Furnace Fire and Women: Agents of Iron Production and Social Reproduction

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Abstract

We are all part of the people of the world whose discourses are wrapped in traditions, stories or some kind of myth. These might be about its origin or the fabrics that maintained it together or features that distinguish it from the rest of its kind or the other neighbor or far distant people. The life of the Oromo groups who live in most part of western Ethiopia south of the Blue Nile is no different from such a socio-cultural scheme. The result of an ethnoarchaeological endeavor I have conducted on traditional craft since the late 2004 to 2011 has revealed a lot about the cosmology of the society, which can readily be transmitted in the medium of technical ceramic-furnace which itself becomes more socially comprehensible intertwined with fire and woman. The data that is derived during the operational sequences of iron production processes have served as the bases to provide the social/ideological/ritual context surround the trade. Whereas it appears that, the non-physical element of iron smelting is trivial, I would argue, at least in wider Ethiopian context and particularly among the Oromo, that the production of iron tools through the combination of physical elements cannot be fully comprehended in the absence of its social/ritual components. In this regard, the paper also relates the myth of origin of the first smith, his first product of metallurgy and the significance of this myth in conceptualizing production and reproduction in this society. This paper concludes that the knowledge of iron smelting is the product of the views of the people developed in other realms of socio-economic life such as human procreation or agricultural production either in the decoration of technical ceramics or activities and usage of or exchanges of words among the workers during production activities. Such rich experience lends a means of putting together ingredients resulting in a material culture made of iron.

Key words: *Ethiopia, Oromo, myth, furnace, fire, women, smith/smelter*

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Introduction

Ethiopia is home to over 80 nations and nationalities. The Oromo people represent the single largest ethnic group in Ethiopia and the Horn. The Oromo people inhabit most parts of Ethiopia today and some parts of Kenya and Somalia. Undeniably, the Oromo society has become quite diverse particularly since the late 19th century of its interaction under the modern Ethiopian regime. Superficially, however, the Oromo seems homogenous because its members share many similar elements of cultural values including the Oromo language-such ambiguity that is reflected in traditions, for instance, is important for us to excavating meanings from the material and social aspects of the people.

Incontrovertibly, the Oromo society has received different cultural values from different directions of Ethiopia and the Horn that resulted in differences regarding its indigenous worldview in the form of the belief system (see Kassim and Megerssa 1989; Burka 2011). Because of those interactions, some follow different denominations of Christianity. Some others have become Muslims. A few of the rest are followers of indigenous religion called *Waaqeffanna* meaning belief in *Waaqa* or (sky god). This indigenous Oromo belief system, *Waaqeffanna*, is the only means to understand the various intricacies of traditions and myths told and retold by the people (Burka 2006, 2011; Burka and Giardino 2013). The Oromo people, therefore, are structured into different categories of life due partly to the environment they have occupied and partly to their interaction with other ethnic groups. Environmentally speaking, the Oromo live in parts of semi-arid, in mid-altitude and mountainous parts of the country stretching from Kenya/Somalia in the south to the Sudan in the west and in the north in Ethiopia. Their view of this agro-ecology is defined as *Baddaa, Badda Daree and Gammoojjii*.

The diverse ecological regions of Ethiopia have lent it to various forms of response to its respective environment (Levine 1974; Todd 1977, 1978). Consequently, one finds farmers, pastoralists, artisans as well as many others in different socio-cultural categories. Such type of categorization is attributable to the life and vivid in the rural parts of the country. In such categorization of socio-culture of the country, the Oromo are sub-divided into farmers, hunters, herders, different constituents of artisans as smiths

(and/or smelters), weavers, tanners, potters, beehive makers, wood carvers, etc (see Burka 2011; Hultin 1984).

Nevertheless, in this paper, my focus is on iron smelters (and smiths) and their activities in order to derive social/cultural meaning from agents (human and material) of production involved in iron metallurgy. In light of this, I have structured my discussion along three concepts- furnace, fire and woman. The rationale for focusing on these concepts arose from that in order to convert a natural object (ore) into a cultural material (bloom); the smelter utilizes furnace as a powerhouse and fire as a reducing agent as well as invoking productivity/fertility of woman by feminizing the furnace (Haaland 1988, 2004; Haaland and Haaland 2007; Burka 2006, 2008, 2011). Whereas the first two represent actual physical elements in production, the third one is an aspect of social/ritual value. Underneath the symbolic meanings surrounding iron production and social components, we refer to above, is the supernatural ambiguous-male and female- origin of the first smith (Kassim and Megerssa 1989) as well as male/female divide of iron ore (Burka 2011; Burka and Giardino 2012).

The First Smith (*Tumtuu*): His Myth of Origin

This presentation has various explanations. Firstly, the present status of the smiths in the Oromo society, which is marginal, needs to be reexamined in light of divergent myths of origin of the group (see Burka 2009, 2011; Burka and Giardino 2012), which seems also that the mainstream prefers to acknowledge it. However, one may wonder whether the myth was created in the service of the needs of the mainstream or the marginalized smith.

Furthermore, it is always difficult to trace the antiquity of the myth of any subject such as this. Although it is both told by the two categories of the people, it is still difficult to provide dates to its origin. Secondly, one aspect of marginalization of the smiths of Wollega Oromo attributes it to the question of fertility or generally human reproduction. Moreover, the social construction of iron smelting is made possible in such endeavor as digging into the debris of traditions overlaying `reality`. It must be understood that tradition that sometimes appears in the form of myth serves as a leading outer light of the truth a certain group of people aspires to convey. In this

regard, an ethno archaeological[2] (see London, 2000) approach enables to prepare a ground from which the hidden message is revealed.

During his excavation of European hunter-gatherer site Binford's observation of variations in their assemblages led him to raise questions as to whether there are cultural or particular reasons for variations. He then decided to explore ethnology and study how contemporary hunter-gatherer kills animals and disposes of the remains (Binford, 1978).

Thus, excavating through the myth is very important and it is presented as follows. The myth of origin of the first *tumtuu* (literally the beater) in Wollega relates at the top of all to Waaqaa, the creator of the first Oromo, who is the father of all present Oromo. He had begotten twin sons named Anno and Hinno. Anno was the senior son for whom Waaqaa gave the power and the knowledge to rule over his world. The myth attempts to fit into another Oromo tradition that upholds the first born as 'pure' with all qualities to put him above the rest-Booran, of the morning implying the beginning. Apparently, Anno has become a secular leader in the sense that he was endowed with all administrative qualities and lack of others. What he was not endowed with were spiritual qualities that could enable him to communicate with his creator-Waaqaa.

On the other hand, the junior son of the Oromo man, Hinno was 'hit by the glowing glance of Waaqaa called-*mill'uu Waaqaa'*. In this, Waaqaa empowered Hinno with the power of prophetic and spiritual power. Accordingly, this glance of Waaqaa came in the form of rains of fire also called *qanqattii Waaqaa*. The sprinkle of fire that has rained on Hinno has converted him into two important personalities. In the first form, Hinno was made a prophet, the first Oromo prophet and became spiritual guidance to his elder brother Anno and the people he led. In this spiritual revelation,

[2] It is noteworthy to follow Gloria London's (2000) on the distinction between an ethnographer and an ethnoarchaeologist rather than just describe what ethnoarchaeology is. She sets apart between the two based on the objectives both aspire to attain. Both however, employ an anthropological method of ethnography- the study of the life of extant societies in order to answer respective questions. The focus of an ethnoarchaeologist is that he/she endeavors to answer archaeological questions by studying the material culture and its attributes used by extant societies. A classical example for the students of archaeology is the study conducted by an American Anthropologist Lewis Binford (1978) living among the Nunamiut of Alaska in order to reconstruct what life looked like during the Ice Age in France, a cultural label called Mousterian.

Waaqaa has also endowed him with the knowledge or skill to forge his symbol of power. The materiality of symbol of power and guidance is what the Oromo call *kallacha*.

According to this myth, Waaqaa has taught Hinno how to forge *kallacha* from *Qanqattii Waaqaa*. The fire of Waaqaa was his forge. In this process, Hinno was able to forge the first *kallacha* from the heavenly fire. In other words, the prophet-smith was exceptional in harnessing heavenly fire for creating the first material culture. Moreover, Hinno himself was heavenly in origin, who was dropped from sky with both male and female decorative metal tools according to the myth of the smith`s origin among the Oromo in the south (Megerssa and Kasam 1989). Here they call him *abba muudaa*, who was discovered from the wilderness by the waataa hunters (Kassam and Bashuna 2004). Hinno/abba muudaa was ambiguous in that he was found wrapped in male and female objects (for details Burka 2011).

Consequently, the first *Kallacha* was heavenly in origin. In other words, Hinno was not only the first prophet (*Qaallu*) but he was also the first smith/*tumtuu*. He was both *Qaallu* and *tumtuu*. The story does not, however, reveal the shape of the forge in which Hinno created the *kallacha*. However, it goes without saying that some form of kiln might be there to enable him transform the sprinkle of fire of Waaqaa into useable product. *Kallacha* is a phallic object tied on male`s forehead and is procreative symbol (see Burka 2011). In the following sections, I shall present our central objects of discussion-furnace, fire and woman. In this discussion, however, it becomes meaningless to separately discuss about woman, unlike the rest of the components. Thus, I shall raise issues related to the personality of female both in the context of fire and furnace.

The Furnace/Forge

Furnace is the powerhouse of iron production. One intriguing aspect in African iron production is the presence of diverse types of furnaces. This has tempted scholars to argue in favor of local origin of iron production technology as part of responding to local requirements. Since the objective of this paper is far from addressing the issue of origin, we will not be delving into the hot debate of the origin of the knowledge. Instead, we will look at the socio-cultural meaning of furnace in Wollega.

The Oromo smelters in Wollega possessed two distinct iron smelting apparatuses - the furnace, which they call *gumbii*- (meaning granary)- is both underground in northeast Wollega and furnace with superstructure in southwest Wollega. There were two major smelting localities in Wollega where however smelters/smiths from similar lineages but living in different locations conducted the activity. In northeast Wollega smelters used what I called pit furnace (Burka 2006). It is an underground apparatus constructed for over a meter without superstructure or construction above the ground (see Fig 1 sketch).

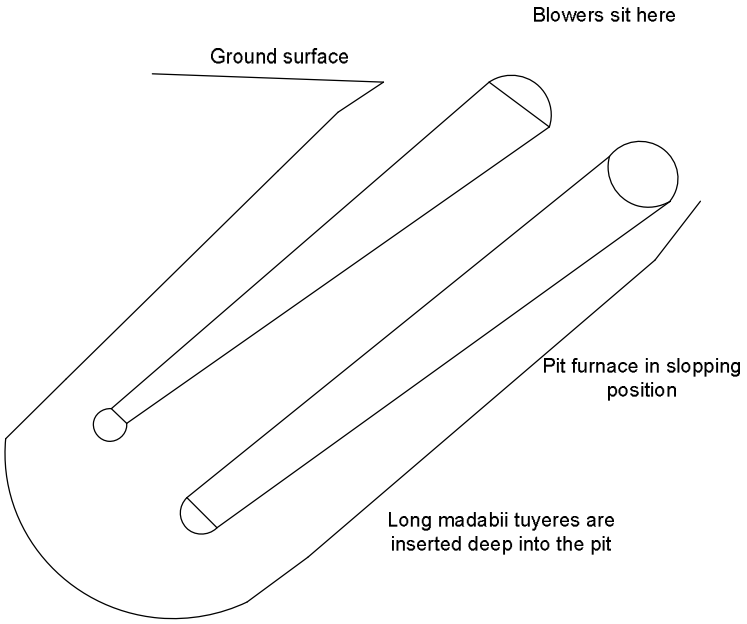

Fig.1: sketch of an underground furnace from northeast Wollega

Fig.2: furnace superstructure from southwest Wollega, a front view

In this paper, this pit furnace lacking above ground extension does not convey any form of social value as opposed to the one in southwest Wollega (Figure 2.). Therefore, I will in the following present and emic perspectives of the second furnace popular in southwest Wollega. Iron smelters /smiths in southwest Wollega around Ayra-Gulliso employed a rather splendid type of iron smelting apparatus (Burka 208, 2011, 2013) with decorative additions conveying various socio-cultural messages.

Unlike in the northeast, iron smelting in southwest Wollega has been carried out in furnace built above the ground in slopping position about two meters tall from the ground operated by two bellows workers who sat side-by-side on a wooden bed built with scaffold to climb nearly as equal in height as the furnace itself. I have discussed this in detail elsewhere (see Burka, 2008, 2011). The number of blowers, their seating arrangement and

the movements they make during the pumping process contain symbols humans and objects represent in production activities.

Fig.3: upper part of the furnace head and ear like structure (left) and zoomed-in epiglottis (right)

The furnace is built with physical features and appearance symbolizing a pregnant woman with outwardly pushed `belly`. To describe it from top downwards, its head is an afro-like structure (Fig.3. left), with upward facing open `mouth`; two `ears` are made on both sides of the head-like structure. The furnace builder decorates or finishes the mouth with refinement depicting a bottom `lip` like structure (see same Fig left). On its backside at a shoulder, two holes are created through which the two clay ***madabii*** **tuyeres** are permanently fitted-tips pointing to the front aperture. The openings are called her `eyes`. The two `eyes` have also contributed into the creation of human physiological structure observable through the open mouth. The structure depicts a windpipe edge, which they called *qoonqoo* and *huuba qoonqoo*- glottis and epiglottis (Fig.3. right). On the front side, below the neck on what is the chest of the woman are two protruding features depicting fully-grown bosoms (Fig. 4. left).

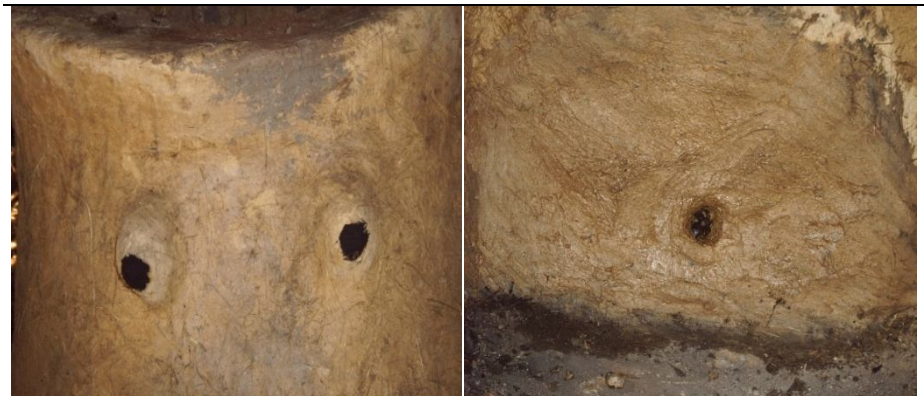

Fig.4: depicts front thorax part of the furnace with breast like structure (left) and a front bottom aperture called *faliqa*-metaphor for vagina (right).

Below the two breasts, as I explained above, the belly like structure depicts a pregnant woman. As one moves down, there is another opening left close to the ground surface called *faaliqa* (Fig.4. right) or *koshee*. This opening is sealed during smelting leaving only a narrow one penetrated with the forefinger of the master smelter, who is the symbolic husband to the furnace woman. One of smelting furnaces at Abayyani of Ayra-Gulliso was named Gobanee (Burka 2008). It is the name of a woman not a man. Literally, Goobanee is derived from the verb *goobane*, which refers to the time of maturity such as when the moon becomes full meaning ***Ji'a goobane***. I will discuss later on how the selection of the name has something to do with the issue of fertility. While I have attempted to show furnace in iron smelting is a representation of fertile woman, it is important that, as fire is central also in iron smelting, the social meaning and significance attached to fire by the people needs discussion at some length.

Fig.5: the three components of tuyères and the bag bellows

Furnace has also other components than those parts specified earlier. In iron smelting, air (oxygen, carbon dioxide, carbon monoxide) is an important catalyst-injected either naturally or by forced draught through apparatus (tuyéres) fitted to the furnace. The Oromo tuyères (both in northeast and southwest) are made up of three categories- clay, metal, and horn (see Fig.5; see also Burka 2006, 2008, 2011). The clay tuyères are called penis (*Qunxorroo*) whereas the two bag bellows made from goatskin connected to each tuyère are termed as his sacks (*qalqalaisaa*)- meaning the testicles. The clay tuyère is named *Madabii* /*Qunxorroo*), the metal tuyère is termed as *Kololii* and the horn tuyère is called *buudaa*. Their physical location and size is as follows: the *madabii* clay tuyère is the tallest and is inserted fully into the furnace; the *kololii* metal tuyère is fitted into the horn permanently and is a connecting tool between the horn tuyère and the clay one. The horn, *buudaa* tuyère is permanently attached to the bellows

carrying air from the bellows to the *Kololii* through to *Madabii*/*Qunxurroo* tuyères.

Fire in Iron Production and Beyond

Fire occupies as ambiguous position as the smith himself does. It is both destructive and productive at the same time (see Burka and Giardino 2012 on the duality of the smith). At a time, it is a taboo to call it by its given name particularly inside a house and a representative term 'peace' is used. For instance, when a fire is extinguished from a fireplace in a rural house it is a custom to fetch it from the immediate neighbor. One wonders how a woman communicates with her woman neighbor. She would not dare to spell out by stating please `would you give me fire`. She would say in Oromo language `*qaba na qabdu*` literally `do you have peace? `

It is understood that she was looking for fire. Elders would say let fire be `respected and bounded` in its fireplace- a medium of its control. They imply that outside of its medium of control fire can become a dangerous product. They would tell their young that fire is a king. Fire is feared also because it symbolizes some kind of epidemic diseases while it is at the same time used to fend off evil spirits. Fire is feared in that it transforms things from one to another. For instance, it is feared to sit along the fireplace with somebody with infectious disease such as sexually transmitted diseases. The Oromo conceptualize that as fire converts a natural object (such as iron ore) into a cultural material, it is capable of transmitting disease from one person to another. Fire in this regard is a destructive product.

In contrast, absence of fire is equated with lack of life i.e. death. The Oromo understand death as coldness; it is lack of life, lack of warmth. The symbolic representation of fire as source of life is also provided in another social context. As we shall see later, the Oromo define marriage as the process of forging two different behaviors by the force of fire- the product of which is materialized by giving birth to children. In contrast, whenever one's wife dies, the symbolic meaning of fire is evoked in public communication between two Oromos. One would not simply say his wife is dead. Instead, he would say *ibiddasaatu dhaame* literally 'his fire has been extinguished. In Oromo, marriage is symbolized as warmth- the engagement of fire, to nourish life. The wife is the warmth of her husband and vice versa. The warmth of both equated with life, not just one warmth.

In another context, the symbolic power of fire as agent of fertility and warmth is particularly revealed during marriage ceremonies from what is wrapped in the people's traditions. In Oromo cultural marriage, it is common that elders (e.g. father or grandfather of the groom) should give blessing to the bride and groom- upon their return with the bride, in front of the spectators. The message in the blessings delivered in the medium of fire is about fertility. Every elderly man who takes turns uses the metaphoric meanings of different objects (e.g. evergreen grass (*cooqorsaa*), honey, mead (*booka*), milk (*aannan*), fire *(A/ibiddaa*) etc) to invoke supernatural power and meaning related to fertility - as human fertility is originating from Waaqa. For instance, one would say `let your fire mature` (*ibiddi keessan haggabbatu*). It is about the mating that the giver of the blessing would refer to. In this case, fire is not a taboo as when fetching it from a neighbor. It is openly spelt and its power for fertility is evoked. Here, fire is deemed source of life.

Smelting/Smithing- Invoking Creation and Power of Fertility in the Medium of Fire and Women

In my previous presentation regarding the origin of the first smith, I have concentrated on the heavenly origin of the first smith and the first fire from which the first ritual tool-*Kallacha* was forged. The special value attached to *Kallacha* must have its origin from the source of the material, which is a celestial one and whose panhuman nature will be discussed later on. In Oromo, metal has different qualifying attributes. In general, the Oromo term equivalent to metal is *Sibiila*. However, when they are qualifying it as iron, they term it as *Sibila Gurracha,* which literally means black metal. Why is iron termed in Oromo as black? What is the meaning wrapped in its literal characteristics as color? The major question that needs to be analyzed is how black metal comes in the context of the first metal object, *kallacha*-which is the product of the sprinkling fire of Waaqa. It must be understood in the context of the myth of origin of the materials, which is celestial/ heavenly. Since the Oromo understand Waaqaa as black, the color attributed to the metal/iron might have originated from such nature (see Burka 2011).

On the other hand, the Oromo smelters/smiths have developed different techniques of extracting relatively pure iron from the crude ore of different kinds available in their respective ecological niche. In Wollega, the major

constituents of iron ore are hematite or hematitized magnetite (Burka 2006, 2011; Hamrla 1966) which is black in color.

Iron ore is not understood as a non-living thing. They understand it as a living one being dichotomized into male and female based on its strength. Such classification is made when the ore is dried under the sun (Fig. 6) or when it is pounded by hammer when smelting (see Burka and Giardino 2012; Burka 2011) is undertaken. The stronger one (strong under hammer) is classified as male (*Korma* literally bull) and weak/easily powdered one is attributed to female (*saakuree*). For instance, the Oromo smelters sing one of love songs during smelting in southwest Wollega explicate the significance of the term *saakuree*:

Gordana Winsaa Qocee Qixalamaan Saakuree;
Silaa Dibbeen siiergaa qixxelamaansaa uree,

Literally means

If it were not for iron ore from Winsaa Qocee (traditional mining site),
I could have sent you Dibbee (a traditional drum girls use during love song) piercing its center.

The Oromo, as elsewhere in Africa, have the notion of understanding iron smelting as productive/ procreative activity. It involves the result of natural mating between female and male or at least adding ambiguity to it as well as its maker- who is good and bad, creator and the creature- who evokes creation through the fertility of imaginary woman- the furnace in the medium of fire. He is who both creates and destroys by converting things from one state (e.g. ore) to another (e.g. bloom) - instigating imaginary fear that the smith would transmit himself from human to dangerous wild beast such as the hyena.

Fig.6: iron ore processing in northeast Wollega (left) and in southwest Wollega (right)

Accordingly, mining sites are revered even after the activities have stopped over the last fifty years. The mining sites are respected as areas where ancestral spirits still hover. Members of the clans associated with mining and smelting visited these sites annually. They used to provide various forms of offerings including slaughtering an old cow- *dullacha* (Burka 2006, 2008), not a male one any way. Not a heifer either. They demand for *kan gara saaqqatte*- the one that has `operated` her abdomen meaning that has delivered a calf or so. The productivity/fertility of the animal for such an offer is central.

Iron smelting starts from putting together inputs such as iron ore, clay, smelting house as well as offerings. Offering is one component of iron smelting procedure. It offers insights into the perspectives of the people who deal with it at different levels of production activities ranging from procurement of natural products to producing useable cultural objects. Smelting house, for instance, has the setting to allow the appropriate space for furnace and display of other ingredients of the smelting. As the fireplace in traditional Oromo house is situated at the center of the house, the furnace is located in this same place. The furnace faces towards the front door. As the fireplace has three stone pillars for cooking one of which called the stone of *Maaramii* (fertility mother) facing the front door, the symbolic

productive organs of the furnace (*faaliqa*, breasts- generally the front side) are facing towards the front door of the house. *Gomjii maaramii*[3] is situated in the same place and orientation of *faaliqa*. Although iron smelting is surrounded with a number of protective rituals, its location inside the house might lend a clue that its activities are one of the domiciles.

During the smelting, a number of offerings such as drinks but above all a mother goat is given accompanied by prayers calling upon the spirits of land, water, trees and of ancestors to help the smelting successful (see Burka 2006, 2008, 2011). Goat is regarded as a potent, sexually active and agile animal enabling successful smelt in other words successful procreation. Sheep is not preferred because it is regarded as 'dumb' animal and not helpful for the activity that needs to arouse spirits of reproduction. Goat reared by the smith is always regarded of healing power for various malicious diseases (see Burka 2009).

On the other hand, there is metaphoric relationship between childbirth and the final stage of smelting. When the smelting was over namely the separation of bloom from the unwanted ingredients is at its final stage, the smelters particularly the master smelter who acts as the husband to the furnace wife prepares the rituals surrounding delivery (Fig.7). In addition to murmuring prayers, a climber is prepared. The master smelter (the symbolic husband) breaks the front aperture (*faaliqa*) wide open to allow the oozing of glowing red charcoal and residues of smelt. Water is smeared over the glowing fire to give it lasting life so that the charcoal might be used for other (smithing purpose). When most of the burning charcoal is cleared out of the bottom belly of the furnace, it becomes evident that the fetus (bloom) is seen hanging onto the furnace attached to hanging tuyères.

[3] In the fireplace of the traditional Oromo house, there are three stone pillars called *Sunsummaa*. Number three is metaphorically taught to children indicating the stone pillars, as education is delivered near fire. Of the three stone pillars, the dominant one facing the front door of the house-that usually faces to the East is called *Gomjii Maaramii*, Mariam's stone. Mariam is a fertility rite. The secret of the stone is revealed during the fifth day of cleansing ceremony, called *Shanan*, five days after the woman gave birth. The day is a day of rite de passage, whereby different offerings are conducted as the woman is sitting in front of the stone with her friends eating traditional food and singing songs conveying meanings of fertility and acknowledging the fertility mother.

Fig.7: final stage of delivery through the *faaliqa* bottom aperture

The master smelter breaks down the hanging bloom using wooden hoe. After it is dragged to the front aperture (*faaliqa*) of the furnace, the smelters pull it out. The next step is to use the climber (*hidda*) which is used to drag it (Fig.8) through the front door of the smelting house to the garden in front of the house. Here, smelters inspect closely on the productivity of their work. The first level of separating the impure from the pure iron is made. The slag (*balxii*) is beaten off. Fragments of bloom are collected. In the past, marketing used to begin at this juncture although iron ore was also traded across the region. This is the marketing of a semi-cultural material, the bloom (*Dilalii*). *Dilalii* (*Callaa*) is used to represent the pure grain after it is cleared of the chaff. In this, the Oromo used the parallel meaning of terms in agricultural production for iron smelting. It is true also with furnace, which they know as *Gumbii* or granary (see Burka 2011 for parallels between furnace and granary).

Smelting is not a final stage in iron production. The retrieving of the bloom (Diilali) is however a critical stage in the processes of iron production. It is equaled with childbirth, which is a critical stage in pregnancy. Similarly, the final thrashing stage in agricultural production is regarded as critical because there is fear that some evil spirits might involve and reduce or complicate the amount of yield the farmer expects. As the farmer makes some offerings and protective medicine to protect sorcery

from affecting his yield, the master smelter also provides similar offerings for different purposes - including abstaining from some `impure` things or actions.

Fig.8: a dragged bloom leaving marks on the ground, still glowing

After the bloom is retrieved and preliminary cleaning from slag is made, it needs to be forged into useable cultural product (tool, weapons etc) at the smithing forge by smiths who occupy separate social category from smelters- at least in their present ethnographic setting. Unlike the smelting procedure, however, smithing does not need ritual procedures to produce objects. According to Wollega smiths, different tree species are needed for forging from smelting. However, such claim seems to be not working where those tree species are absent; smiths would use available hard wood in the environment. The smiths of southwest Wollega have already begun using charcoal made of eucalyptus tree (Burka 2008).

The forging process on the bloom is also a tricky business in that a proper control of fire is as important as the one in the smelting furnace. During the reenactment of smelting in southwest Wollega in 2007, I have observed that smiths were overwhelmed by bubbling of a liquidated bloom and had to call upon an experienced forger who, before the practice has

stopped in the 1960s, participated in the smithing from the locally produced bloom (Fig.9).

Fig.9: bloom at bubbling stage in the smithing forges in southwest Wollega

Discussion

In his 'Archaeology as Anthropology' Lewis Binford (1962:218) argues that the study of material culture has different classes of meaning. Accordingly, he suggests that a) We should not equate material culture just with technology; b) We should not seek explanation for observed differences and similarities in 'material culture' within a single interpretative framework of reference; c) We cannot excavate kinship terminology or a philosophy but; d) we can excavate material items, which functioned together with behavioral elements. It is in light of this namely that material items provide different classes of interpretation of culture that the data from Wollega is situated.

Iron metallurgy is characterized by complexity. That it needs high level of temperature attainment makes it uncommon place among every society

particularly in early times which is a case in Africa (see Phillipson 2005). African iron smelting technology underwent a remarkable degree of variety throughout the continent (Haaland et al 2002; Haaland and Haaland 2007; Mcosh 1979; Chirikure 2004; Holl 2008; Burka 2011, 2013; Childs and Schmidt 2001; Childs and Killick 1993; Schmidt 1997; Mapunda 1997).

However, crosscutting such variety of technological apparatus such as the furnace, there seems a panhuman type of similarity in the areas of the socio-cultural aspects surrounding iron production (see Haaland *et al* 2002). In the first instance, there seems to exist a very similar belief system surrounding the origin of its technology. In many societies in antiquity (in ancient Egypt, in Levant, Greece, among many societies of Europe, among the Oromo), the origin of metal is attributed to heavenly one. In connection with this, heavenly fire in the form of thunder/lightening has given it special place for the origin of the material and the knowledge to forge it into some form of material- the first material being a symbolic one than a utilitarian object.

We have elsewhere argued (see Burka and Giardino 2013) that the myth of origin of metal and its smith from heaven is a story pertinent to human society in different parts of the world. Among 'nomads' in the Sinai, it is a commonplace belief that if a warrior is armed with a sword forged from metal of heaven i.e. meteoric iron, he would not be vulnerable to attacks in a battle (Mcosh 1979). Similarly, there exists in Oromo the belief that metal of Waaqaa in particular and metal in general plays extraordinary roles than just utilitarian purposes. For instance, farmers believe that he who owns a slice of thunderbolt and puts it in his granary would feel confident about productivity of his yield. In addition, it is commonplace in Oromo that a piece of metal or an amulet or a spear point is held for its protection against malevolent spirits or protects one from the act of evils such as sorcery.

In light of this, the ritual, or the non-physical aspect of metallurgy is both integral part of the process itself and that it takes place in much overlapping activities or dilemma. In the first instance, iron smelting symbolizes the process of impregnation and childbirth, which is a dangerous position. In relation to this, fire is symbolizing death and life, fire being both destructive and productive. In another level of meaning, the smith/smelter occupies a liminal position as agent of production and

destruction. The smith who is both a ritual person and a forger takes both personalities of man and woman. In Oromo myth of origin, the smith (Hinnoo) was not only a ritual head, the prophet but also discovered in the wilderness by the hunters wrapped in Oromo colors, metal and beads - taking the position of man and woman, an ambiguous position.

As a smith, also he takes the position of Waaqaa as a creator. He creates things. He creates things in the medium of fire. He turns things to state, which is not reversible. This symbolizes that he acts as if he creates life. For instance, in order to evoke fertility of his smelt, he symbolically converted an object furnace into a woman. He temporarily marries to his furnace woman. Thus in order to ensure the fertility of his furnace woman, the master smelter performs various forms of ritual performed in other realms of life such as agricultural fertility/productivity. The Oromo furnace in southwest Wollega around Aira-Gulliso is an anthropomorphic one. It is a furnace depicted as pregnant woman. Its front side is decorated with fertile breast, the mouth and glottis, head, ears and productive organ. During the period of smelting, participants particularly the master smelter (the symbolic husband) abstain from any sexual conduct with their biological human wives since they have made a ritual marriage with the furnace woman.

In the middle of the smelting, an offer is made. A mother goat is slaughtered and its blood smeared on the chest of the furnace between her breasts. In this paper, I have attempted to present the interaction among furnace, fire and woman and their philosophical bases in Oromo life. Thus, it gives insight that iron metallurgy in Oromo is not just a separate entity. It is part of the way of life of the people. At least the people have adopted iron metallurgy into their cultural milieu. In other words, the procedures involved in iron smelting are not alien to the cultural aspects of the Oromo people. Although the purpose of the discussion had to do with the ritual aspects surrounding iron production, human procreation and agricultural productivity, such entrenchment in the cultural milieu of the people hints that the culture of iron metallurgy has a long history with the people.

Conclusion

Amongst Oromo artisans in Wollega we have two kinds of iron smelting furnace structures, the one in east Wollega, which is conducted in

underground and the other in south West Wollega - a furnace with superstructure. Although Oromo tradition constitutes crosscutting issues in the realm of iron smelting, agricultural activities and the role of woman in invoking fertility, such is paramount and vivid in iron smelting procedures conducted in the anthropomorphic furnace of south West Wollega. The lesson from procedures involved in Operational Sequences of iron smelting in south West Wollega underlines the significance of further research such as how the people understand securing productivity in different sectors of economic activities as well as human and even animal fertility. More ethno archaeological works that excavate deep into the people's bricolage might enlighten us with similar Oromo worldview elsewhere in the country, not just Wollega. As I have demonstrated in this paper, what might be regarded as trivial in western academic discourse, such as ritual performances, are integral part of the life of the people whenever they engage with nature or culture.

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[4] Although I have employed the use of Ethiopian names as common to other researchers, with regard to my contribution, I used the second name instead of the first since such usage has entered into the use in various literatures long ago.

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