blame this on the encroachment on forests, and the increasing quantities of chemicals sprayed on commercial crops, which kill the coleopteron in the egg. It is therefore not surprising that the way to get beetles is to collect them in wild areas. Gleaners have to search for beetles in remote places, notably in regional and national parks where the soil is said to be the most "fertile" (*udom sombun*, อุดมสมบูรณ์). When I was there in 2007, 2009, and 2013, the organizer of the world championship of beetle-fighting even dedicated a few days to collect *kwaang* in Chaiyaphum and Udon Thani Provinces (Northeastern Thailand), where the environment is supposed to be more pristine and conducive for the

2) For the Thai vocabulary about *kwaang*, see: https://zooacademy.wordpress.com/2011/12/22/ชนกว%าง/

Fig. 2 Players at the Morning Market Looking for Their Next Champion (Stéphane Rennesson)

emergence of big, beautiful specimens, which make for aggressive and courageous champions. The idea was to inject in the local market (here in Chiang Mai area) a couple of weeks in advance the beetles they lacked, to hold a competition worthy of its repute (*Cf.* Fig. 2).

The same people used to be part of those who tried to breed beetles as another way to cope with the scarcity of good specimens. Since rhinoceros beetles are more and more difficult to find in Northern Thailand—because of the reduction of their natural habitat, claim the players; or due to the intensification of the use of *kwaang* for the sake of the game, say their critics—some amateurs have tried to develop beetle-farming methods. Drawing on hormonal enhancement techniques of the soil, thanks to more or less natural materials, some influential players have tried to select beetles to produce genuine fierce prizefighters. But the little animal resists all efforts done to try to breed him. As a matter of fact, I am unaware if, after a few years of selection, specimens out of *kwaang* farms could compete with those collected from the wild. If some experiments have led to the production of big and beautiful coleoptera, they have never proved to grant players with a daring specimen that one can find among "forest beetles" (*kwaang paa*, กว่างป่า). At best, there could have been competitions dedicated to farm beetles, but this idea has not been brought into being. Well, not totally at least, since among the couple of "traditional *kwaang* festivals" held each year, they organize a "*kwaang* beauty contest" in conjunction with the fights themselves. So even if the breeders have failed to produce good fighters, they are still very proud to get some really good-looking specimens that can compete with others.

There are two lessons to be learned from these breeding experiences. First, some of them are incidentally documented in the museum of life. The curators seem to nurture the idea that these farming tests demonstrate the Lanna people's mastery of *kwaang*'s life cycle. Obviously this knowledge is in turn considered as proof of the intimacy that inhabitants have developed with the local natural environment, to the point of paying attention to the well-being of insects. The survival of the game, which is presented as an old local tradition, is associated to the survival of the *kwaang*. By highlighting the danger of the intensification of agricultural technique for the insect, the small animal is presented as a kind of sentinel of the quality of the soil as much as of the vivacity of Lanna identity.

In order to fully acknowledge what this means, we have to decenter our thoughts such that we can move away from any ethnocentric truisms. According to Philippe Descola (2013), we have to open our mind to other cosmologies. *Kwaang* amateurs do not separate as clearly socio-cultural fact from biological ones, such as in the case of the modern, Western worldview. Players and their beetles belong to a localized and situated nature, not an objectified one: we speak here about the Thai idea of *thammachaat* (ธรรมชาติ, literally *order of what is*)—a nature that is not mentally constructed in contrast to culture, but to disorder. Nature is a world in itself, where everybody has to find their place so that everything, every phenomenon is in order . . . or not. The construction of Thainess (*khwaam pen thai*, ความเป็นไทย) or other regional identity like Lanna, is thus articulated with a distinctive way of building one's relationship with their own environment, be it cultural, natural, or whatsoever, as already underlined in the specialized literature on Thai Studies.[3] It is a question of a Thai nature and obviously, it emerges from the relations that the Thais nurture with what is around them. Rather than acknowledging "one world, many worldviews," we need to recognize multiple worlds. We should not therefore limit ourselves to "representations," "symbolism," or "belief," but also investigate alternative realities. As such, *kwaang* may be said to contribute to the making of the local identity along with their human mates, beyond what we are prone to distinguish as natural and cultural realms.

The real contrast in the Thai cosmological model is between the civilized center of the *mueang* (เมือง, a term which denotes the idea of human polity) and the peripheral zone where the influence of the king and the Buddhist institution vanishes as we move further away and approach the "wild" (*pa thuean*, ป่าเถื่อน) areas, from where *kwaang* are found, preferably. It could be the reason why an intermediate solution between the very controlled breeding of *kwaang* and their collect in remote areas has not yet met with success.

3) On the Thai notion of *thammachaat*, one may consult Charles Keyes (1987), Philip Stott (1991), and Amare Tegbaru (1997).

I recently came to know of more extensive methods, in which people try to attract males in their garden by placing trees traps, each constituting a pealed sugarcane chunk with a female attached. Also chemical-free, the idea is to make the garden attractive both for reproduction and the laying of eggs in the ground. Instead of trying to control everything, like with the farming method in which the insects are bred in a small enclosure, they are trying to model the ideal natural conditions that will hopefully foster true gladiators for their collection. The results seem more interesting, but have yet to produce high-range champions, and the few experimenters themselves have admitted to buying some additional specimens on the market in order to go through the three-month season.

Generally, the great majority of players rely on the "traditional" collect of wild specimen—still regarded as the most interesting to play with. The beetles thus get their strength from wild areas and untamed territories. Deep forests are, for example, widely regarded as highly potent places, where you may have the opportunity to master the risks (either animals or malevolent spirits) and transform them into personal spiritual power such as *baaramii* (บารมี, prestige, righteous power, virtue, charisma) to be used for political and economic purposes (Jory 2002; Jackson 2009). One can notably think of the tradition in which Buddhist monks wander out in the forests to experiment "the Buddhist Law" (*thammachaat*), and allow themselves to be confronted with their own fears, pains, hunger, and thirst (Tiyavanich 1997). Even if the game of *kwaang* is definitely a question of channeling and mastering raw forces out there, I am not aware that outstanding specimens or even skillful players would be regarded as showing (a high level of) *baaramii*. Yet, players speak of a "king of *kwaang*" (*phayaa kwaang*, พญากว่าง), referring to a single specimen that can be found every year, and which has "magical/supernatural power" (ฤท, rit) that enables it to beat any other beetle. But the question remains: what do the beetles get when they are from wild parts of the country; that which the "king of beetles" best embodies? In this regard, the scientific environmental argument is weakened by the breeding experiments, and this is the second lesson to be drawn. Even without chemical inputs and with best efforts to emulate the composition of pristine forest soils, players admit that these do not always work. Instead, they only produce beetles for beauty contests to celebrate the simplistic idea that the value of a beetle depends on how it looks like. The vast majority of amateurs think it impossible to reproduce the miracle of the life force that stems out of the wild. The difficulties and hazards one has to undertake with beetles are obviously not on the same level as those faced by wandering monks. We thus have to underline what makes the game's very specific features. If it is not a question of *baaramii* building, then how can the vitality of the *kwaang* be transformed and become meaningful for both players and beetles? Obviously, the beetle-fighting game cannot be reduced to the opposition between wilderness and civilization, as with

the forest monks' practices. We thus have to leave behind us the symbolic potential of animals and scale down to a kind of phenomenological cosmology—close enough to the players/beetle interface in order to have a chance to decipher what is at stake in the game. As we shall see, players seem to build on the difficulty to canalize the fighting instinct of the animal, whatever level of fitness it will ultimately demonstrate in the game.

Building an Interspecific Sensible World: The Difficult Art of Circulating Combativeness

A good-looking *kwaang* is a promising beetle, but not mechanically a champion. It is not enough to be from the forest and look good; rather, it takes some know-how to validate (or not) the initial diagnosis and to help one's coleoptera to express all their potentialities. More than anything, a good *kwaang* is an animal that has been well taken care of. If wild specimens are regarded as being the fiercest, a beetle is not ready to go into the ring right out of the forest. Instead, the insects have to be closely looked after for weeks beforehand. First, they have to be nurtured with high intakes of sugarcane on which they dwell, night and day. They are also sometimes given a real glucose dope (sugarcane juice) to boost them when needed—a few minutes before a fight, for example. Second, they have to be well trained, tested in opposition to challengers of various morphotypes: they are endlessly stimulated on a daily basis. Only then is there a chance that among the 30 or 40 insects with whom you spend at least a couple of hours a day, there may be five or six ready-to-clinch gladiators every weekend—a few really outstanding fighters for the entire season.

The question, then, is: what really happens between a player and his beetles since the insects allegedly cannot learn anything? Further, how can we tackle this issue as anthropologists, not ethologists? We have to fight not only with our ethnocentrism, but also with something which is cognitively even more powerful—our predisposition to anthropocentrism: regarding and interpreting the world in terms of human values, human experiences, and human points of view. I try to scrutinize not only what Thai players think they could share with their animals, but also what they truly do share or not. This is what it takes to strive to escape that doomed heritage of the Cartesian dualism (that opposes spirit to matter, humans/animals, etc.) that leads us to see animals as mere reactive machines to stimuli, not masters/owners of their actions.

We need here an analytic tool that will help us emulate the pragmatic stance the players take concerning the beetles, for they are forced to deal with these beings that are far away from us on the phylogenetic tree. Following the German-Estonian biologist

Jakob Von Uexküll (2010), whose work is at the root of biosemiotics (Brentari and Von Uexküll 2015), let us try to understand what can happen between two beings living in very different "subjective worlds" (*Umvelt*). I assume Von Uexküll grants us with the most convenient frame to think about our interspecies device; to raise the question of what the two species can share. As a matter of fact, he remarkably does not speculate on the intelligence of animals, a perspective that always leads one to confirm the qualitative difference between humanity and the rest of animality. Instead, the idea is that every living being has an interiority that is not confined to the limit of its body; it emerges from the interaction with one's environment. Interiorities are thus like built from outside; they go beyond the limits of the organic body and overflow into the environment, as far as one perceives and acts upon. An interiority is made of one's capacity to extract information from the milieu and to project oneself in the latter. Through this feedback loop, every being is an actor of his own world that could best defined as what he is interested in, and what has some meaning for him, to put it simply. This "subjective world" is the reality as it exists for one being, a milieu that is different from the environment, from all the objects within the Euclidian space around (*Umgebung*). It is interesting indeed to note that a similar distinction is made in another cultural context a little bit closer to Thailand. Watsuji Tetsurô (2011), a Japanese philosopher, distinguishes the material environment (*Shizen kankyô*) and the milieu (*Fûdo*) (Couteau 2006). Yet these sensible worlds are not to remain closed in on them. I here make a reading of Von Uexküll that draws more on a pragmatist stance than a semiotic one. He bestows us the descriptive tools to shed light on the very empiric stakes of the interspecies playful encounter. Building on pragmatism as developed by William James and John Dewey, for example, I shall consider experience as the result of an interaction between a living being and its milieu that affects both of them (Debaise 2007, 8). If action conveys significations, it especially shows points of interests. So it is neither a question of pure subjectivity nor objectivity, but rather the idea that a common world can be elaborated during action. How can the interests of human beings and beetles be connected? We shall subsequently outline how and to what extent the respective milieu of human and beetles can meet over a playful device. How can an interspecific coordination of action be possibly established between animals that perceive the world and act upon it in quite a different way? How can we even communicate with them actually? What can we share with them?

Let us look for answers in the *kwaang* fight set-up, which can appear rudimentary at first glance. Yet it is quite obvious that it is actually built on the knowledge that players gathered about beetles over generations. Two male beetles are placed on a "wooden log" (*mai kön*, ไม้คอน) that serves as the combat area. This log has two small holes containing females whose pheromone is expected to excite the two males. Besides their

Fig. 3 The Beetles Are Now Engaging in a Real Balance of Power (Stéphane Rennesson).

presumed aggressiveness linked to their obsession to breed, rhinoceros beetle males are also regarded as highly sensible animals, mostly to vibrations. In fact, the players try to communicate with their beetles, thanks to a "notched stylus" (*mai phan*, ไม้ผั่น) that when properly manipulated can produce vibrations that the insects seem to be interested in. By doing so, the players follow a well-documented ability of vibratory communication among arthropods. Beetles, notably, can produce various kinds of stridulation depending on the different species (by scraping their protothorax against their mesothorax, in the case of the rhinoceros beetle).

Making the most of these local putative ethological assets, players develop strategies to enhance the aggressiveness of their insects, not only during the fight but also throughout a real training process that takes weeks to enable a *kwaang* to walk up the ring. As a result, the drama inherent to these duels attracts the attention of many amateurs and produces an intensive gambling economy (*Cf.* Fig. 3).

The material device utilized for the fights is always the same and there is an oral set of rules that players have to follow in a game. We shall present here a few that may help us understand the difficulty of framing together human and beetle actions, so that human spectators can make sense of what the insects are doing.

First, if the *kwaang* can be stimulated by direct contact with the stylus before the beginning of the match, players are only authorized to roll and tap their stylus on the log once they have released their champions. After a few minutes to warm up before the fight, on the sugarcane and then on the log where players make them smell the presence of the females, the beetles are freed simultaneously. The appropriate technique to pro-

duce influential vibrations involves rolling one's stylus between the thumb and the middle finger. Players cannot stimulate them by direct contact anymore, at least up to the moment when one or two beetles fall off the log and both players need to restart the fight.

Once the beetles are released, players are allowed to turn the log around its longitudinal axis, but only in certain circumstances. The idea is to help one's beetle to find the best position in which to grab its opponent or escape its opponent's grip. When none of the beetles has taken an advantage on the other, both players can then manipulate the log. But when an advantage is recognized, the log can only be turned by the owner of the *kwaang* who is in a position of power.

A fight should go on up to the moment when at least one *kwaang* gives up the fight. If the two beetles withdraw simultaneously, it is a draw; if one of the two withdraws before the other, this signals victory for its opponent. A beetle is said to have lost when it clearly refuses the fight by fleeing its opponent three times in a row.

A fight is also finished when the two beetles have wrestled for 12 rounds. The match then ends up as a draw and all the bets are cancelled. The rounds are not discrete time units. They are called *khaam* (ตาม), grabbing, and represent a unit of action when the two beetles really engage in a physical balance of power. It starts when the beetles grab each other and stops when they separate.

If we look strictly at the rules, they are more or less the same across all competitions, though there are some differences in the ways to end fights. The aforementioned rules are the ones enforced in official competitions, as far as possible, considering the circumstances. It is the case in larger venues, the so-called traditional festivals that are held on few occasions in a season; it is much less obvious in the numerous authorized and non-authorized "*kwaang* casinos" (*bon kwaang*, บ่อนกว่าง) where a large number of players and a small number of logs may cause organizers to hasten their decisions by making the rules simpler to win a fight. For instance it can be decided that a beetle loses if it flees its opponents once, or if it falls off the log. This enables more players to have the opportunity to play, to bet, and for the organizers to collect more registration fees.

Upon closer examination, we can see that there are even more differences that are not specified in the rules themselves. Each rule is actually organically open to interpretation and discussion. What does it mean when you say that a *kwaang* undoubtedly refuses to fight, three times in row, more or less quickly than the other, or that a coleopteron has an advantage on the other? Indeed, the interpretation of the rules and the action of the insects are subject to endless negotiations. The confusion is nurtured up to the point that the empire is one of the principle gamblers. He is in fact responsible (to the owner of the place) for stirring up the gambling activities.

The analysis of this normative corpus sheds light on the ways that different beings

can be brought in the same game and the extent to which they can be said to cooperate or even coordinate their actions, and on what it means to know the true and deep nature of the *kwaang*. The observation of the beetle game shows that it is actually neither a natural nor a pure human balance of power device (Rennesson *et al.* 2011; 2012a). The game cannot be reduced to a pure technical device that would see human players confronting one another through insects. The beetles do not in fact always answer to players' commands faithfully, and it is not a remote-control kind of relationship. Maybe it could have been, but the players themselves have decided to make it a little bit more difficult. Once the beetles have been released, the players are no longer allowed to touch their champions directly, except when the game has been stopped because at least one of the opponents is no longer in a combat position, having either backed away or left the combat area. It means that the players choose to let their beetle free, to loosen the relation of control, and to let their insect go wild. If *kwaang* are quite responsive when directly touched, we can at least say that they seem to do what they want when the players reduce their hazardous influence on the game by rolling their notched stylus on the wooden log. It appears that the notching of the stylus at a distance from the two beetles during the fight is a kind of cooperation between the two players to sustain a kind of minimal stimulation level to prevent the beetles from separating and not acknowledging the presence of the other anymore. By doing so, they are merely sustaining a kind of vibratory field that cannot be really considered as a clear, discrete, and unambiguous signal to one or the other coleopteran to eventually interpret (*Cf.* Fig. 4).

Similarly, we cannot limit ourselves to a natural or "etho-naturalistic" understanding of the process such as males fight each other only for the right to cover the females. *Kwaang* enthusiasts cannot solely bank on the insect's ability to stimulate itself. The rules considering the possibility of stimulating and helping one's beetle and their possible negotiation confirm that the supposed aggressiveness has to be sustained from time to time. Amateurs know that in the wild, most meetings between two beetle males end in either avoidance or a relatively quick fight; in any case, the fight does not last long enough to produce a spectacle that *kwaang* players would consider worthy of that name. Strong in their know-how, players admit that they are never sure that their beetles, even those that displayed their aggressiveness regularly, will be prone to fight on the day of the competition. Beetles are versatile and nobody can be sure that they will not escape the device the next moment. A "mono-specific" set-up that would only involve releasing two males on to a log would not provide the same quality of fun as an "interspecific" set-up in which players pit their skills against one another, as is the present case, stimulating their protégés, and sustaining their combativeness. *Kwaang* enthusiasts have chosen to move away from the configuration found in the wild through a clever cooperative system

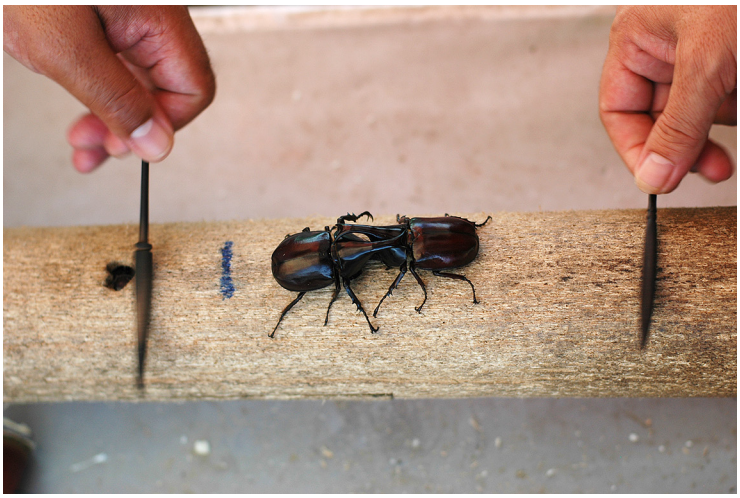

Fig. 4 Both Players Are Rolling Their Stylus to Send Vibrations to Their Beetles (Stéphane Rennesson).

that allows them to extend the fight, which can last as long as 20 or even 30 minutes.

Kwaang's vital force, however one names it, either biological fitness, raw aggressiveness, or masculinity, is definitely difficult to nurture. Players resort to many different tricks to make out of a beetle fight a show for humans. They are facilitating the circulation of meaning in and outside beetles' bodies, as Von Uexküll would say. Human players insert themselves in the subjective words of the insects that finally impose their own way of communicating. Basically, it is the ambiguity of the relation of control that emerges as a primary property of the device that stimulates the interest of amateurs and teases the activity of gamblers (*Cf.* Fig. 5). The energy is thus firmly looped as it is finally circulating between all actors in the game, be they human or insects.

Ontologic Volatility and Play upon Cosmologies: The Emergence of an Ecosystemic Wisdom

Players not only spontaneously resort to anthropomorphism, namely to the attribution of human attributes to their animals, such as calling them their sons, assigning them with aggressiveness, boundless sexual appetite, and so on. Amateurs need also to become a vibratory animal, and accept to enter the perceptive world of beetles. In a way, it could be said that they "become an (other) animal," making this an interesting kind of estrangement process.

Ambiguity pervades indeed. Not only does the control of the game seem distributed

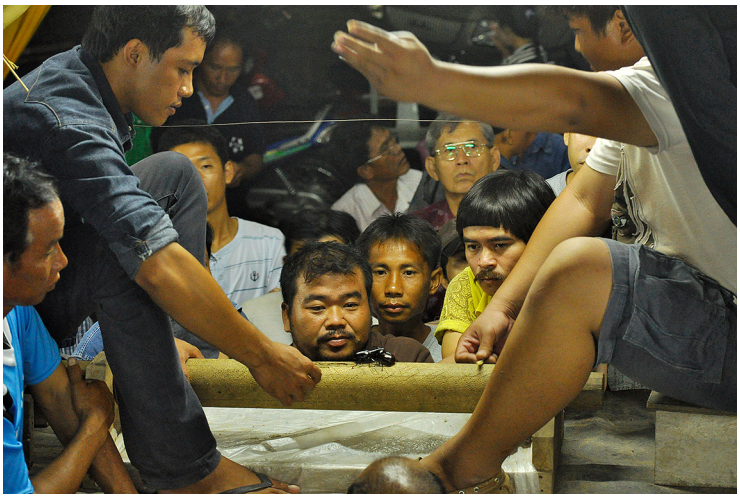

Fig. 5 A Players Calls for a Bet. He Feels Confident as the Fight Is Gaining Momentum (Stéphane Rennesson).

in the whole circuit of communication linking players with their beetles and all the technical apparatus, different ontologies of the *kwaang* do also flourish among players. Interestingly, when it comes to interpreting the results of such fights, the ponderation in between natural characteristics (either genetics and or morphology), psychology, training, player's technicity on the log, and so on, vary a lot from one player to another.

For example, some players attribute victory to animal characteristics for 20 percent; insect brave heart 10 percent; training 40 percent, and player's technicity 30 percent. Others might explain it at 30 percent by animal characteristics; 30 percent insect brave heart; 30 percent training; and 10 percent player's technicity. Behind these different rationales, we find alternative ways of considering beetles' ontology. Some will see them as very sensible animals—a kind of nerves bundle with no central nervous system, and which has to be stimulated and controlled as much as possible. Others at the very other end of the spectrum will not only attribute a brain, but also a will and a heart (*jit jai* จิตใจ), some feelings, moods, and even souls (*khwan* ขวัญ and *winjan* วิญญาณ when it comes to special champions). If the players who view *kwaang* as sensible machines prefer stocky beetles with large horns and try to monitor them as much as possible during the fight, another group of players favors slimmer beetles with long lower horns, and which are supposedly more intelligent than their massive counterparts—this latter group of players also tends not interfere that much once the insects are freed on the log, choosing instead to delegate more control of the match to the beetle.

This is the strength of this game: to enable the cohabitation between different species as well as between various conceptions of continuities and discontinuities between

these species. The device upholds a kind of vast network of analogic correspondence between diverse dimensions: connections, i.e., full analogic links can be done and undone endlessly, and can be tested infinitely between the insects' morphological characteristics, interiority, behaviors, and the results of the fights.

Yet, the final ranking of *kwaang* competitions does not celebrate one beetle over the others or a player over the others, but interspecific couples. The major tournaments are designed as such: the winner is a couple (man + beetle) that raised the highest sum of bets among gamblers. Thus, ultimately the game is oriented toward the greatest confidence players with their champions can inspire to the gamblers. And all players agree on one thing: *kwaang* cannot be tamed, and that a good player builds assurance along with the insects he selected and patiently takes care of on a daily basis. They call it a cohabituation process (*hai koei chin kan*, ให้เคยชินกัน), a reciprocal move where both parties have to learn to mutually acknowledge the other as accurately as possible.

Ultimately, by not choosing to make it a human game through insects or a pure animal game in which human would stay mere spectators, the players build on the radical difference of the worlds in which humans and beetles live. It is not only difficult to know if a beetle is a good fighter, or a better fighter than another; it is also tricky to decide if a *kwaang* is good because of its natural characteristics or because of the intimacy it built with a human player that was able to make the best of its potential. But it is even more fundamentally difficult to know what makes a coleopteron have the upper hand over another—a beetle winning the other. (What is going backward three times in a row for a beetle? When do they engage in a round?) The actions of the beetles are so difficult to frame that the endorsement of a situation is more than always the result of a more or less lengthy negotiation of the interpretation of the fights by the different parties. The game is even regarded by some players as the best school for politics.

When Pairat says that "we Thai know the true and deep nature of the *kwaang*," I see from the close observation of practice a co-production of a culture of negotiation, where continuities and discontinuities between human beings and beetles are being constantly investigated. Both parties accept to be affected by the other and to experience as a consequence a kind of transformation; they are always open to new possibilities and potencies. I assume that this is an attitude that takes us to the very root of how these people think and practise the "harmonious" relations they foster not with but within their environment, as to emulate Tim Ingold (2000). The beetle ultimately imposes its sensory universe while leaving humans the possibility of appending code, meaning, and technique (Rennesson *et al.* 2012a; 2012b).

If we draw on Charles Sanders Peirce's typology of signs (1894) as ways to denote an object, it is not so much that coleoptera are the symbol or the icon of a harmonious

connection built by human populations with their natural environment.[4] Rather, the game itself is more a question of indexicality, of metonymy than of metaphor, and more about what happens in the intimate relationship between human beings and insects. Beetles can act so unpredictably that players are forced in a radical alterity that, in a way, gives credit to their ability to cooperate with "natural forces" which are more than often difficult to interpret. The logic here is thus not linear. Limiting oneself to add one technical action to another leads nowhere and there is no real recipe to become the best *kwaang* player; it even has almost no meaning if we consider how major competitions are won. It is more about some kind of a cybernetic loop where control is evenly distributed, and that is made out different feedback effects from beetle and human behaviors.

One cannot say who controls the game, and this absence of control is the quality of self-organized systems—cybernetic loops that are thought to reduce disorder, to bring down the entropy of the systems.[5] Philippe Descola would surely have spoken of the fragmentation of the interiorities and the physicalities that are to be reordered in ritual context in analogic worldviews (2013).[6] But if I actually do not know if Lanna people as a whole can be considered to be engaging their world with an analogist cosmology (which is a question that goes beyond the scope of this paper), what I witnessed in the beetle-fighting game is not so much about defragmentation than subtly cultivating a stochastic process, a general state of uncertainty. Flexible cosmologies, ontologies, representations, and technical control effects are all emergent features of the game, not its underlying causes.

Admittedly there is something that circulates and has to flow as much as possible. As such, the playful interspecific device works not that very differently from the well-documented rituals of the area, animal sacrifice for *genius loci*, protective spirit of places and gods of the soil for instance, which organize a triangulation between humans, animals, and the invisible realm to secure the benefits of agrarian activities.[7] Yet, building on a

4) Charles Sanders Peirce's typology of signs as ways to denote an object: Icon, index, symbol. This typology classifies every sign according to the category of the sign's way of denoting its object. The icon (also called semblance or likeness) denotes its object by a quality of its own; the index denotes its object by factual connection to its object; and finally, the symbol by a convention or rule for its interpretant (1894).

5) Gregory Bateson (1971) was the first to introduce the concept of cybernetics in social sciences, notably in anthropology.

6) The three others ontologies identified by Descola are animism, totemism, and naturalism, the latter having imposed itself in the modern western world (2013).

7) On this topic, Paul Mus produced a seminal work (1933) which underlined the importance of the earth as a main pool of symbolic resources in the area. Bernard Formoso also stimulatingly highlighted the chthonian gods as intermediaries with nature in Southeast Asian societies, a relation that he incidentally coined then as an ecological theme per se (1996). There are other interesting contributions in that regard (Archaimbault 1991; Tanabe 2017; Sprenger 2005).

more pragmatic stance and on Gregory Bateson's conception of cybernetics (1971; 1979), I advocate that in the case of beetle-fighting, the proliferation of singularities is the very chaotic matrix on which possibilities of common worlds can come to light. No matter where the interiorities are or are not (or we risk to give in to old good dualism again), the whole system can be regarded as a mental process; a "Mind" if I follow Bateson's terminology of an "ecology of Mind" (1971; 1979).

What circulates are neither symbols nor a physical energy—a force that would be measurable. It's neither about semiotics and cosmology, nor about Newtonian mechanics, about conservation of energy as widely regarded in the field of ethology or ecological anthropology (Rappaport 1968). Of course, as it has been said, players do resort to the rationale of raw energy that stems primarily from the soil and wild areas, which can then be called upon in *kwaang* as a sexual energy, biological fitness, fertility, physical force, and so on, and finally as "social, prestige" (*kiat*, เกียรติ) for players. But they admit at the same time that what happens in the soil during the insects' growth is mysterious, that the beetles have emotions and feelings, that they can escape the device at any moment without notice, and, even more significantly, that the entire game is a question of weak links of communication. Playing with *kwaang* is therefore dealing with a qualitative force more than anything else. It means taking on the idea that living beings are all linked by a circulation of differences/information that gives birth to forms and patterns that are snatched away from entropy, as Bateson (1971; 1979) would have stated. Living systems surely need energy, but the energy alone cannot explain the structures (morphology and behavior) of the formers.

The proposal here may look similar to those of the circulation of a life force typical of the "hierarchical animism" advocated by Kaj Århem (2016), or in the animistic characteristics of potent places of Southeast Asia highlighted by Anne Guillou (2017). Nevertheless, it was shown that, in the case of rhinoceros beetles game, it is primarily a question of potentialities of connections between disparate elements. It is not essentially an issue about potency or agentivity understood as an animistic calibration of objects, places, or non-human beings in a symmetric intersubjective matrix with humans. Rather, the game develops as what William James (2003) calls a "pure experience," a kind of pre-intellectual experience where subjects and objects are not the premises that make experience possible. It is instead the patient co-building of a common plan of experience, an area that lacks differentiation in which new kinds of relations and knowledge can come to light. Subjects show up with alternative realities only when it comes to linguistics, when the player's verbal language kicks off and to which beetles are deaf. However, the game fundamentally has to sustain a field of pure potentialities. Beetles can thus be regarded as one of the conductive materials of a mental process emulating

the immediate flow of life. The circular logic, on which the beetle-fighting game builds on, shapes what could be coined an "egalitarian analogism" in which the main injunction is to tend towards empathy and communion on the one side, to suspend conscious goals and the will to control.

Interestingly enough, it is the figure of the "king of *kwaang*" (*phayaa kwaang*, พญากว่าง) which all players wish to find one year or another, that best exemplifies the methodological advantage to consider the game as a kind of flow economy. The "king of *kwaang*" is the only one that would not need any help from its owner, easily beating any opponents thanks to its "magical/supernatural" power (ฤทธิ, rit). When you do not meet him, you have to resort to many never-ending experiments to track, channel, and nurture the flow of life. Could it be the basis of an original proposal in "cosmopolitics," in the sense Isabelle Stengers conceives it (2005)—the fragile cooperation between two very different species keeping both politics and cosmos open to new participants potentially bringing in their distinctive characteristics? We do not know if Lanna people know the true nature of *kwaang*, but it seems like some of them accept that human kind does not have a control over an objectified nature and that fostering uncertainty in relationships can prove to be virtuous. Fascinatingly, they have selected and chosen a species with which they share a certain tendency for playfulness and reflect upon what it takes to make common worlds with others.

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