PART I

Listening with Patience
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The Ethiopian leatherworker gathered his fingers together, forming a beak near his mouth, and simultaneously flicked his wrist away from his mouth, opening his hand to the air and aspirating a slight puffing sound—engaging body and sound to emphasize that I should leave this topic alone. I asked him about a story that I had heard from his neighbors concerning stone hidescrapers causing harm when they were discovered in their yards or near their houses. Despite his brush-off, I persisted and thought he said something to the effect of I did not need to know this and it was not old enough now. At the time, it did not occur to me that what was not old enough was me. After all, I was 31 years old and married and considered myself an adult. In my mind, I thought he was speaking about the practice. I was a culture-bound listener (Kuhl 2004), not only in the literal sense of having a difficult time distinguishing between words in the Gamo tonal Omotic language. I was also culturally bound in my way of viewing the world. I could not comprehend that I was not old enough to have access to particular knowledge and thus could not hear it. I would also learn slowly, through long-term participant research among the Gamo, that many Gamo perceive that stones are living entities that literally can move and cause harm. At the time, I was caught in my own experiences of being-in-the world, a human-centered perspective in which object agency is relational (Gosden 2005; Meskell 2004; Robb 2010; Sillar 2009). I was unable to discern the Gamo perceptions of the world and how the clashes in our understandings were intimately entangled with differences as to how we related to resources and technology (Clammer, Poirier, and Schwimmer 2004).

I began my studies among the Gamo 20 years ago as an ethnoarchaeologist, determined to access non-Western worldviews of material culture. My goals,
though, were external and mimicked the declarations of Western archaeological academia of the era, which emphasized that ethnoarchaeology was a research strategy that observed practices and behaviors in living communities to test Western archaeological theories and academic approaches (Binford 1978; Gould 1978; Hayden and Cannon 1984; Kleindienst and Watson 1956; Yellen 1977)—a perspective that persists today (Lyons and Casey 2016). My hubris as a young scholar held me back. Only after deeper reflection on my methodology and gentle and persistent guidance from many Gamo Elders did I realize that I refused to be caught and begin transforming into a new phase in life—a stage that would provide me with access to a wealth of knowledge.

I was not a true apprentice to the Gamo, which severely hindered my access to the exact knowledge I desired. I realized that I was simply trying to fit what I observed into Western scholarship and validate Western theories as universal rather than recognizing the legitimacy of alternative ontologies (Alberti and Marshall 2009; Henare, Holbraad, and Wastell 2007; Viveiros de Castro 1998). By simply testing and retesting our theories of the world, we severely limit our ability to provide new knowledge and constrain solutions for future action and understanding (Gonzalez 2012). We not only lose substantial understanding when we dismiss the intellectual contributions of non-Westerners and nonacademics, we also are engaged in intellectual imperialism (Gonzalez 2012; Smith 1999:25–28; Viveiros de Castro 1998). If ethnoarchaeology is going be relevant to the future of our discipline and to the publics we serve, we need to “change like a snake” as the Gamo would say and shed our academic skins.

We must move forward and acknowledge a wide range of intellectual contributions concerning peoples’ definitions, perspectives, and relationships to other beings in the world. We need to identify and situate ideas and practices within their proper present-day and historic ontology in a given time and place through onto-praxis (Scott 2007:21). Ethnoarchaeologists should engage onto-praxis by embedding material analyses in reference to local histories and lives—creating the space for revealing the vast tapestry of cultural variation, rather than resorting to universals that tend to homogenize creating tensions and conflicts. The Gamo taught me that learning and immersing oneself in an alternative way of knowing the world/a theory of reality/an ontology (Gosden 2008) occurs bit by bit and requires time, maturity, and the skill to listen. We need to position ourselves in longitudinal relationships that build mutual rapport and respect, apprentice ourselves to earn the privilege and honor to be introduced to alternative ways of knowing the world, and consciously listen and adjust the acoustics with
which we hear and understand the deeper and variety of meanings of words as they play out in proverbs, rituals, daily practices, and materials.

Longitudinal Investment and Learning to Listen Bit by Bit

The Gamo transmit their philosophy and ontology to the next generation bit by bit. They believe that a person should acquire knowledge by synthesizing information piece by piece through experience, that wisdom is contained in small bits such as proverbs, and that knowledge is accumulated over the course of one’s lifespan little by little, according to one’s life course status. Experiential learning, storytelling, and age/status-based knowledge are fairly widespread means of education outside Western society (Barnhardt and Kawagley 2005; Cajete 2000; Kunnie and Goduka 2006; Smith 1999). In at least one account, an ethnoarchaeologist noted (and misconstrued as a joke!) that participants informed him that the knowledge he requested required a lifetime of learning (Binford 1984, 157). We continue to believe that our academic credentials create an exception for us and that weekend and short-term studies are viable means for deriving knowledge outside of our own culture.

In the late 1990s, when I first went to study lithic technology among the Gamo, I was confident in my methodological plan and in my status as a competent adult. I was 30 years old and married. Having left home for college at 16, I had long felt independent. Perhaps like many graduate students, I also was secure in my intellect and knowledge-base derived from years in Western academic training. Few publications in the 1990s explicitly discussed ethnoarchaeological research methods and even fewer exemplified longitudinal research. Notable exceptions included the work of Nicholas David (2008, 2012); Susan Kent (1993, 1998); William Longacre (Longacre and Skibo 1994; Skibo, Graves, and Stark 2007); and Peter Schmidt (1996, 1997).

I realized that I needed ethnographic training and spent the bulk of my Ph.D. course work focused on immersing myself in ethnographic and historical methods and case-studies. I was aware of the importance of language competency, cultural relativity, building rapport, census surveys, questionnaires, mapping, in-depth interviews, collecting life histories and oral traditions, engaging in participant observation, and committing to a long-term study (Arthur and Weedman 2005). Two to three years was the recommended time-frame for dissertation-based cultural studies. I was funded for two years, which seemed like a significant portion of time to dedicate to living abroad and adequate time
to build rapport and obtain the knowledge I sought. Learning Gamocalay, the local language, was a challenge, and I hired a schoolteacher to improve my vocabulary and sentence structure. To further complicate matters, I was working in 10 different political districts, which all had their own dialect. Already in my thirties, I greatly exceeded the point at which my brain and ear had converted me to a culture-bound listener (Kuhl 2004).

I still need clarification today on several words that sound almost identical to my ear; the difference is that I know that these variations exist and I know to ask. Learning the nuances and variation in meanings within words, phrases, stories, and proverbs that revealed Gamo perceptions of the world and their material culture required a much longer time and the assistance of many patient teachers, including my assistant for the last 10 years, Yohannes Ethiopia Tocha. These intangible aspects of Gamo culture were initially invisible to me not only because of my lack of language skills but because I had naively believed that the Gamo would accept me as an adult and consider my two years living in the highlands substantial enough to demonstrate my commitment and generate close rapport. It was not. Although I left with a wealth of knowledge that I previously did not have, I knew very little about their perceptions of the world or their perceptions of material culture, and my publications concerning Gamo material culture were embedded in academic theories common in archaeology (Arthur 2008; Weedman 2002, 2005, 2006).

I returned to the Gamo highlands in 2006 to begin a community-based archaeological project in the Boreda district that would concentrate on places in the landscape that were identified by the Boreda as significant to their heritage (Arthur et al. 2017). My project goals were entwined with personal, political, and academic changes. I grew up with the privilege of not being concerned with my heritage—except that secrets seemed to weigh heavily on us. I learned with the passing of my mother’s parents that they had hidden their Jewish and African American heritage to protect us—a decision that left me with the uncomfortable sense of how quickly and easily one’s past can be subsumed.

I also was influenced by movements in the United States and Australia by descendants who were demanding control over their histories (Deloria and Wilkins 1999; Funari 2001; La Roche and Blakey 1997; Smith 1999; Watkins 2000; Weiner 1999). For years, I had been teaching a course on non-Western religion learning about the diversity of ways of being and understanding in the world. I was determined that any future research I conducted would be directed by the Gamo and how and what they wanted preserved concerning
their heritage and that it would need to forefront their perception of the world. I worked with interested members of the Boreda-Gamo community, including men, women, youth, Elders, farmers, and craft-specialists, recording their historical knowledge recounted in life histories and oral traditions (Arthur et al. 2017). Elder men led me to their Bayira Deriya (ancestral landscapes) and provided details of their ancestors’ settlements, wars, and hunting expeditions. Many Boreda-Gamo identified the household and community spaces of their ancestors based on their historical knowledge and on parallels that they drew in space and material culture with their present settlements and households. This led to more ethnoarchaeological research in which we mapped different households. They taught me and demonstrated to me a variety of technological and ritual practices. Boreda-Gamo Elders also requested that I make maps to accompany their narratives, preserving the locations of their sacred places and settlements associated with their Bayira Deriya. In the course of augmenting some GPS (Global Positioning System) readings at one Bayira Derre (singular) at Barena, I met Detcha Umo (Figure 2.1), a spirit medium who caught my ear.

Figure 2.1. Detcha Umo, Boreda spirit medium. Photo by author.
when he crystallized the indigenous Boreda-Gamo method of learning in the phrase “little by little.”

At the start of a cool and clear day in 2012, I was exasperated, which makes me impatient and less likely to listen; by the end of the day, I had met the spirit medium Detcha Umo and was listening attentively. At the beginning of the day, I was reviewing GPS data for Barena, a subdistrict of the Boreda district, when one of my colleagues informed me that I had not recorded the locations using the correct reference system (hence my annoyed state). I had to return to Barena and revisit the more than 20 sacred places, which meant one more day reading numbers off a device rather than spending time with Elders and learning about the significance of the locations from them. My one solace was that I would have the opportunity to return to the Zala Gago debusha (coming together meeting place), one of the best-preserved sacred places in Boreda. I started my day there.

Unexpectedly, I was distracted almost immediately. It was both a market day and the time of year when men were plowing their fields. But when I arrived two men were sitting on the rock wall that enclosed the sacred meeting place. One of the two men was sitting on a heavy white blanket with a bright red fringe and his hair was arranged in six long braids, atypical for a Boreda man; he was a Maro or spirit medium. A majority of the Boreda spirit mediums are women, who as children are caught in river water by the Dydanta (water spirits), nearly drowned but saved. They recover in seclusion in their father’s home, offer a sacrificial sheep to the spirits at a feast at their father’s house, and thereafter serve as mediums between the spirit and human world (Arthur 2013).

We accompanied the spirit medium named Detcha to his home and learned that the Dydanta had caught him as he was getting ready for his circumcision ceremony. He began shaking, so the people bathed him in water. Afterward he spent a long time in his father’s home recovering. Ever since this event, the spirits have spoken to him. People bring the stories of their misfortunes to mediums like Detcha, who in turn hear from the spirits how people have offended them and the ways in which they can make amends and relieve their misfortunes. During our conversation, Detcha described his practice: “We have a science of religion—all this I do is science, for all answers we try and try again, little by little, it is a process based on observation and experience” (Detcha Umo, personal communication 2012; Arthur 2018:66). Detcha’s transformation through water and the phrase “little by little” conjured Zara Yacob, a man considered to be Ethiopia’s founding philosopher.

In the seventeenth century Zara Yacob wrote a treatise titled Hatata, which ar-
argued that it is best to acquire knowledge bit by bit through human rationality, and in doing so broke tradition with his contemporaries in Ethiopia as well as with “Frang” or European scholars (Sumner 1986:38–39). Hatata “refers to a mode of thinking marked by penetrating a phenomenon with the tools of inspection and examination piece by piece” (Kiros 2005:45). Zara is recognized as the founder of the African Enlightenment and a rival to Descartes, as he reasoned that wisdom comes not from God but through the process of experience (Kiros 2001, 2005). Zara’s emphasis on experiential knowledge irrigated a future course of learning for many Ethiopians that differs from that of the West (Kiros 2005).

Many Boreda taught me how learning bit by bit, building on my experiences, listening to them, and learning the deeper meanings to their words, proverbs, and phrases was essential to my ethnoarchaeological research methods. Boreda wisdom and philosophy are transmitted in small bits, in their proverbs and sayings. Indeed, several scholars of Ethiopian philosophy argue that the wisdom of Ethiopian thought is revealed through proverbs and oral communication rather than through long treatises (Kiros 2005; Sumner 1986). For my own instruction, Gamo Elders doled out information little by little and left me to ponder and sort out meanings and connections for myself (Figure 2.2). When I met them next,
they would question me and make adjustments to my knowledge. When I finally correctly expressed their meaning, they would smile, nod their heads, and say, “Now you know our secrets!” Their discourse was infused with proverbs such as “A wise man listens and speaks little” and “The hen does not give birth immediately.” A conversation documented by ethnographer Marc Abélès (2012 [1983]:35) illustrates that this method is widespread in the Gamo highlands: “It is not in the course of one day that woga [Gamo ontology] can be learnt. Besides how lengthy is the germination process after the seed is sown! Does the hen give birth immediately? Day after day the egg is brooded, and similarly your knowledge will grow little by little.”

For many, Gamo knowledge is transmitted slowly through experience, through a process, and throughout one’s life time. The importance of the connection of listening, time, and wisdom is expressed in Ethiopian thought as early as the sixteenth century in the Book of Philosophers:

The wise man is he who knows the time, the time to speak, and the time to keep quiet, the time to listen, and the time to reply. (Kiros 2005:4)

The wise man is like a farmer who knows the time of the maturation of his crops. (Sumner 1974:223)

A wise man gives up his world and examines the future. (Sumner 1974:226)

Sumner (1974:221–224) argued that sixteenth-century Ethiopian thought diverged from contemporaneous Western thinking in that “time is the creation in process”: it has stages and is ordered, though it lacks a predestination controlled by God. Learning and acquiring knowledge requires rationality, piecing together knowledge bit by bit, listening, and knowing when to move forward.

In a biography by Teodros Kiros (2005), Zara Yacob credits his life experience to the development of his wisdom, a description that parallels the Boreda philosophy and acknowledgment of life stages. Zara attributes his wisdom to his life, recalling his birth, his education, his fall into a ravine, more education, and his seclusion in a cave, where he secured refugee from persecution (Kiros 2005). Similarly, many Boreda say that people learn proper behavior and practice, including technological practices, little by little, in accordance with changes in their life course marked by rites of passage that mark new phases of social responsibility (Arthur 2018; for similar rites of passage descriptions, see Freeman 1997, 2001; Hamer 1996; Kassam 1999; Turner 1969; Van Gennep 1960). The Boreda crystallize their philosophy in the proverb “Keep changing like a snake,” which conveys to youth that life is a process that changes bit by bit in
stages, with the shedding of former lives to move into the future. If individuals fail to transform in life, they are *t’unna* (infertile and wasteful), which has the potential to create chaos and disrupt the world.

Men and women who properly transform into their different life course stages from a human infant to child, circumcised youth, married adult, wise adult/ritual-political leader (including a Maro; plural Maroti), and ancestor living with seniority and prestige (*bayira*). Each rites of passage ceremony symbolizes the human life cycle and consists of a particular act at each stage of the rite: birth—cleansing with water (*yella*), circumcision—cutting (*katsara*), maturation—seclusion (*dume*), marriage—feasting (*bullacha*), and transition to new being—cleansing with water and anointing with butter (*sofe*). As in the case of the seventeenth-century Ethiopian philosopher Zara Yacob, who acquired new knowledge after falling in a ravine (Sumner 1986), river water is an essential transformative medium in all Boreda ritual practices. Boreda spirit mediums are caught in river water, instigating their transformation into Maroti (Arthur 2013); at birth Boreda newborns are washed with river water; and at puberty young men wash together in the district boundary river prior to their presentation in the community as young adults. In addition, Boreda acquire knowledge during ritual seclusion in forests and households, like Zara Yacob, who secluded himself in a cave. A Boreda person's maturation from a child to a circumcised adult for men and to a mother for women is considered the most important life transformation and is accompanied by a long ritualized period of household seclusion.

Many Boreda recounted in their life histories that they began to learn their trade in life and its connection to their indigenous ontology (Etta Woga: Fig Tree Culture) during seclusion (*dume*) rites of passage for puberty (for men) and marriage (for women). For example, a Boreda leatherworker stated: “When I was a youth, I was circumcised. I began to stand by my father, side by side. During *dume*, I learned and practiced to scrape. I learned to produce my own hidescrapers” (Osha Hanicha, personal communication July 2012; Arthur 2018:78).

When I first began working in the Gamo highlands I was married but without a child. I brushed off persistent comments by women that I should leave and return to my husband’s house to produce a child (Arthur 2020). I was unaware that many Boreda perceived me either to be a child or to be infertile (*t’unna*), incapable of change and thus not ripe to receive adult knowledge and responsibilities. The absence of a child signaled that I had not participated in long-term household seclusion after marriage when the first child is often conceived. After a woman births her first child, she acquires a new status and title (*mischer*) in
society. During her social reproduction, her seclusion in the married household, she acquires essential technological knowledge from her mother-in-law and sisters-in-law. She learns her future technological responsibilities in society: farming, brewing beer, spinning, basketry and gourd work, and possibly making pottery and its connection to their indigenous ontology, Etta Woga.

Ten years after I began to work in the Boreda highlands, I returned and spent the subsequent eight summers working with Boreda. I brought my child with me. For many Boreda, my return demonstrated my long-term investment in their community and the birth of a child signaled my status change into a responsible adult. Not until a ceremony at the most sacred of all Boreda landscapes in which my daughter was initiated into the Boreda community did Elders express that as her mother I was now mischer and also a Boreda adult (Arthur 2020). After this point, ritual specialists made themselves available for me to interview.

As a mother, I understood the responsibility of helping forge an identity for the next generation and quickly realized that two years was a short-term investment in any social relationship. I had a sense of understanding the importance of the past, change, and the future. I was now ready to accept and internalize adult knowledge and mature enough to represent these ideas to others. Boreda men and women, in turn, began to disclose to me their philosophies, foregrounding a deeper understanding of their relationships and perceptions of technology. Today most Boreda practice Orthodox Christianity, but many, particularly Elders, continue to hold to the proscriptions outlined in their indigenous religion, Etta Woga. I came to know how the phrase “bit by bit” was significant to the Boreda of the southern Ethiopian Gamo highlands in terms of their way of knowing the world—their ontology: Etta Woga, particularly their way of acquiring and practicing lithic technology.

Reproductive Ontology: The Birth and Death of Stone Tools

In old days they celebrated by sacrificing for the Spirits and they assumed the earth has its own spirit . . . they believed in the power of the earth, stone, and tree. Every village had Tsalahay trees and water. (Shara Luga, personal communication, 2007)

In the Boreda-Gamo perception of reality expressed in Etta Woga, humans and nonhumans (including trees, water, mountains, caves, and stone) are alive (Arthur 2018). The essence/life force/spirit (Tsalahay) of being embodied soil,
stone, water, rainbows, sun, moon, and wind that came into being through the reproductive forces of the earth without human interference. Evidence of their existence was their ability to change exhibited in the life cycle (deetha) and their creation through the reproductive process. Like humans, stone tools shed their skin and proceeded through life-cycle rituals that were parallel in space and action to those of humans to ensure their proper development.

Boreda knappers perceive stone tools to be male. Chert and obsidian began life as parts of the parent raw material, a fetus (gatchino), and proceeded to become an infant (uka) individual piece of raw material, a boy (naža) tool blank, an unused tool (pansa) youth, a married (wodala) hafted tool, and an Elder (chima) tool ready for discard. Deetha organized leatherworking and lithic technology into five stages facilitating proper practice and ensuring the longevity of the stone being. A stone being is birthed and washed in water (yella) at the quarry; he is knapped or circumcised (katsara) at the quarry and at home; he is secluded (dume) in storage at the home; he is married with the haft in the household (bullacha); and is reincorporated into the earth (safe) in garden discard. When nonhumans enter Boreda social life, Etta Woga stipulated that humans have a responsibility to respect and properly interact with nonhuman beings, which impacted the practices associated with the birth and death of stone tools.

Give Birth to Stones

The phrase “Give birth to stones” is generally considered a grave insult among mala, who define themselves as farmers, working land that they have acquired through agnatic descent. The phrase speaks loudly of the contempt that many Boreda farmers harbor for the status of leatherworkers and their perceived infertility in society as a result of birthing stone. Etta Woga established rules that insist birth is a female activity and that reproduction involves male and female interaction. Knapping and leatherworking are male-controlled technologies among the Boreda. Excluding women from “reproduction,” particularly birth, is a transgression of the natural order. Male leatherworkers during their puberty rites of passage formally participate in their first offensive act by birthing knapping stone from the earth—infringing on female reproductive authority as midwives.

In the past, young men were circumcised with stone knives prior to birthing stone. As the knives first transformed a young man, he then gained access to practices and knowledge for transforming stone. Yet his act of birthing stone was a transgression. His neighbors, the mala farmers, prohibited him from complet-
ing the final ritual stage of puberty rites of passage, which is public incorpora-

tion at the marketplace (sofe). Consequently, stone tool–using leatherworkers do

not fully transform and shed their skins, reinforcing publicly their impure and

infertile status. Within Boreda communities, leatherworkers historically were

referred to as tsoma, who inherited their trade and were forced to live segregated

lives from mala in marriage, diet, resources, and community, and household

space. Their perceived impure status prohibited leatherworkers and other craft

specialist tsoma from entering the sacred forests and caves with springs at the

ancestral landscapes (Bayira Deriya) and from participation in historic ritual

festivals, such as the summer solstice renewal bonfire or light festival (Tompe).

Leatherworkers, though, birth their own light (tompe) in the form of chal-

cedonies at their sacred grounds—quarries (Figure 2.3). Quarries are located in

river gorges. Like Bayira Deriya, which are located on mountaintops and caves

hollowed and eroded by the rain, quarries are direct evidence of the vitality of

the earth. In river gorges of the lowlands, the earth as womb is penetrated by

Figure 2.3. Boreda knappers working at a quarry. Photo by author.
the rain, creating chert nodules. Quarries are a part of a knapper’s patrimony: access to quarries is restricted based on a man’s patrilineage just as *mala* restrict access to Bayira Deriya based on their claims of direct descent from the founding settlers (Arthur et al. 2017). Knappers travel to quarries in small groups, usually consisting of an experienced Elder and his sons or grandsons. Inexperienced and younger men never travel to quarries alone due to the potential for danger.

Elder leatherworkers often place bowls of porridge in tree hollows or at the edge of the river at the quarry, as offerings to the spirits (Tsalahay) to protect the quarrying group from the earth’s harmful forces. Flooding waters have swept men to their deaths, landslides buried them in early graves, and illness often inflicts a man after he has quarried. As a living entity under the Boreda way of knowing, Etta Woga, a stone has the potential to cause harm and also earns the right to be properly cared for from the moment it is born to ensure its proper development. With the guidance of experienced knappers, men work to remove nodular cherts from the earth, dismissing surface materials. They select only nodular cherts, which exude a shine or light (*tompe*) as evidence of their life force (Tsalahay) to be birthed. These small nodules are considered to be fetuses (*gatchinotta*). Knappers in each community prefer particular colors of chert, which they believe are more developed than others. Stones not only communicate through light and color but also issue sound.

At the quarry after birth, the infant stone is circumcised (*katsara*) or knapped and is perceived to emanate a sound. A nearly blind leatherworker stated that he selected proper knapping stone by the sound that the stone makes when he knaps/circumcises it. He whispered that when he struck the stone it spoke Odetsa, the secret ritualized language of the leatherworkers. Leatherworkers use the word *tekata* to refer to knapping, which literally means “to protect,” and the debitage that is removed is referred to as the “infertile waste” (*chacha*). The implication is that the act of knapping, like circumcision at puberty and removing the umbilical cord at birth, is an act of protection. Knapping protects the future of the infant stone and allows it to develop by removing the impure infertile aspects. Knapping is considered the most difficult aspect of leatherworking and requires years of listening, observing, learning, and practicing with expert and master knappers. Just as they would not leave a human youth to mature on his own or alone in the presence of other youths, expert knappers do not leave knapping to the whim of youths. Stone is protected, and youths practice for at least 10 years in the presence of experts, who directly intercede on the behalf of the stone
and may even take over production. The Boreda perception that stone is a living entity encourages long-term apprenticeships and control of lithic reproduction by experts. Western archaeologists and narratives often assume that lithic technology can be self-taught or learned through experimental attempts to mimic a tool’s form (Bordes 1947, 1961; Flenniken 1984; Tixier 1974; Tostevin 2012). This approach amplifies the perspective that stone, clay, and other earthly materials are nonliving, resulting in a lack of concern for nonproductive events. In the absence of direct instruction from experts in experimental studies, novices produce a large amount of debitage and often do not produce actual tools or produce nonfunctional tools. Their knapping results in production errors (for a collected list of errors, see Bamforth and Finlay 2008). Expert Elder Boreda leatherworkers closely monitor and assist youth for at least 10 years before apprentices are encouraged to knap, engage, and bury stone scrapers on their own. Boreda experts take over production of tools from novices, resulting in fewer production errors, a consistent production of viable stone being (tools), and community standardization in tool form that is contrary to experimental studies (Arthur 2018; Weedman 2002). The Boreda perception of stone tools as living beings ensures that skilled knappers have a responsibility to protect the birth and the development of stone tools. As stone tools mature and reach an age when they are no longer productive, skilled knappers carefully bury them in household gardens.

_The Spirit Mediums Are Never Fools, the Leatherworker’s Neighbors Are Strong_

What is seemingly hidden from the unaccultured ear in this proverb is the power of discarded/deceased hidescrapers. Leatherworkers’ neighbors are the _mala_-farmers, who are strong because they have the protection of the spirit medium. Historically and to some extent today, leatherworkers and their stone hidescrapers are considered the source of many misfortunes and problems in a community. To contain the perceived pollution of leatherworkers, they reside separately from farmers at the edge of communities on grades that are too steep for agriculture. Their segregation may be considered a symbolic state of persistent seclusion (_dume_) and their inability to transform and shed their skin. Stone tools as beings associated with leatherworkers spend their lives in a leatherworker’s household compound and are also considered by many _mala_ to be the source of infertility and pollution.

When a stone hidescraper is no longer functional or dies, he is buried with other hidescrapers near the base of a tree in the leatherworkers’ garden. It is
common practice even today to plant a tree at the burial site of a deceased family member. In the past, leatherworkers, other craft-specialists, and even the children of *mala* who did not complete their puberty rites of passage ceremonies were buried in household gardens rather than in the cemeteries at Bayira Deriya. Final discard or incorporation (*sofe*) of all lithic materials, the deceased scraper (*hayikes*), and the debitage or infertile waste (*chacha*) takes place in the household garden (Figure 2.4). The *hayikes* return to the earth and rejuvenate the life-cycle process, supplying the essence for new stone beings, like the essence of the leatherworker who transforms into an ancestral being.

The leatherworkers intentionally and carefully bury stone beings in their household gardens to respect the stones and prevent them from wondering and settling elsewhere, where they may inflict harm. As noted at the beginning of this chapter, chert and obsidian sometimes are perceived to bury themselves in the houses or household gardens of the *mala*, who believe that the stones, particularly obsidian, contain a bad spirit (*Bita*) that will bring them misfortune through infertility of fields, domestic stock, and people. “The black one [obsidian] was only used on hoofed animals with wounds, not people. The black one, like a dead cat
or rat or wood on someone’s land, can cause bad things to happen; it can have a bad spirit” (Badheso Tera, personal communication June 2008; Arthur 2018:70).

A mala who finds the offending item in his house or compound consulted the community spirit medium, who prescribed the diagnosis as Bita practices. The spirit medium suggested how the Bita could be removed, usually by offering a goat and placing enset leaves full of roasted barley around the person’s property. Enset and barley are perceived to be among the oldest of crops and have a seniority featured prominently in many Boreda rituals in association with fertility and well-being. Leatherworkers said that whenever they acquired some small bit of wealth, they would be accused of encouraging the stone to move out of their household to bring misfortune. The community’s punishment for Bita practices was either to ask the offender to provide a small feast for the community or to impose further sanctions restricting interaction between the leatherworker and other community members. The perceived impure status of male knapping-leatherworkers and the recognized vitality of the stone tools ensures that both are spatially segregated from the larger community. Learning slowly, bit by bit over decades, through proverbs and observations, eventually led to my exposure to Boreda ontology or perceptions of their relationships with nonhuman beings and clarified the Boreda lithic technological practices and status of the male leatherworker.

Conclusion

Longitudinal research among the Boreda has awakened me to the importance of letting oneself become a cultural apprentice who develops sensitivity to the existence of a wide variety of historical and present-day ontologies that inform technologies. By listening and submitting to the Boreda practice of learning bit by bit through proverbs and experience and by maturing in my own time, I eventually was given access and the responsibility of learning their ontology, Etta Woga. Etta Woga is significantly different from the ontology of most archaeologists. In the past and some Boreda today perceive that stone tools have a biography and the power to change in the presence or absence of humans as well as the power to impact humans. The living status of stone tools sets a moral order for interaction. Male conscription of “reproduction” results in low status of the male toolmaker, contrary to Western tropes. Etta Woga also ensures that apprenticeships are long term, emphasizing community investment in the care and well-being of nonhuman beings.
The Boreda ontology Etta Woga shapes the life of both the knapper and the stone tool. According to the tenets of Etta Woga, all matter is in existence, sharing an empowering essence, which most closely resembles other African ontologies (Diop 1974; Karenga 2004, 178, 186; Obenga 2004). All beings demonstrate their existence through their ability to change, which is instigated by a reproductive process that may or may not involve humans. Knapping stone is born and comes into existence without human interference through other earthly life forces in a kind of vitalism. The stone has a power to cut and circumcise a youth, to enter households and fields causing infertility, and to influence other earthly agents resulting in harm. Once a stone enters human social life in a seemingly relational alliance, the stone experiences a life course that includes circumcision (knapping), rest in the house (storage), marriage (hafting), activity in the house (use), and burial (discard) in a knapper’s garden. I am hesitant to categorize Etta Woga as either animistic (Tylor 1871), vitalist (Bergson 1998 [1907]), or relational (Astor-Aguilera 2010). Like many African ontologies, it incorporates aspects of all of these. Subsuming it under one would eliminate the space for recognizing non-Western ontologies as legitimate alternative realities. The Boreda ontology through which many perceive stone as alive cannot be subsumed under animism, vitalism, or relational theories. It is a unique ontology.

Gaining the knowledge and the permission to relate alternative ways of knowing the world requires longitudinal studies and a willingness to shed academic training and theories, deferring to listening and experience. I am not unaware of the voices of students and current practitioners of ethnoarchaeology. I understand that most scholars who practice ethnoarchaeology do so in departments or programs in archaeology and that ethnography and the four-field approach emphasized in some U.S.-based anthropology departments may not be widespread. I am cognizant of the simultaneous emphasis on STEM (Science, Technology, Engineering, and Math) programming and funding that shrinks money and resources for long-term humanistic research. Archaeologists are increasingly aware that descendants have a human right to control their heritage; they equally have the right for their present-day materials to be kept in the context of the ontologies in which they came into existence—to be accredited for their theories of reality. Longitudinal research and accepting that communities may have other status criteria for transmitting knowledge to researchers in spite of their academic ones is essential for engaging in ethical ethnoarchaeological practice.
Notes

1. I use the word “caught” intentionally as a reference to Gamo perceptions. Individuals are caught by others and encouraged to transition to new phases in their lives.

2. In Ethiopia, people are respectfully addressed by using their first name rather than their surname or father’s name.

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