Abstract: Using (linguistic, socio-cultural) data collected among the Turkana of Kenya, I investigate specific configurations of actions found in sacrifices. I argue that Turkana sacrifice has specific cognitive effects and that those can be explained in terms of the activation of specific cognitive mechanisms. Turkana sacrifice elicits assumptions about living things and artifacts. It does that in a particular way: Living kinds are used as tools and artifacts, as if endowed with an essence. The systematic combination of such manipulations with ordinary action scripts, reoriented to build ritual sequences, and the display of social orders has important effects for participants’ cognition.

1. Introduction

Turkana sacrificial praxis has specific cognitive and emotional effects. It is attention-demanding and, in some respect, compelling. I will try to show that those effects can be explained in terms of the activation of specific cognitive mechanisms. Specifically, I will argue that the Turkana sacrifice activates specific assumptions about the difference between living things and

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1 The Paranilote Turkana inhabit northwestern Kenya. They are primarily herdsman but practice some agriculture. Turkana engage in warfare against surrounding ethnic groups. The population is divided into territorial sections. Turkana society is also split into two groups, generations, that engender each other: Leopards give birth to Mountains and reciprocally. Women get aligned with their husband’s generation. The masculine community is split into age-sets. Men go through a collective initiation. The population is yet divided into clans and marriage is exogamous (brides belonging to either maternal or paternal clans are excluded). Unions are polygamous.
artifacts, and give them a twist. Living kinds are used as tools henceforth acquiring a function, an important feature of our understanding of artifacts. And artifacts are manipulated as if endowed with a powerful inherent quality, or essence, a central feature of our understanding of living kinds. The particular activation of those specialized information-processing devices and its probable effect on the cognitive system (attention-grabbing, highly recallable) may explain why sacrificial endeavors of the sorts alluded to above is well spread.

Here I describe actual ritual behaviors that took place during a lengthy Turkana sacrificial ceremony. The ceremony is particularly interesting because a great number of features social scientists habitually attach to various types of sacrifices are well represented in it. The display of special social arrangements is central throughout the ritual. Animals are offered for killing by segments of the society for the benefit of other segments. Victims and their body parts are used in ‘technical’ acts (i.e. they are used to do or build specific things). Techniques of killing are intricate. The act of killing is surrounded by precautionary and prescriptive rules. The sacrifice is conceived as affording protection against dangers. It is viewed as a collective endeavor in which everyone should imperatively be involved in order for it to be effective. And no defection is allowed. In brief, the ceremony is a sort of epitome or ideal type of sacrifice.

After introducing findings about the Living Kind/Artifact dichotomy constraining parts of our knowledge of the world, I then show how it might be relevant for our understanding of what takes place in the chosen sacrificial ceremony.

I proceed with the linguistic study of a particular sacrificial concept. This analysis is intended to bring evidence that some cognitive effect of Turkana sacrificial praxis could indeed be explain in terms of the combined activation of two specific cognitive systems in charge of processing information about living kind and artifact respectively.

I then analyze another frequent feature of sacrifice: Many action sequences are built through reorienting and rearranging more commonly known action scripts. We’ll see that this specific

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2 By sacrifice I mean any animal killing in ritual context. The distinction between sacrifice, ritual slaughter and non-sacrificial ritual killing is irrelevant for my endeavor (Firth 1963; Ruel 1990). I’m not concerned about delineating categories of ritual killing but about investigating specific action configurations, found in various cultures, in which animals are ritually put to death.
ritual “device” might well enhance the effect of manipulations in which living kinds are used as tools and artifacts are used as if endowed with a particular essence.

Finally I introduce a last ritual “device” found in many sacrificial procedures: the preoccupation about ordering society. We’ll understand that, in Turkana sacrificial praxis, the association of status displays with the special manipulations I talked about above is likely to have important effects for the participants’ cognition.

2. The ekimomwar

2.1. Introduction

In the Turkana cultural universe, sacrificial rituals are enacted in the most diverse situations: to name a few, in case of illness, combat wound, infortune, looming danger, witchcraft, political talks, thanksgiving, sanctioning ceremonies (wedding, end of mourning period, return from raid etc.). One should distinguish between sacrificial occasions in which different kinds of misfortune are fought against and other rituals.

For the misfortune group, a soothsayer (emuron) usually interprets the situation as requiring a sacrifice. The throwing of sandals, the burning of tobacco or the reading of an animal’s entrails can help to provide that interpretation. For the divination by the sandals, the soothsayer holds the sandals sole against sole. He repeatedly beats their side on the ground uttering a question to which he wants a (mainly) yes-or-no answer. At the last beat, the soothsayer thrusts the sandals on the ground. The configuration formed by the sandals is interpreted as a positive or a negative answer. The procedure is repeated and the diagnostic progressively refined. When burning tobacco, the soothsayer interprets the shape of the flames. A clean blue flame is a good index. A smoldering fire is not. When ‘deciphering’ entrails, imperfections, nodules and size and color of the blood vessels are used to appraise the situation at hand. Entrails provide information on the land, the animal owner’s household, the residential group, the camp, the territorial section, the past or coming raids etc.
The soothsayer can also decide to launch a sacrificial procedure on witnessing obvious clues (people are sick; cattle is dying). Or he might also dream of it. What is striking in the process is the fact that a great number of situations identified as affording danger are categorized as belonging to a limited number of classes of sacrificial situations with often general attribution of the disorder’s cause to an invading entity, to forgetfulness on the side of the afflicted, or to undue exposure to enemy. A number of ritual procedures match those ‘sacrificial situations’, including the technique of killing and the color of the sacrificial animals. For instance, the killing can be done by smothering (holding the animal’s snout tight, sitting on its chest) when someone is diagnosed as the object of damaging gossip; by plunging a knife in between the collarbones, when someone needs to fend off evil aggressions; or by sagittally cutting in two the body of the animal, when grave dangers loom. I’ll come back to the choice of color later.

In the following section I describe a sacrificial ceremony commanded by a soothsayer. The ceremony belongs to a group of procedures that are enacted only when some kind of grave danger looms. Those rituals are called ariwɔ. In ariwɔ, animals are typically put to death in a very specific way: sagittally cut in two at the level of the diaphragm. The victims may be dogs, small or big livestock depending on soothsayer’s prescription and on the purpose of the ritual. Aриwɔ can be executed for people’s wellbeing or for debilitating enemies.

In both types of sacrifice, at some point in the procedure people should tread in the middle of the victim’s body parts placed on each side of a penetrating route. This can be a natural passageway used for traveling (a dell, a plateau, a canyon in escarpments) and through which, most certainly, the enemy will pass or a route in a ritual procedure. In a ritual performed for the wellbeing of friends, people are told that at some point in the ritual process they have to pass in-between the body parts. At the contrary, enemies should be unaware that they pass in the ritual contraption. In the situation of an intended positive result, by passing in-between the body parts, ritual agents get rid of or separate themselves from looming dangers. In the other case when a negative result is intended, by moving through the device, enemies over-expose themselves to the

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3 That term is derived from the stem -ri, of an action verb, aki-ri, (Ohta 1989; Barrett 1990) that can take on a range of meanings: ‘to yank’ (Barrett 1990), ‘to pull with effort’ or ‘to introduce with effort’, ‘to incline’ (Barrett 1990), ‘to divert danger with sacrifice’ (Barrett 1990) or to prevent evil thing (Ohta 1989).
enemy fire, loose their stamina, strength and ability to walk long distance, and lessen their eyesight (i.e. they're not able to properly see their enemy anymore).

The ritual described here took place in January 1998 among the Ngilukumong, a Northern Turkana territorial section. It was an instance of ekimomwar. The term used to designate the sacrificial ritual as a whole specifically denotes a special dance (dancers, in a pack, slightly hunched, beat their feet flat on the ground) that is often used as introductory séance for different ceremonies or other dances. That introductory phase is viewed as propitiatory.

The sacrificial ceremony started at dusk one night and ended four days later at sunset. According to Erot, the soothsayer who decided to launch the ritual, a danger threatened the people of the area. Erot had uncovered bad omens concerning the new grazing grounds where the camp was about to move. The peril seemed to be an amalgam of sanitary risk, susceptibility to evil endeavors, and war menace. Activities must be interrupted and migration put off until after the execution of the ritual. Furthermore the whole Ngilukumong territorial section, women, man, warriors, adolescents and children, must all confront the risk together.

2.2. The first four days

The first session is a nocturnal rehearsal. Nakito (Erot’s brother⁴) with his sister starts preparing a ritual space on the dance floor. At its center, they place two clay pots a few feet apart following a North-South axis. The pots are filled with water.

Under Nakito’s command, the participants start dancing. For two hours, they beat their feet on the ground while singing at full voice and turning counter-clockwise around the clay pots. At regular interval, Nakito interrupts the dance. This is the signal waited by everyone to throw him/herself on his/her knee in complete silence. After a few seconds, the dancers stand again and resume the rotations around the pots.

At the end of the session, the dancers, in a packed column, progressively widen the round in a centrifuge movement. The pack stops west of the clay pots and gathers in a semi-circle facing East. Nakito exhorts the audience to feel better and, thrusting his arms in saccades above his

⁴ Erot will be absent during the ritual and will reappear right at its completion. He has put in charge his older brother and sister.
head, sends back the ‘disease’ toward the mountains of the West (where reside enemies). In a West-East movement, the dancers cross the dance floor and pass between the pots. Nakito splashes them one by one at their passage with water taken from the pots, telling them to become cool. Everyone returns home to rest until the next day.

For the following two days there will be ampliations and repetitions of this sequence as well as further complications but the ritual scripts are not fundamentally modified. After rehearsal of the same sequences of actions this time for shorter period, the fourth and fifth days see the introduction of radically different scripts.

The fourth day doesn’t involve any sacrifice. The focus of the day is on the treatment and consumption of milk and its derived substances (butter, cream) according to very specific rules. As such, that specific phase, although part and parcel of the ritual logic and of the emotional buildup effect, doesn’t concern us here.

2.3. The fifth day

At dawn, the dance resumes and lasts until the sacrificial ox is brought to the scene. Accompanied by two other oxen and followed by the owner’s family, some elders and a bunch of men, the ox is made to round three times counter-clockwise the cluster of dancers. The dance is then interrupted.

Members of the Ngigolereto, the clan to which the ox’s owner belongs, are in charge of bringing and controlling the sacrificial animal. In the meantime, the rest of the participants round three times around the pots and gather in semicircle to the West still facing East. People are abundantly splashed. They spent the next hour setting the stage for the last rite. To the East of the ritual field, a fork-trunked acacia is cleaned of its surrounding bushes - it will be used as a gate in the last ritual scene - while Nakito splits the assembly in groups of clans.

The ox is brought to the acacia, made to lie down right next on the Western side of the tree and firmly tied and maintained on the ground. The ‘owners’ of the ox, the Ngigolereto people, approach the sacrificial ox one by one and rub their bodies from forehead to groin on the animal’s

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5 For a thorough description see (Lienard, 2003).
forehead in a gentle upward thrust⁶. After that sequence, the Ngigolereto clan gathers in the shadow of the acacia near the ox.

This particular sequence is called *akijuk emong*, ‘to smear the ox’. The meaning of *akijuk emong* may be understood if we observe the behavior it describes. The zones of the body rubbed on the animal’s head are the ones usually smeared with chyme or colored clay, or sprayed with water and stroked by elders when they dispense ritual blessings⁷. One starts from the head, goes down to the chest and stomach and then often proceeds to the front part of the legs and the upper part of the feet. One may do that while intermittently spraying water, kept in one’s mouth, on the body of the person being blessed. When using chyme, people dip both hands in the pile of pre-digested material, then mark the head and trace two large bands on the body. So in the *ekimomwar* ritual we are considering here the people who own the ox must move their bodies in a way that would produce the same types of contact as in ‘ordinary’ unction. The ox seems to be used in the same way as a tool or a substance that has to be put in contact with people.

The ox’s sacrificator should meet several criteria. He should be a left-handed twin from the clan that owns the ox. The rule wasn’t entirely followed in this case, as the twin selected wasn’t left-handed. But he was told to guide the spear with his left hand when he sliced the ox’s skin. The animal is cut open alive at the level of the sternum. Part of the stomach (the rumen) is taken out in order to collect the chyme. The animal is finally put to death with two blows of an ax sectioning the spine. The two halves of the body are spread apart and placed, head and forelimbs to the North and posterior limbs to the South, on either side of an imaginary West-East route bisecting the ritual field and passing through the ‘acacia gate’. Between the two halves, Nakito spills chyme and plugs in it the axe used for finishing the ox.

A second animal, a young billy-goat, is brought by its owner, a member of the *Ngisalika lu ecucukwa* clan. It is suspended in the branches of the acacia at chest level, head to the North. The sacrificator kills it by sectioning the carotid arteries with the spear that was used for cutting up the ox. Now people are told to go through the ritual “device” made up of the two halves of the ox’s

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⁶ Babies also have to go through the procedure. They are handled by their mothers, pressed against the ox’s forehead and slowly slid in an upward motion.

⁷ *Akijuk ngikujit*, to smear chyme and *akijuk emunyen*, to smear ocher/clay.
body spread apart on each side of the imaginary path, the pile of chyme set at equidistance of the body halves with the axe plugged in it, the fork-trunked acacia and the suspended goat. The owners of the ox are first to walk through, then the owners of the goat followed in good order by all other clans present. In each clan, elders and men walk first, followed by adolescent girls and women in age of marriage, then the mothers with children and finally the young unmarried men. Nakito and his helpers make sure that everyone walking through the ox’s body steps in the chyme and on the axe before proceeding to walk underneath the slaughtered billy-goat suspended in the acacia.

After their passage, the participants, some raising arms as if in supplication, walk towards the East and wait until everybody has gone through the passage. Then all return together to the dance floor to be splashed with water one last time (clan after clan) before regaining the East side of the ritual area beyond the acacia. The elders exhort their respective clan members to keep their word, to fight disease, as well as wish them a long life, many offspring etc.

Nakito ends the sacrificial ritual enunciating the prohibitions that are to be followed for a time. Nobody is allowed to cut down trees on the ritual site. No livestock can be exchanged or given away until the end of the lunar month. No big game hunting should take place. The cession of any animal could indeed harm the protection gained from the sacrificial ritual. And the killing of wild animals that came down from the Kidepo Valley in Uganda to use the fertile grazing land could have some adverse effect for the fertility of the area. After Nakito’s exhortations, the participants as a whole, arms raised, run frantically toward the East yelling repeatedly: Akuj, kingarakinai sua! (‘Sky, help us!’) People gather one more time and finally disband.

The ceremony ends with the elders begging one of them another ox to sacrifice. That ox is called the amuro, the hind leg. The animal is ordinarily sacrificed (i.e. speared in the heart by the

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8 Akisec et al., ‘to spoil the rule’. The same verb is used in another expression: akisec emunyen, ‘to spoil the clay’. Smearing of clay on the body is often prescribed by soothsayer to fight infortune. The two locutions are often used as equivalents.

9 As Nakito puts it, wild animals have no owner so only Akuj/Sky provides (water, grass) for them. Killing them would cause the land to dry up like previously happened. If actually this conjunction of events happened or not before had no relevance for the person to whom I asked if Nakito had a specific drought in mind. Ekimomwar took place before and severe droughts are common. No one would question the conclusion that a link between ritual rule violation and drought exists. Nakito’s assertion is not about reasonable knowledge but about common knowledge no one bothers to question.
elders), roasted and consumed by the male crowd. That new sacrifice is intended as a closure (hence its designation as the “hind leg”). It is usually the case that a sacrificial meat feast should follow an arīwo. Though, it doesn’t have to immediately follow the first sacrificial ceremony, as is the case here. At some point in the procedure, one at a time, the elders come to the butchering place, smear themselves with chyme and run toward the East mimicking war charges while yelling war cries or their warrior or ox name. The amuro ox is then cut into pieces and distributed among the elders (who, for some, give to younger men). The skin of the amuro is cut into strips and given to the elders for them to make sandals.

3. Biological Kinds vs. Artifacts

3.1. The Living Kind/Artifact dichotomy

In order to evaluate the potential cognitive effects of those ritual manipulations, I must introduce findings and hypotheses bearing on human cognition.

Early in infancy, children show principled variations in the way they behave when interacting either with conspecifics, animals, or objects (Hirschfeld & Gelman 1994). This indeed suggests that different psychological mechanisms are designed for specific classes of stimuli (Wellman & Gelman 1992; Hirschfeld & Gelman 1994; Diesendruck 2003). So human expertise about the social and natural environment would be best understood as made of different domains of competence (Boyer & Barrett 2005). Important qualitative conceptual changes in child’s cognitive development, for instance, seem to occur in different ways and at different moments in distinct domains of cognition (Walker 1999; Keil 1986 & 1989).

In later development, the identification of objects as artifacts or living kinds leads to organize them in very different ways: elaborate hierarchical taxonomies for biological kinds, juxtaposition of kind-concepts for artifacts (Atran 1990). In people’s spontaneous reasoning, it seems that living kinds with outwardly similar properties may naturally share an essential quality. Artifacts by contrast either fulfill a function or don’t and we categorize and conceptualize them as members
of a functional class. Indeed evidence suggests that our cognition might, in some decisive aspects, be thoroughly domain-specific.

Specific domains include causal reasoning frameworks or principles that inform intuitions, beliefs and expectations about specific domains of reality (Hirschfeld & Gelman 1994; Diesendruck 2003; Boyer & Barrett 2005). People’s reasoning about, say, persons and animals is different from their reasoning about objects or inanimate entities (Diesendruck 2003; Medin & Atran 2004). Indeed knowing (or perceiving signaling cues) that something is an animal or an artifact leads to a shift in the properties the agent attends to (Wellman & Gelman 1992, Gelman & Opfer 2002). Whether it is a person, an animal or an artifact one considers, different types of inference are recruited and applied to the particular object. It can be primarily envisioned either as a receptacle of biological processes (growing, dying, sleeping, feeding... object), as a source of agency (object endowed with intentional states), as a source of mechanical inferences (object with physical properties), or as a source of social interactions (agent as social object).

An important manifestation of living-kind cognition is a strong disposition to infer an underlying and enduring ‘inner’ causal essence – shared by members of a category – that is uniquely responsible for the typical appearance and behavior of the living kind (Atran 1990 & 1993; Diesendruck 2003; Medin & Atran 2004, Boyer & Barrett 2005). Living kinds are thus clearly construed as essential objects.

It seems to be quite different for the artifacts for which, as stated above, overall, what counts is the function ascribed by agents. An important developmental twist in the artifact function knowledge occurs though. Before the age of seven, the child’s concept of artifact function is defined by any goal a user might have. After that, function is defined by artifact’s typical or intended use (Defeyter & German 2003; German & Barrett 2005). When it comes to understanding man-made objects, older children and adults adopt a design stance. The artifact is systematically represented in terms of a core design property, consequence of an intended function (Sloman & Malt 2003, Gelman 2003). Contrary to what happens with natural kinds, older children and adults trace causes of spoons, combs, or clothes to creator’s intentions.
We might wonder if these cognitive processes apply in the same way across human cultures. It seems that people across cultures basically tend to think about living kinds in the same ways, different from the ways they think about tools and other inanimate objects (Medin & Atran 2004). Although there seems to have some effect of culture and experience on the way people reason and categorize living kinds, culture and experience don’t seem to override the deep effects of the specialized mechanisms (Medin & Atran 2004). For instance, studies of (mainly) urbanized populations show that specialized living-kind cognition is resilient even though those populations have an impoverished experience of nature (Medin & Atran 2004). On the contrary, I collected my ethnographic data among the Turkana, a people deeply depending upon its natural environment for its survival, thus with an enriched experience of nature. If people who have a distant experience of nature still show strong effects of specialized mechanisms on the way they reason about living beings, then I believe we are entitled to postulate that similar processes constrain Turkana reasoning about the “living world”. “Tool cognition” could be a litigious case. Indeed our Occidental complex material culture is clearly apart from the rather simple material culture we find in use among Turkana. But again, the urbanized populations of the Occidental world are the peculiar ones, not the Turkana. That is, if we take into account our evolutionary past, Turkana material culture and tool use is clearly closer to what existed in human ancestral past. New challenge to our cognition came with the advent of complex industrial processes. Furthermore we do have also a somewhat impoverished experience of tools as we have access to a lot of processed objects that we don’t need to manufacture ourselves anymore. So if we still find strong effect of specialized mechanisms on the reasoning of Occidental people about tools, in societies where maybe the relation to tools has been dramatically change in some important respects, we might again be entitled to think that similar processes constrain Turkana in their grasping of artifacts/tools.

3.2 Property transfer and counterintuitive concept

In the ritual we consider here, it seems that both the ox and the goat are manipulated as artifacts. The animals are used to build the last ritual “device” (the ‘gate to the East’). Both animals are kept alive while being positioned at their respective location. Although it would have
been easier to kill the animals before handling them; that is not what happens. The live animal’s arduous manipulation and intricate placement seem to be an integral part of the procedure. Indeed if the manipulations weren’t important and victims were only necessary for their parts, there would have been no necessity to keep them alive until after their proper placement.

In the literature, one finds many examples of intricacy and complication (as integral parts of rituals) in the way the sacrificial animal is killed: ‘Gently’ smothered; slowly hacked to death in a gory display, killed violently without noise, suffocated while being tied to an immersed weight etc. (Berglund, 1976; Hoskins, 1993; Thornton, 1982). Although complex manipulations of live animals might not be necessary or universal traits of sacrificial ritual, those types of procedure are found in numerous sorts of ceremonies: From the application of live animals on an ailing person’s body in order to gather information about the patient’s health, information to be ‘uncovered’ in the corpse of the animal, to the demarcation of a space by promenading or carrying around some animal to be sacrificed.

The prevalence of such procedures could plausibly be explained by the fact that those manipulations elicit strong cognitive reactions by tapping, in a particular way, into the deeply ingrained living being/artifact dichotomy. It doesn’t mean we should find those manipulations in every sacrificial ritual though but that when thought up, those behaviors have a better chance of being adopted and reenacted, more so than other less attention-grabbing behaviors. They might be graced by a cognitive advantage, so to speak.

In our ceremony, the ritual strenuous manipulations are particularly attention grabbing inasmuch as they must strongly elicit in agents’ mind counterintuitive conceptual material. As a first approximation, I might say that those behaviors (either enacted or observed) certainly trigger thoughts about living beings acquiring a quality that is central to the representation of artifacts/tools. As soon as living animals are manipulated thing-like, they take on a functional dimension that somehow characterizes them from that moment on. In that sense, the scene in which the Ngigoleroto people rub the ox with their body (akijuk emong) has a strong cognitive effect. Conversely, once the animals are killed, it seems that, as ostensive behaviors lead participants to think, the sacrificial artifacts have acquired some kind of essential quality.
Participants must be put in contact with the chyme, pass in-between the ox’s body parts and underneath the goat’s almost intact carcass. Thanks to those behaviors, regardless of any additional exegesis, participants should have a hard time not to foster thoughts about the instrumental efficacy of those special body parts and substances and not to conclude that the purported efficacy is borne out of the ‘manufacturing’ process (i.e. the sacrificing). Indeed only those parts and substances are efficient and not the ones of any animal (available as frequent non-ritual killings occur).

In this ritual, then, people are invited to ascribe to sacrificial objects specific properties that are not part of their ordinary attributions: Intended functions to animals and essence to artifacts respectively. These (cross-) ascriptions are enacted and implied by behavior during the ritual rather than the result of explicit exegesis. Indeed, little information is given other than instructions to organize actions and to build the ritual “device”.

A great deal of the effect of the “paradoxal” sequences for the participant is then better understood as stemming out of the enacted unordinary behaviors’ conspicuousness. As we’ve now understood, animals are blatantly used as tools and artifacts and substances are manipulated as if endowed with some kind of inherent power. Those characteristics conspicuously ascribed to the ritual victims and artifacts must trigger the combined activation of the two distinct specialized cognitive mechanisms we’ve talked about.

If indeed those ascriptions take place, we may wonder about their cognitive-emotional effects. How can we appraise those? If mutually exclusive inferential mechanisms are applied somewhat automatically (once specific cues are detected) to different classes of object, the symbolic transfer from Biological Kind to Artifact must produce a change in the way the object is grasped. M. Bloch would argue that the coordination of the Biological Kind and Artifact domains could imply a reorganization of general cognitive-patterns process (Bloch 1993). This in turn should have important consequence on later apprehension of living and non-living objects. Bloch hypothesizes that a great deal of cognitive development could well be spent in linking up domains of knowledge (Bloch 1993). Transfers from Biological Kind to Artifact occur in many ordinary human activities. Cooking is a good example of that. Living things are process in various ways (butchering, boiling)
to become food. It might be that indeed in learning how to combine those domains (in the context of cooking) we get to reorganize pre-existing knowledge and schemas. But that is not the problem I’ve chosen to tackle here.

More interesting for our concerns, though, is what plausibly happens at transitional moments when the thing-like animals or the vitally empowered artifacts substances are instantiated. Those are moments in which, through ritual manipulations, victims acquire a function or conversely an essence is passed on to artifacts. In those moments, the automatic concurrent activations of inferential mechanisms, due to the detection of two types of cues not easily, ordinarily and naturally associated, must produce some kind of cognitive “puzzle”. That is, if both inferential mechanisms are active and they both have different implications and principles for distinct type of information, then inevitably some of those implication and principles will end up being incompatible. This must pose a challenge to the cognitive system.

Naturally, people do get used to such combinations of opposite qualities if they witness rituals repeatedly. However, habituation wouldn’t eliminate the effects we consider here, although it would diminish some of the manipulations’ emotional edge.

4. A ritual purpose

4.1. Basic plural form and meaning

It may seem that we are positing a combination of two different systems. In fact the linguistic evidence itself shows that it is exactly what is taking place.

Among the Turkana, the sacrificial victim – depending on the ritual procedure either an ox, a camel, a billy-goat, or a ram – once chosen, are no longer designated by their class name but most frequently as ajulot, literally the ‘body hair’

Other specific terms are used. Awomad, for instance, denotes a goat sacrificed at a ritual of reinsertion for a warrior who killed an enemy. In that sacrifice, a strip of leather from the right flank of the goat is cut into pieces (ngawomai) that are tied around the warrior’s body joints.
The meaning and the lexical characteristics of the term *ajulot* need clarification if we are to fully understand its potential cognitive effects. In *Ngaturkana*, the Turkana language, nouns denoting countable entities that normally exist in unspecified numbers or in pairs have a plural as their basic form (Dimmendaal, 1983: 227). The singular of those terms is derived by the suppression of the plural marker and adjunction of an individualizing singulative marker, specific to that conceptual category (Dimmendaal, 1983: 227). The suffixes {-it`} and {-at`} or their allomorphs are indices of this singular’s type (Dimmendaal, 1983: 227). So, take for instance words used to denote specific body parts.

<table>
<thead>
<tr>
<th>Basic Plural Form</th>
<th>Singular</th>
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<tbody>
<tr>
<td>Ears</td>
<td><em>ngaki</em></td>
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<td>Collarbones</td>
<td><em>ngilagam</em></td>
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<td>Irises</td>
<td><em>ngicop</em></td>
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<td>Testicles</td>
<td><em>ngitou</em></td>
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<tr>
<td>Hair</td>
<td><em>ngitim</em></td>
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<tr>
<td>Intestines</td>
<td><em>ngamaliteny</em></td>
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Note that not all pairs of body parts follow the rule.

<table>
<thead>
<tr>
<th>Regular Plural</th>
<th>Singular</th>
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<tbody>
<tr>
<td>Hands</td>
<td><em>ngakan</em></td>
</tr>
<tr>
<td>Legs</td>
<td><em>ngakejen</em></td>
</tr>
<tr>
<td>Eyes</td>
<td><em>ngakonyen</em></td>
</tr>
</tbody>
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11 Mass or abstract nouns are either intrinsically singular or inherently plural and have masculine gender or feminine gender prefix (Dimmendaal, 1983:211).
The basic plural form in the case of body part denotation signals a type of strong unity: Body parts that cannot be moved independently, have the same aspect, and/or are part of a functional or conceptual unity.

Note again:

<table>
<thead>
<tr>
<th>Regular Plural</th>
<th>Singular</th>
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<tbody>
<tr>
<td>Breasts</td>
<td>ngisikin</td>
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<table>
<thead>
<tr>
<th>Basic Plural Form</th>
<th>Singular</th>
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<tbody>
<tr>
<td>Nipples</td>
<td>ngitupan</td>
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We also find the special grammatical form in use for terms denoting plant and animal concepts.

<table>
<thead>
<tr>
<th>Basic Plural Form</th>
<th>Singular</th>
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</thead>
<tbody>
<tr>
<td>Grass</td>
<td>nginya</td>
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<td>Flowers</td>
<td>ngatur</td>
</tr>
<tr>
<td>Seeds</td>
<td>ngicok</td>
</tr>
<tr>
<td>Wild animals</td>
<td>ngitiang</td>
</tr>
<tr>
<td>Maggots</td>
<td>ngikur</td>
</tr>
</tbody>
</table>

Some terms denoting specific objects, substance or more abstract concepts also belong to that grammatical conceptual group.

| Words, news | ngakiro | akiroit |

\(^{12}\) A sprig of grass.
The term *ajulot* comes from *ngajul*, a basic plural form. It denotes the human body hairs or the animal’s fur or coat. By extension, *ngajul* also means color. The term primarily refers to the color of the animal’s coat, a dimension that is very important in the *Turkana* pastoral universe. Nevertheless *ngajul* can be used with the meaning of color in many other contexts (to talk of bead’s colors, of a cloth’s color). The singular form *ajulot* is not ungrammatical but is not common outside of the sacrificial semantic context. The singular form seems to be most willingly used to denote the sacrificial victim.

### 4.2. *Ajulot*: a hybrid conceptual object

In Turkana apotropaic sacrifice, the victim’s coat is often a central characteristic taken into account to choose the sacrificial animal. The soothsayer decides whether the coat’s color should be considered and chooses the right hue. It might be oneirically ‘revealed’ to the soothsayer or the latter might decide to divine it through aleatoric procedures. Although the ultimate decision lays on soothsayer’s interpretation of *signs*, the process of linking specific misfortunes with ritually efficient coat colors is broadly pre-oriented and follows the kind of “sympathetic” logic familiar to anthropologists.

Coats that do not include any striking color or combinations of hues are considered dull and discarded. Brown (*-mug*), for instance, doesn’t count as a color at all, unlike red (*-aryangan*) that might be used in (in-) fertility sacrifice or in aggressive ritual procedures. Black (*-kiryon*) is often used in counter-witchcraft rituals, or for fending off invasive entities. Spotless, bright and/or
‘shiny’ coats would be used in more positive schemes. White (–akwaan) and assimilated colors (like various hue of pale yellow) would likely be used in rituals intended for cleansing, protecting, or offering (to elders, to an age-set, to in-laws, etc.).

Other colors (like blue/green, -pus) or sometimes coat designs (-meri, spotted as a leopard; -sili, with the body in two colors neatly separated, -ngole, with a white spot on the forehead) may be required for the success of the sacrifice but the decision to use either one of those is highly idiosyncratic. The association between colors and general connotations are broad specifications helping the soothsayer making his decision. But it is not a system of perfect equivalence between colors and intended meanings. There is a large part that is up to the whim or personal logic of the soothsayer.

The use of the term ajulot to denote the sacrificial victim suggests that the animal is apprehended in terms of its ritual function. The morpheme –jul (a-jul-ot / nga-jul), by its reference to the color of the animal’s coat, makes it obvious. But on another plane, the peculiar type of lexicalization – the typical singularization of a basic plural form – must have cognitive consequences. The fact that a term denoting a (ritual) function and inflected by a specific irregular singulative marker – a mark of the specimen – is used to lexicalize the sacrificial animal’s concept is indicative of a semantic manipulation, instantiating the combination or juxtaposition of Living Kind and Artifact.

So despite the reference to a ritual function (the animal is chosen because of its ritually efficient color), it seems that the animal is still individuated. In fact, the grammatical markers induce agents to focus on sacrificial animal’s individuality (a specimen of living being) and consequent core property, its essence. At the same time though, the morpheme, by focusing attention on the function, counters the easy attribution of a full-blown individuality to the sacrificial animal. The concurrent focuses make it hard for the cognitive system to fully process information in either way.

The Turkana word used to render that notion of shiny is emalimalete. An animal with a great luster, well-structured color contrasts (symmetrical ones for instance) or a superposition of hues (top of the hair is dark grey while the base is light grey) is considered ‘shiny’.
Ajulot’s lexicalization thus seems to reproduce in a synthetic way the partial re-categorization of living kind into artifact. In a Whorfian perspective, one might say that, thanks to its characteristics, the term constrains the conceptualization of the odd ritual concept. Precisely, the term ajulot denotes as Cole & Cole call it a ‘fused cultural artifact’, the (ritually) functional living being, while aiding at the very same time the cognitive merging of largely reciprocally excluding properties (thing-like and living) under the scope of a unitary concept (Cole & Cole 2000).

Although not a basic plural form, the term awomad (from ngawomai, plural feminine, footnote 10 above) follows fundamentally the same type of logic. A plural term denoting elements (strips of leather, hairs) that have a specific ritual function is used in its singular form to denote a sacrificial victim. On the basis of this evidence, there seems to exist a Turkana sacrificial category (i.e., a category defined by its links to sacrificial action) containing ‘hybrid’ items, items conceptualized as possessing characteristics animates and some inanimates, i.e. artifacts, have, that is, essence and function. The discrepancy between semantic-grammatical (the mark of the specimen imparted by the singular or singulative marker) and conceptual planes (the efficient function, color or strips of leather) might have a cognitive impact explaining why the lexes have ever been thought appropriate, and are still in use, to denote paradoxical mental concepts, Thing-Like Living Entities.

There is more to sustain the claim that the term ajulot is used because of its grammatical and semantic properties making the term fit to denote an odd concept. Other ajulot’s lexical characteristics may be significant. In Ngaturkana, the feminization of a term that denotes, at the masculine, a specific item implies that the item has been transformed in an important way.

<table>
<thead>
<tr>
<th>Masculine case</th>
<th>Feminine case</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fresh grass</td>
<td><em>nginya</em></td>
</tr>
<tr>
<td>Tree(s)</td>
<td><em>ekite</em> (<em>ngikitoe</em>)</td>
</tr>
</tbody>
</table>

\(^{14}\) The grass dried by the sun or cut for a purpose.
According to Dimmendaal, that feminization marks the change of status from animate to inanimate (Dimmendaal, 1983: 220). The lexical form of the concept Ajulot – a feminine form although the vast majority of the sacrificial victims are male animals – transmit, for sure, some sort of cognitive discordance.

Furthermore, when collectively designated, the different types of livestock (ibarasit, ngibaren) can be and usually are referred to by a plural feminine.

<table>
<thead>
<tr>
<th>Plural Feminine</th>
<th>Singular</th>
<th>Plural Masculine</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cattle</strong></td>
<td>Ngatuk</td>
<td>X</td>
</tr>
<tr>
<td>Ox(en)</td>
<td>emong</td>
<td>ngimongin</td>
</tr>
<tr>
<td>Bull(s)</td>
<td>emanik</td>
<td>ngimaniko</td>
</tr>
<tr>
<td>Cow</td>
<td>Ngatuk</td>
<td>Aite</td>
</tr>
<tr>
<td><strong>Goats</strong></td>
<td>Ngakinei</td>
<td>X</td>
</tr>
<tr>
<td>Billy-goat</td>
<td>ekoroe</td>
<td>ngikora</td>
</tr>
<tr>
<td>She-goat</td>
<td>Ngakinei</td>
<td>akine</td>
</tr>
<tr>
<td><strong>Sheep</strong></td>
<td>Ngamesekin</td>
<td>X</td>
</tr>
<tr>
<td>Ram</td>
<td>emesek</td>
<td>ngimesekin</td>
</tr>
<tr>
<td>Ewe</td>
<td>Ngamesekin</td>
<td>amesek</td>
</tr>
</tbody>
</table>

The general term is then feminine and when one has to designate a male animal a new term or a masculinized term is used. Against that background, the choice of a term in a feminine case to denote male animal— and note that in Turkana the term could have easily been masculinized (*ejudul) – must enhance the ‘male animal/denoting feminine case’ discordance, ultimately reinforcing the effect of the feminization as marker of a somewhat ‘inanimate’ status (i.e. an object with a function).

By its peculiar grammatical, lexical and semantic characteristics, ajulot might then activate various classifications and existing schemas. It has linguistic characteristics that are the markers
used for entities that can be acted upon and that have lost their primary essence. The concept’s partial assimilation to that category made apparent by the feminization of the denoting term is clearly in opposition with the other assimilation elicited by the individuation of the collective term (thanks to the suffix {-ot'}). Those cross assimilations enhance certainly the cognitive discordance of the lexical form and might explain why the term has been selected to denote the sacrificial concept.

5. Reorientation and evocation

In the Turkana sacrifice, the effect of property transfers between conceptual domains is supported by another ritual device. Many ritual action sequences are built through reorienting and/or rearranging more commonly known action scripts. For instance, eating is not just about ingesting food anymore. Choice foods are distributed to and consumed by members of various social categories according to precise rules. In the same way, speaking is no more just a mean of conveying information and engaging social interaction. Speech is addressed to walls or figurines. Beating is not for punishing, fighting or defend oneself. Striking is applied to people needing help.

This reorientation induces a blurring of the conceptual links between behavioral sequences and their original intended function. This allows the new (symbolic) function assignation to take place. Eating according to a special order is now conceptualized as blessing or offering; talking to a figurine, as begging or entreating; and harsh beating as curing or salutary. Nevertheless the ritual symbolic material gets some of its extension from the original non-reoriented items (and thus from more common or ordinary cognition): It is still eating, speaking, or beating that takes place! The enhanced cognitive effects the critical phases seem to have in our ritual must be understood in light of that\textsuperscript{15}. As I sustained above, I believe that reorientation and/or rearrangement of action scripts might well be a central characteristic of most ritual behaviors. I

\textsuperscript{15} What I state about those phases can be said \textit{mutatis mutandis} about other sequences composing the ekimomwar. The ritual is made out almost entirely of reoriented action scripts belonging to other categories of social events (ritual, ordinary, or purely festive). The ritual scripts from which \textit{ekimomwar}'s reoriented scripts are inspired should also be viewed as rearrangement of ordinary sequences of action.
intend to explore its effects in our specific ekimomwar ritual. It is a matter that will be worth investigating further in other social and cultural context to evaluate how general and central this is.

5.1. The meat feast

The comparison of the sacrificial sequence of actions on ekimomwar’s last day with the akiriket or meat-feast, a masculine Turkana sacrificial ritual performed with a very high frequency organized for various reasons (as a simple feast between friends, as a way to fight away misfortune, to prepare political meetings...), might adequately exemplify the previous claims. The complex ekimomwar ritual we considered above can be viewed as a rearrangement and reorientation of some of the action scripts that inform these “ordinary” meat-feats.

The typical pattern of a meat-feast (akiriket) can be summed up as followed. A hoofed animal is speared by elders, seniors, initiated men, political leaders, or unfortunate suffering persons. Once the animal is lying dead, initiated men, helped by several young men approximating age of initiation, butcher it. At some point, the stomach is neatly separated from the carcass and its content is spilt in a heap at the ritual space’s center. The chyme can then be used for smearing the body of the sacrificing persons, that is, the one offering the beast or for which the animal is killed: Somebody presenting an age-set with an animal, a sick person entreating his friend or seniors in helping him, someone fighting some misfortune, etc. At times, in important rituals, members of the assembly line up to pass at the heap of chyme, smeared themselves or get smeared and launch themselves in a race toward the East, miming war feats and yelling their ox-name and/or war cry.

The meat is then roasted and distributed among the seniors of the assembly seated, facing East, around a semi-circle of branches located on the West side of the ritual space. The seniors and elders are divided in two groups. On one side of the semi-circle sit the members of the generation of the Leopards; on the other, the Mountains. Inside those major divisions, members sit according to their age-set rank. The center of the semi-circle is occupied by members of the oldest age-set; both extremities of the arc are occupied by members of the youngest age-set. The other age-sets sit in seniority order between those two groups. The elders and seniors primarily consume the meat but may decide to redistribute it to the rest of the men and youngsters loitering.
around the ritual scene. Often then, political leaders, elders or seniors harangue for some times the crowd. The assembly then disbands.

5.2. A basic sacrificial form

Contrary to the ekimomwar rituals we described above, these akiriket meat-feasts are frequent event. Indeed, they are daily occurrences at some times of the year. They are highly visible events that structure men’s life and, more generally, the camp’s life. People who are not allowed to participate (women and underage children) are aware of what takes place during those rituals as anyone can observe the procedure from afar. The general pattern of the Akiriket meat-feast is common knowledge and it clearly orients overall ritual expectations for people of both sex.

To some extend, then, there is a clear similarity between ekimomwar and akitriket types of ritual. The general orientation of the actions is consistent (West/East) throughout both types. The use of the sacrificed animal’s chyme is important in both situations. We notice a display of particular social roles and orders and the use of the semi-circle-facing-East-type organization. There is ‘unction’ in both ritual instances as well as harangues at the end.

However, there are also suggestive differences. The chyme is not taken in the same way. Furthermore, in the ekimomwar, it is not smeared on people as it is in the akiriket. The meat is apparently not consumed in the ekimomwar. Ritual actors are organized differently. The victims, as much as their carcasses, are manipulated in different ways. Part of ekimomwar’s cognitive effects, I propose, lie on ekimomwar’s enacted behaviors repeatedly clashing with a background of expectations about what is viewed as more common, ‘ordinary’ ritual procedures or ritual courses of action.

5.3. Common knowledge and paradoxical manipulations

Ekimomwar’s scripts could then be viewed as thorough reorganizations of ‘ordinary’ sacrificial sequences belonging to akiriket meat-feast. The systematic reorientation renders more or less inept ordinary and common expectations about sacrifice. Participation is therefore attention-
demanding, more so than in an “ordinary” sacrifice. In such a “problematical” context, the paradoxical manipulation (evoking living things and essentialized artifacts) must take on an added edge. The ox is used in place of chyme for the unction at the beginning of the sacrifice. The ox isn’t speared but cut opened alive with the spear while the goat has its throat sliced (a non-ritual way of killing) with the spear and not with a knife (which would be the utensil for slaughtering non-ritually). The chyme is taken while the animal is alive. The sacrificator is not defined by his masculine social belongings (age-set and generation), as would be the case in an akiriket, but by his clan provenance, engenderment characteristic and a natural inclination (he should be a Ngigoleroto, a twin and left-handed). The chyme is not smeared on people’s body but amassed in a heap in which the ax is plugged and on which everyone has to step. The carcasses of both victims serve an engineering function and, contrary to what happens in the akiriket where it is the end goal of the ritual procedure, the consumption of the meat disappeared from the ritual scene. Those successive violations of ritual and non-ritual expectations combined with the counterintuitive manipulations must reinforce the cognitive effects the ritual event has for the participants. Agents’ focus on actions is enhanced. The procedure is much more attention-demanding than it would be otherwise. Those scenes where counter-intuitivity and demotion of (ritual and ordinary) expectations are combined are most likely to be remembered better than scenes where no combination occurs. All else being equal, “combining” scenes should be more likely transmitted between generations of agents than scenes where no combination takes place. That could explain why we find such ritual “constructions” around the world.

6. Ontological property transfers and social category denotation

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16 In rituals performed to fend off dire danger, chyme is taken while the animal is alive, as if the chyme could acquire a peculiar quality by so being taken. That way of doing violate ordinary expectation: In order to access a living being’s entrails, it must first be killed.

17 Besides regulating marriages, clan membership plays no great role in Turkana society. The use of the land is not regulated by clanship. The interaction between people isn’t much either. Clan members must observe certain rules though but, as a whole, they don’t have much influence on ordinary social interactions. Those rules regulate the use of items of clothing and specific children and women hairdos, the sequences of marriage ceremonies and the rituals for a bride insertion in her new family.
Another ritual device seems to be used extensively in sacrificial procedure and add to the intricacy of the evocative sacrificial sequences. Thing-like living beings and essentialized artifacts and substances are used to mediate and to coordinate interactions between categories of social agents. That is, while enacting prescribed ritualized behaviors on/around/with the ritual items (victims and artifacts) people interact with other participants according to their status.

We know through our own experience of the world that hierarchy and status distinctions are social dimensions fairly readily available to anyone witnessing ordinary social interactions. The capacity to discern the faintest cues about people’s status is part of our evolved social cognition. It is a basic capacity for functioning in any social context and we need to access that specific information in order to coordinate our actions, to adequately associate ourselves with others, or to efficiently cooperate for achieving various goals (Kurzban & Neuberg, 2005). Statuses and hierarchies are thus good vehicles for other dimensions (behavioral and conceptual ones). Those easily graspable and attention attracting social dimensions lend themselves perfectly for conveying other complex information.

But, sacrifices are no ordinary social events. Victims, artifacts and substances are used for the display of not just any type of social orders but for the display of extra-ordinary ones. And indeed those orders are somewhat extra-ordinary. They are usually confined to the sacrificial actions.

Examples taken from the ekimonwar and the akiriket will help us understand this last point. In the ordinary meat-feast, every aspect of the ritual procedure from the handling of the sacrificial victims to the consumption of the meat is an occasion for affirming a masculine social order: Men belong to age groups, initiated age-sets and alternate generations and their actions in rituals are defined by those memberships. Some participants are required to kill while others are prohibited to do so (initiate/not yet initiate). Some are China hands in the butchering process while others must help them out (initiate cadet/not yet initiate). Participants are divided into roasters and consumers of the meat (youngsters/elders), smearers and smeared ones (seniors/cadets), and consumers of the choice meat or not (elders-seniors/cadets). All those positions are stipulated in reference to the victim and to the derived substances. The sacrificial scripts are clearly
represented with those interactional behaviors (between social categories around the handling of victims and substances) as focal points.

By contrast, the complex ekimomwar sacrifice ritual is organized in terms of clans. Recall that people from the Ngigoleroto clan come rub their body on the ox's forehead. Then all the participants walk through the last ritual contraption clan by clan. This differential treatment according to which clan people belong to is found also in the milk consumption, in the order in which people parade, in the last aspersions, in the elders’ speeches. Together they concur to delineate a ritual clan order in which some have to abandon (animals) or relinquish something (first position, one own milk) for the benefit of all. That clan order is part and parcel of the working of the ritual and is instated for that purpose only. Of course, for people acquainted with the general exogamous rule, those differential treatments and arrangements will probably take on an added meaning. That is, cooperation between clans is necessary if the group is to survive and as we consume the milk of other groups and not the milk of one's own clan, so it goes for choosing a mate.

Walking through the ox's body, underneath the goat's carcass and stepping in the heap of chyme on the axe is again the occasion for the stipulation of a special order from clans down to smaller groups defined by gender (male/female) and relation to procreation (elders, men, young women in their prime with no child, mothers with children and 'old' mothers, young men and youngsters). The insistence in ordering various social groups is essential to the action's definition and people's positions are systematically specified in relation to the ritual items made out of the sacrificial victims ('that category of agent must be first to pass through the contraption because they're members of the clan that gave the victim').

Furthermore, as we are now able to understand, many of those behaviors organizing people's (inter-) actions centered on or around the living kinds, sacrificial artifacts and substances are often also the ones that allow the evocation of counterintuitive concepts, the “Artifactual” Living Kind and the “Essentialized” Artifact.

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18 One cannot drink the milk of one's own clan, for instance.
We may wonder about the type of cognitive consequences this recurrent association of social and counterintuitive materials could have for the ritual participants. For sure the sacrificial procedure helps instill specific beliefs and representations. I believe though that the sacrificial ritual is not just about making those thoughts, concepts, ideas and beliefs somewhat apparently self-evident. The sacrificial ritual induces a shift from a situation in which members of ‘naturally bestowed’ social categories defined, say, by gender and age are given positions, roles, and privileges (that old one kill and apply substances on younger ones; that young in his prime help cutting) to a situation in which social categories seems to be 'naturally' defined by those extraordinary positions, roles, and privileges (the one who sacrifices, eats, and blesses people is an elder; the one who kills is an initiate).

The sacrificial ritual facilitates or induces the illusion that specific processes are utterly necessary for individuals’ proper growth, wellbeing and social integration. As Turkana sacrificial mechanics strongly articulates with the modeling of special social orders and arrangements, it helps blur the distinction that exists between category denotation and category instauration.

Thus ritual rules organize non-ordinary behaviors of agents. The type of highly specific behavior one can have in ritual seems somewhat to be foundational of his social status. Those \textit{statutory} behavioral rules at the same time prescribe adequate ways of acting \textit{with, on and around} the victims and substances made out of it. Those actions are precisely what produce the clues that elicit the counterintuitive quality ascriptions. Status, behaviors, and counterintuitive concepts are irremediably and strongly linked in agent’s representations of ritual sequences (and conversely). Once situational, behavioral, statutory, or conceptual cues are presented, people will be prone to have the associated corresponding thoughts.

\textbf{7. An ideal sacrificial action pattern?}

On the basis of the previous points, it may be possible to lay out some of ideal sacrificial action pattern’s general characteristics that could be at the core of the sacrificial logic and could
somehow explain a great deal of sacrificial ritual’s cognitive effects. To some extent, the features I present below seem to be found in many sacrificial rituals.

A transformation of living kinds into artifacts takes place. Animals might be put to death in various ways: From a straightforward butchering to an intricate killing procedure. Although the actual killing is a focal point, executants’ prescribed behaviors around the sacrificial animal might well be more important for sacrifice’s cognitive impact. Procedures in which some kind of incremental transformation is instantiated are probably more frequent than events in which abrupt killings and rapid discarding of the remains take place. Indeed the incremental transformation allows for the display of odd or non-ordinary behaviors (using the ox as a tool to rub oneself) eliciting, in the minds of the participants, counterintuitive conceptual material. The more manipulations of the live animals there are (or the more intricate, odd... those manipulations are), the stronger the elicitation of an artifactual living-kind is and the more attention grabbing the prescribed behaviors for handling the animal should be. And, similarly, the longer and/or the more intricate the use of substances made out of the sacrificial victims are, the more lively the elicitation of essentialized artifact is and the more attention grabbing those scenes in which the counterintuitive material is evoked should be.

A sacrificial procedure that highlights these kinds of elements (incremental aspects, long or intricate manipulations) is then likely to have great cognitive effects (and the more elements involved, the stronger the effect). Such symbolic material that is somewhat attention-grabbing (at least for a majority in the course of its successive instantiations) should attain great success in a cultural tradition. It would be judged particularly impressive, enough as to be passed on to successive generations of agents.

Furthermore, of all the behaviors transgressing the boundaries of ‘ordinariness’ and thus potentially being found in sacrificial endeavors, the ones that elicit in participants’ minds domain-level conceptual violations should be among the most commonly in use.

Finally, a preoccupation for social orders, statuses and hierarchies should be manifest. The combination of those types of social dimensions (to which human are specifically tuned) with evoked counterintuitive conceptual materials makes the behavioral sequences in which takes
place the combination particularly attention grabbing, giving those sequences a cognitive advantage.

We will have to see how general this is. I do not mean that it is found in all sacrifices, but when it is found, it does explain perhaps the effects of the rituals.
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