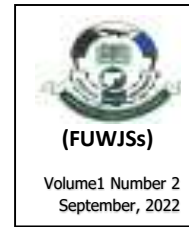


MAPPING OF SOCIAL LIVES OF WASTE ELECTRONICS (E-WASTE) IN NIGERIA'S SECOND-HAND COMMODITY SPACE

A. A. Akintunde

Bowen University, Iwo, Nigeria

abel.akintunde@bowen.edu.ng; abelonhigh@gmail.com



Abstract

In explaining used-objects' materiality, emphases have always been on abjection and terminality of these objects, especially as used-objects such as used-electronics are often classified as e-wastes, thereby denying their biographies and possible life experiences when discarded by initial users. This paper attempts to provide a sociology of used-objects in Nigeria with a focus on how the materiality of these used-objects is socially constructed. Using the notion of *sociography*, the paper examines the subjective and empirical value of used electronics within the context of reuse and social relations of second-hand culture of consumption and merchandise in Lagos, Nigeria. Findings indicate that Nigerian e-wastes are symbolically "born again" within three basic *sociographies* identified as commodity *sociography*, fabricate *sociography* and the *regenerate sociography*. These illustrate the materiality of West-used, non-functioning and discarded electronics voyage from meanings of abjection and materially terminal lifespans in the West are transformed into symbolic indeterminate lifetimes after importation into Nigeria. The three sociographies show that there is reinvention of waste into tradable goods. In this sense, used objects in Nigerian second-hand commodity space undergo a transition from abjection and debasement, into valuable biographies that make these used-objects not to be seen and treated as waste any more. The paper concludes that there is a shift from 'lifespan' to socially constructed 'lifetime' dimensions of used objects in the Nigerian second-hand commodity space. Thus, the paper urges re-thinking of e-waste policies in Nigeria that are currently rooted in material abjection (toxicology) and finitude (obsolescence); to situate e-waste policy design within the direction of symbolic significance by social actors.

Keywords: Second-hand, 'born-again', sociology, *tokunbo*, social action

Introduction

Used objects such as electronics wastes (e-wastes) have terminal lives; this is commonly indicated in the popular phrase, end-of-life (EOL). This observation has come under elaborate critique in scholarly 'object-discourse' circle (Grower, 2010; Cooper, 2012). The critical argument is that, even after exit from their initial or 'inceptional' use, initiated by a discard, objects do not instantly or necessarily transfigure into wastes (Woodward, 2011; Pelletiere & Reinert, 2006; Gibson, 2010; Ture, 2013; Chevalier; Appadurai, 1986; Kopytoff, 1986; Gregson, Metcalfe & Crewe, 2007). Discard by initial users may have assigned to the materiality of used objects (household and other electronics), the prospects of waste and EOL (Osibanjo & Nnorom, 2007, Herat & Paratiamby, 2012), yet the act of discard itself is a process and not an end in itself. That is "discard" only signals a channel, conduit, or phase, in the life of material things (Chevalier, 2013) that paves entry into alternative use and value biographies (Ture, 2013). Thus, to assign an object an end-of-life or terminality, based on discard upon initial use, is inadequate; moreso, because "discarding", as a social practice, is more often defined subjectively by individuals than by any objective definition of such in the market (Akintunde & Omobowale, 2019; 2021). As such, some goods still remain functional even after they are purportedly discarded off (Grower, 2010). The "objective" arguments of pro-materiality scholars can hardly withstand critique from those who prefer to see material reality - used object's materiality, as socially constructed. The social constructionist will therefore argue as we do in this paper, that the fate of used objects hinge on how they are subjectively defined.

This paper advances the position that, depending on human meanings, assigned to objects, materials have shifting and unfixed nature, and can transform and undertake new use lives. A reconstruction of this thesis is that the incarnate capacity of used objects derives not from their physical materialities, as such but from the meanings being assigned to them by humans. Accordingly, the paper contends that EOL discourse can only provide a partial and inadequate explanation of the biography of used objects. This is because in focusing on the abjection and finitude of used object materiality, as the EOL discourse does, the perspective naturally

evades the social meanings of used objects, particularly of the roles that humans play in defining their fates as materiality.

Of course, relations between humans and discard objects, such as e-wastes, have been established in literature (Puckett, Byster, Westervelt, Gutierrez, Davis, Hussain & Dutta, 2002; Toxic Link, 2003; Schmidt, 2006; Jeffries, 2006; Tereda, 2012; Herat & Paratiambay, 2012; Khan, 2014). However, the inattentiveness of pro-materiality to the role of human meaning-assignees in the life of objects, has only encouraged the tendency to ascribe determinism on used objects over the capacity, capability or ability of human actors to create meanings and interpretations that could frame objects as subjects and subjects as objects. In the case of the narratives framing used electronics as e-wastes, their emphases on abject (toxicological) and finite (obsolescing) materiality of these electronics has led to the framing of human actors mainly as the vulnerable and disadvantaged category. Their position is based on the ideas that embedded metal materials in used electronics pose toxic harm to humans and environment (Herat & Paratiambay, 2012; Toxic Link, 2007).

Therefore, they advocate for Environmental Sound Management (ESM) of e-waste, and for Extended Producer Responsibility (EPR) to key into the ascription of determinism on objects over those humans who are constantly framing them into something else. This critique of the e-waste epistemology does not necessarily downplay or make light the possible and actual hazardous nature of e-waste materiality to humans; rather, it points to how the e-waste epistemology either fundamentally overlooks or blurs those dynamics of how e-waste materiality is shaped and determined by humans as objects. It is therefore needful to unravel the “fate” of these materials as it is conditioned not just in view of how objects impact human actors (Woodward, 2011; Puckett, 2002; Schmidt, 2006; Jeffries, 2006; Osibanjo & Nnorom, 2008), but more precisely as these objects are framed and shaped within flexibility of time, in the life of actors working within meanings and social relations of consumption (consumers, producers and traders, reusers). If any issue is pertinent in the foregoing, it is the need to understand the destiny of used objects’ materiality and their fate, and to come to terms with the episodes constituting what Appadurai (1986) and Kopytoff (1986) have described as the “social life of things” (of used electronics –e-waste). In exploring the complex fate, biography and identity of used

objects, as precipitated by actions and meanings sustaining the human social relations around these objects, and within a temporary frame, the social lives and cultural biographies (Appadurai, 1986; Kopytoff, 1986), are examined in this study using the concept of *sociography*. While the immediate section of this work details the relevance of sociography to the discourse, in the rest of the paper, the *sociography* as used is established within the used or second-hand market of imported used electronics merchandise in Lagos, Nigeria.

Sociography as Understanding of the Lifetime of Used Objects

Sociography as a concept aims at understanding, defining and engaging waste objects, not in terms of their physical materiality that is often framed according to obsolescence and abjection (Clapp & Princen, 2003; Cooper, 2007; Robinson, 2009; Cooper, 2012) but as they are socially constructed and related with in terms of values which people subjectively and contextually assign to them (Shove, 1975; Omobowale, 2009; 2012; 2013, Gibson, 2010; Stobart & Van Damme, 2010; Chevalier, 2013). The researcher operationally defines the *Sociography* as the subjective but empirical value biography and lifetime identity (graphy) which a used or “waste” object experiences within the context of reuse and social relations of second-hand object culture (Omobowale, 2009). In *sociography*, the voyage of used objects is from their materially presumed EOL (*lifespan*) into a *lifetime* which adjourns their end-of-life (Omobowale, 2009). Hence, in time there is a remolding of their fate. In this sense, used objects are seen as in a transition out of abjection and debasement into frames and value episodes/biographies other than waste. It is in view of such biographic episodes that one is able to speak of objects as having their own contextually specific lifetime identities which challenge popular material understandings of objects as wastes having terminal materiality.

Etymologically, *sociography* is coined from social and geography, whereas *socio* depicts those social relations and the subjective inter-actor-object meanings, which assign any used object, including waste with lifetime(s) (based on biographic value frames and assortment of frames) that these objects take on as people ascribe to them subjective meanings other than those projecting material abjection and debasement. ‘Graphy’ on its part, denotes that social space(s) and context of use, reuse and the second-hand culture in which objects are

assigned with value frames. In essence, if objects have social lives and cultural biographies as Appadurai (1986) and Kopytoff (1986) had proposed, then *sociography* aims to identify, characterize and to locate those specific and empirical value frames and episodes within biographic (lifetimes) that constitute these social lives and cultural biographies of things respectively. It is, therefore, through *sociography* that used objects, including waste such as e-wastes, are accorded posteriori purpose and essence depending on given contexts of subject-object-relations and spans of interpretations defining those relations. And since *sociography* focuses on the context of object use-reuse and second-hand culture, then the starting point for analyzing any object's *sociography* is that object's point of exit from its initial (inceptional) use after manufacture. Hence, it would be inadequate to speak of the *sociography* of a brand-new object because it has scarcely exited that phase of inaugural use upon manufacture. The key concern of this study is to unravel the *sociography* underpinning imported used electronics products coming into Lagos, Nigeria from the West; but are classified in pure-scientific literature as e-wastes owing to their obsolescing and toxicological materiality (SBC, 2011; Puckett, 2002, 2005). In other words, this study seeks to understand what contextually specific value frames/biography and lifetime identities there are that objects experience according to local meanings within the context of reuse and the second-hand social relations in Lagos, Nigeria?

Theoretical Framework

Considering the centrality of meanings to the transmutative values and experiences of otherwise waste electronics, already described in this study as waste electronics, this paper adopts Max Weber's social action theory. The central argument of Weber's social action's theory is that action, whether as action towards things (mere action) or as action towards people (social action), are predicated on and motivated by subjective meanings (Bendix, 1954; Marshall, 1998; Hogan, 2009). What this means is that action towards a given reality and in this case the importation of electronics wastes and the local treatments being meted out to them cannot be the same per time across different actors, even if these actors cohabit within the same environment such as Lagos where this study was conducted. This is central to the extent

that Weber regards meanings as the bedrock of human action and the bedrock for a possible scientific understanding of it (Baker, 1999).

To be interpreted, an individual's action towards any given reality must therefore be studied based on what Weber postulates as *Verstehen*. A term by which he believes the scientist embarking of the sociology of action is obligated to penetrate into the subjective world of meanings of an actor's action to be able to analyse or explain action (Coser, 1977; Hogan, 2009). A sociological study of action which fails to factor in the possible subjective meanings motivating an action therefore automatically fails at what he considers as "a sociology per-excellence" (Coser, 1977). For Weber, what *Verstehen* helps to achieve is understanding and he treats *verstehen* and understanding synonymously. A successful science of action is therefore dependent upon a successful penetration of the world and web of meanings of an actor. In other words, Weber's central belief about *Verstehen* is that the researcher of action or a set of actors must necessarily ensure to come close to experiencing the reality of action from the lens and perspective motivating it. This is closely captured by what David Silverman describes in Thomson and Tunstall (1971) as ensuring to "experience their experience". Implicitly, a study of what happens to imported waste electronics within the purview of the selected markets therefore relies upon immersion into the interpretive domains of actions, both individual and collective which drive the enactment of actions towards otherwise waste electronics and interactions between actors based on e-waste.

Emanating object-studies and sociological research on people's actions towards things, which Weber describes as *mere action* have buttressed the centrality of the social action theory to studies of things and these studies have commonly centralized their explanations of human relations with objects and things within purviews of domestic household contexts of use, storage and reuse (Wiseman, 1975; Stobart & Vanne Damme, 2010). And rarely have these studies been intentional towards creative interpretive relations of people with things, particularly within markets and commodity-use and reuse spaces. With Weber's theory of action and his postulate that subjective meanings are bedrocks of action and social action (Marshall, 1998; Ritzer, 2008; Hogan 2009), it follows inevitably that that people's actions and relations towards imported used electronics in Lagos and interactions between them based on meanings will produce

heterogenous forms of object-relations and make visible series of culturally specific indigenous object-relations culture characterizing the popular Imported electronics markets selected for these study.

Materials and Methods

Why is Lagos key to this study? The relevance of Lagos for understanding the *sociography* of used objects is that it has evolved overtime into a haven of thriving international second-hand electronics economy in West Africa. This evolution informs the historical recognition of Lagos as an economic centerpiece and the largest modern metropolis in Nigeria and in West Africa. The irony of the evolution is that it presents this megacity as a space of polycentric contradictions (Akintunde & Omobowale, 2019; 2021). Apart from being a place which celebrates the rich life and ethos of hard work, ingenuity and capacity for local technological innovation and adaptation, Lagos is also replete with crime. Obono (2007) describes this contradiction as the ‘enigma and stigma’ of Lagos. He blames the Lagos contradictions to the traumatizing psychic conditions inflicted by the encroachment of suburbs in this ‘cittiness’ in which inequality underpins social relations. Lagos ultimately produces a freak moral order and social chaos mixed with ethnic norms, and lower class consciousness which are internally derived .

In Lagos, as data reveal, Imported used electronics acquire enigma despite stigma, and a transformative value despite their perceptually abject (toxicological and obsolescing) materiality as e-waste. Of the many markets in Lagos, the three major ones popularly recognized locally and internationally for merchandise and consumption of imported second-hand electronics are the Ikeja Computer Village, the Westminster Used Electronics Market, and the Alaba International used electronics Market. A qualitative research method was adopted to collect data from consumers and market actors of imported used electronics in the study areas in Lagos using primary sources. Accordingly, the study utilized the purposive sampling method to gather data using In-depth Interviews (IDI) and key-Informant Interviews (KII) which were sorted, categorized, content analyzed. To allow balanced spread in the selection of interviewees across the study locations, Ten (10) In-depth interviews and Ten (10) Key-Informant Interviews were conducted in the Alaba International Second-hand Electronics market, the Computer Village and the Westminster Used

electronics Market Lagos, Nigeria, with the following actors namely: Merchants (Used Electronics Importers and Sellers who have spent at least 10 years in the used electronics trade and who have relationships with scrap electronics dealers) and technicians who often deal with semi-functioning and non-functioning used electronics who have spent minimum of 5 years as used electronics technicians in the market, and end-users who have narratives to offer on their encounters with scrap and waste electronics. It is needful to state that this methodology and data generated are part of the author's larger PhD thesis (2016). To establish and validate the currency of data relative to when it was generated, conversations held with market officials and select market actors confirmed that, besides Covid-19, the current reality of the market has not been outmoded by data generated therefrom well as those presented herein.

In studying imported second-hand textiles, automobiles and electronics, Omobowale (2010, 2012, 2013a&b) used the concept of *tokunbo* (that which arrived from abroad) to denote the symbolic 'local social appreciation' of these imported goods in Nigeria. As Nigerians celebrate and preferentially consume what 'comes from across the Sea' over locally used electronics products; or sometimes too, the new *chinco* –Asian electronics made for Africa, what happens is that Nigeria becomes a haven not only for trading of, and ascribing value to, otherwise waste and used objects, but also a destination for them. Basically then, this study traces how within what we describe as three sociographies (Commodity sociography, fabricate sociography and regenerate sociography), the use of the terms *non-tested* and *tested* are creatively deployed into the subjective constructs of *tokunbo* to socially frame such and transit then from abjection (terminal lifespans) into indeterminate *lifetimes*.

Sociography, as explained earlier denotes those specific contextual value frames and biographic lifetime identities that a used or "waste object" experiences according to people's subjective meanings and interpretations in the context of use, reuse and second-hand object culture, in this case, Lagos, Nigeria. As would be seen below, this paper presents how otherwise waste electronics voyage from their pure-scientifically assigned label of abjection (obsolescence and toxicology) into three contextually specific value frames illustrating biographic lifetime identities (*sociography*) of waste electronics in Lagos, Nigeria. What especially mobilizes the

voyage of these objects is nothing but the deployment of local creativities and ingenuities tied around everyday market meanings, interpretations and social relations of use, reuse and second-hand culture in Lagos. The first phase of the used electronics *sociography* to be discussed is the commodity *sociography*.

The Commodity Sociography

The defining attribute of the materiality of imported electronics objects is their being assigned an exchange value which derives from the meanings local consumers attached to them. In Lagos second-hand market the used electronics are seen as nothing else but consumable and tradable commodities affordable and usable. They assign meanings to these objects, based on value:

anything made for the utilization of the white man is more superior to those intended for the African market because those in Europe have a working standard, and anything used by them is definitely superior to those considered as new here. The notion of superiority is still very much around us here (KII/ market Official and IUE trader/2013).

With the superiority assigned to the Western production, and specifically, to West-used electronics, nothing produced locally can be like them. It is not their abject physical materiality (non-functionality) that is to limit their value but rather the subjective consumer interpretation of Western capability; its power of creativity. By this, there is an idealized value of the goods from the West and this idealization serves as the catalyst which could aid the transition of materials to patronizable commodities in a commodity *-sociography*. A commonly used local concept in describing the perceptually and actually abject materiality of imported used electronics is the term *non-tested*. In the market usage of this coinage, the corollary/opposite is “*tested*”. That which is “*non- tested*” initiates the “*tested* electronics” into the commodity *sociography* locally. Whereas the “*non-tested*” indicates that there is yet no ground to trust the efficiency of the performance of the electronics, it could also in the context of repair of such objects be assigned such value ascriptions as non-functionality, dismemberment, broken-parts, severed power chords and uncertain functionality. The “*tested*” on the other hand, indicates the material status of such non-functional IUEs that have

been locally restored and ascertained by specialized technicians in the local market. An interviewee explains that:

“every imported used electronics usually comes into Nigeria as *non-tested*, however we give them to our mechanics and engineers who fix them. That name ‘tested’ (which is the opposite of non-tested indicating certitude and functional materiality) is therefore, “an attribute assigned to things in this market after our technicians have repaired them” (IDI/IUE TRADER/2013) and found them to be suitable.

The *tested* and *non-tested* symbolize the initiation of the object into, and the gradual but successive commoditization of waste electronics. The price systematically edge off the abject label of e-waste, which pure-scientific research had assigned to these electronics thereby making them appear as Porsche and tradable commodity. While the *non-tested* stands for that which could be bought cheaper, as more affordable imported used electronics which have not been tinkered with, the *tested* represents the costliness that is assigned to those electronics whose functionality has been restored and ascertained within the market’s standard measures. However, both *non-tested* and *tested* may initially indicate *low* and *high* costs respectively, but as noted below, they gradually reveal peoples’ preferential orientations to goods:

Non-tested *tokunbo* is usually way cheaper and consumers prefer to buy them than the costlier tested ones. If you are buying non-tested which is for instance N20, 000 (Twenty-Thousand Naira), you may have to pay N35-40,000 (Thirty-Thousand Naira) to get its equivalence which is tested. Because consumers always prefer cheaper ones, they always buy non-tested (IDI/ Seller/2013).

The goods enter into *-sociography* with flattering local interpretations aimed at exchange value, such as through a utility value, and thus acquire immunity from what is technologically-defined in pure-scientific research as end-of-life. What matters to consumers is, whether goods still remain durable and progressively useful, as well as whether they are affordable as disclosed in the following quote:

The truth is that brand new electronic items of nowadays are gradually diminishing in quality and you cannot compare them with those that have been made before. The *tokunbo* have a

superior quality and that makes their parts continuously useful and impossible to just throw away. The cover of a CD player for instance may become a waste if it is broken but not the engines; parts of the engine can still be useful for something with time (IDI/IUE Consumer/2013).

Consequently, as an interviewee argues, “insofar as used electronics are concerned, in this market, there is nothing like expiry or expiration, no matter their state. You can still make sales out of them” (IDI/Merchant, 2013). Issuing from the consideration of *non-tested* as well as *tested* electronics is the localizing of the global; in which case,

Quite apart from those buying within the market, we also have people coming from other West African countries. And that is why this place is called an international market; people also come from different parts of Nigeria to buy. Customers come from Benin, Osun, Ibadan, Onitcha, Aba, Portharcourt (notable states and cities in Nigeria) and other places. They call and send money into my account and their boys come to pick them up. In fact what we import are scarcely enough for the buyers (IDI/Importer/2013).

The seemingly abject materiality of objects acquires value as the waste electronics objects technically move further into the commodity-*sociography*, as a result of favorable local meanings created by consumers. The *non-tested* electronics as e-wastes never have expiration of life or ‘end-of-life’. They remain a commodity and as nothing else. In fact, it suffices to argue that both *non-tested* and *tested* have come to inscribe on imported used electronics commodity and exchange value that contextually blur out their presumed abject material symbolism as obsolescing and toxicological objects.

The Fabricate-Commodity Sociography

Within the commodity *sociography*, a new life for the imported non-tested electronics begins as the object is mobilized from abjection into value within Lagos market. But the next step of the material is to be introduced into the level of fabricate-commodity *sociography*. In Lagos, fabrication is a means by which wastes are put into new forms. What distinguishes the commodity in the fabricate-*sociography* is, first of all, that parts of the imported commodities can be cloned into existence to fit consumers’ affection; as attestation to local initiatives

and creativity. The second distinction is that locally used and waste (non-functioning) electronics are feigned to appear as good as one foreign through careful deception and seduction of unsuspecting buyers in which there is seller exploitation of 'sameness' of type, to capture the interest of naïve and unsuspecting consumer who cannot make out the difference.

What happens in the fabricate *sociography* is that sellers surreptitiously disincorporate and rework the coinage "non-tested" into three different types, making it easy to present all kinds of imaginable electronics, including those not imported for sale as *tokunbo non-tested*. Below, an interviewee highlights the creativity behind such disincorporation of *non-tested* into the fabricate-commodities status through a presumed "end-of-life" saying:

When we talk of non-tested, we refer to those electronics whose functionality is under probability. They are of three types: those which may or may not work (probable functional), those we call grade, - they usually have minor errors that you can always fix on your own or by involving a technician. It may just be a little wire cut or something... The third class is what we call the broken. Usually, the client is never allowed to unwrap them. We are to tell you that that is how the importer originally packaged them and that is how they were bought (KII/IUE seller/ 2013).

The unsuspecting consumers are being entrapped by the covert self-benefiting schemes of sellers, pronouncing their creativity and marketing ingenuity in the following fashion:

These people commonly assemble bad electronics which have been trashed and they package them as *tokunbo* (imported) non-tested. They sometimes even bring electronics that are non-working from home and carefully package them together with real imported *tokunbo* non-tested using sealed nylons. Consequently, most ignorant buyers who believe in this market so much often end up as victims and leave here sad, weeping and disappointed. Yet the big problem is that, when such sellers are done selling, they close their shops and vacate such locations for another. Like the university where a student must be attentive and careful to learn, this market presents the naïve onlooker and buyer with the crisis and challenge of sorting out real imported electronics presented by all the funny characters present here (KII/ IUE Seller/2013).

For buyers not to be cheated requires more than just their physical presence, to personally verify the object, but also the mental alertness to be able to escape the deceptional ploy underpinning sellers' sale of the electronics as *non-tested*. The evasive nature of sellers of the *non-tested*, indicated by their tendency to vacate initial trade locations for others implores consumers to be cautious in this market space when buying *non-tested*.

The creative agents are called the *Oso Afia*. They go round the market canvassing those seeking *non-tested* goods, and luring the unsuspecting ones into patronizing commodities that has been fabricated systematically by them. In this game:

Non-tested sellers work hand-in-hand with *Oso afia* and they operate as a group. If an *Oso afia* calls you now, there will be four others following you. They know themselves but behave and act like normal buyers. It is often like a drama but that is just part of their business. When you (buyer) accept to move with an *Oso afia*, you will hear yet another *Oso afia* saying '*oga follow am, na my brother get the shop*' (meaning 'sir follow him, the shop he is leading you to belongs to my brother). To cast away your doubts and to help you summon courage, another one of them would also come out from somewhere else telling you to follow him (KII/CSO/Alaba International Market/2013).

The mobilization of goods into fabricate *sociography*, also involves a sense of a disclaimer which is to further ensure the functionality of the objects:

"What you see is what you buy and what you get is what you bought. That means that at the point of buying *non-tested* from the container, every buyer is fully aware that 'what you see is what you buy, and what you got is what you bought. It also means that in case a buyer opens the box and finds nothing inside, she or he does not blame anybody" (KII/ Market Associational head/2013).

Buyers are cajoled or coined into taking, full responsibility for purchasing what could come out to be a fake commodity. The implication of the disclaimer on buying *non-tested* imported used electronics is that buyers lack power to ask for warranty, and "even when they ask for guarantee, the sellers do not owe them such: "we cannot give them anything like guarantee (IDI/Seller/2013)".

“What you see is what you buy, and what you got is what you bought”, in the disclaimer phrase, is already an apriori caution and warning to consumers and the would-be consumers of non-tested, that with buying a *non-tested* electronics comes full responsibility for any possible consequences or surprise that comes up. The seller, by the same token, is hence exonerated out of the duplicit, of buying a non-tested electronics whose functionality are inherently unascertained. The guilty is, invariably, the buyers:

“buyers are the problem because they prefer cheap articles and they do not know that it is fake. Most of them seek for cheap things and what turns out as cheap are the non-tested *tokunbo* electronics and that puts them into much trouble. Hence, you have to beware of hustlers (*Osoafia*), if they get you they take you to the wrong place” (IDI/IUE seller/2013).

These buyers that unconsciously fell into schemes of their own exploitation by others. That they proceed with purchase of *non-tested*, particularly when they even have knowledge of the overt and covert risks of the “non-tested”, they gamble with their money; falsely thinking that wastes had been mobilized for another value. Therefore, “when it comes to buying purely non-tested, it is a game of luck and that is what we call it (IDI/IUE Seller/2013)”. This means, whatever disappointment follows any purchase within the fabricate *sociography*, arising from the untamed affection of consumers for imported and particularly, the *non-tested* is self-inflicted.

Regenerate Commodity Sociography

From the fabrication phase, the commodity moves into the regenerate *sociography*, the last of the steps. The term *regenerate* is a qualifier of the notion that electronics objects have anything like an end-of-life (EOL). In this phase, the non-functionality of used electronics and the full knowledge of it ironically do not instantiate the EOL of electronics but, instead, enhance their chances to live on. The market's guiding philosophy orchestrating the voyage of used electronics' materiality into the regenerate value episode is the assumption that the non-functionality of *non-tested* can become functional. This term, therefore, is that which inscribes on, and empowers the, materiality of e-wastes, a sense of no matter their abjection, there is the capacity of an incarnation that can accord them another form of value. A buyer explains how this phase enhances the incarnate materiality of these imported e-waste from the West, when he said:

I prefer imported used electronics to brand new ones because the advantage of repairing imported used electronics is higher. They are more repairable than new ones. There are some certain parts that get spoilt in brand new ones that may be difficult for technicians to repair, but when it comes to imported used electronics, they can always be repaired (IDI/Imported Used Electronics Buyer/2013).

While the fabricate sociography explains the crafty assignment of value to waste electronics through subtle fabrication, the regenerate sociography shows how imported "non-tested" electronics are systematically mobilized into value and significance through the market's creativity exhibited by technicians. The sustaining notion is that these objects are, indeed, repairable.

Technically, the otherwise abject -non-tested materiality of e-waste signifies opportunity and profit, but not a disadvantage for those serving in the market as technicians. And even when, in fact, some of these imported used electronics may sometimes defy resuscitation, the optimistic interpretation of these objects as 'repairable', makes it difficult for consumers to accept that what they have can experience an end-of-life or witness any kind of terminality. But, rather it is

endowable with a perpetual utility. This is ingrained in the mindset in the consumers.

The belief that IUEs are repairable is sustained in fact by the belief in technicians who exist in the market and who specialize and engage in repairing the non-functional (non-tested) electronics. They are empowered by volatility of the market into testing their capacity to repair electronics into functional, tradable and consumable objects. Though the cannibalization is structured into parts, there is possibility of restoring the non-functional back to functionality, and the supposedly dead electronics can get a tradable value making them merchandisable. And because as already noted, warranty and guarantee do not exist for those purchasing *non-tested* electronics, the presence of the repairers means power of unlocking the potential of *non-tested* - of that which eventually failed to function for a service back to life as commodities for reuse in the Lagos second-hand market. This ascription of the *non-tested (non-functioning)* with a merchandise value is contextually coined as '*merchantabilization*' while the term '*merchantabilizer*' (*from the same term*) is technically used to describe these technicians in the market; because in restoring the non-functional back to life, they also inscribe those objects with exchange value which raises them from abjection into consumable commodities. The rise of "*merchantabilizers*" and their corresponding asset in delaying the end-of-life of e-waste EOL is presented below:

When we bring in non-working electronics such as television sets, our boys in this market would always innovate and device different ways of making sure that they discover what is wrong and seek for ways of fixing them back. This way, audio outputs of non-functional appliances are restored and these electronics begin to work again (IDI/Importer/2013).

The presence of *merchantabilizers* in the market is central to the regeneration impressions through repairs, particularly among sellers. The sellers' confidence in *merchantabilizers* that they could restore electronics back to life clearly erases any ill feeling about importing what the previous users in the West might have classified as waste. Therefore, *merchantabilizers* are strategic agents not only for sellers of *non-tested* but also as hope for consumers who are not entitled to

warranty and guarantee in the purchase of *non-tested*. To this extent, therefore, the regenerate *sociography* is fundamentally rooted first in the local regenerate interpretations of imported used electronics and second on the transformative value which *merchantabilizers* consequently inscribe on the abject electronics in Lagos by their skills as technicians in the market.

The regenerate *sociography* within the Lagos second-hand electronics market, for the life of e-wastes, means that anyone, not strictly the consumers of imported *non-tested* or *tested* electronics, can now present any and every kind of their non-functional electronics in the market for repairs, in a new form of transaction which again contributes to delaying the end-of-life of these electronics. This contingent transaction is marked by its own distinctive characteristics, within the regenerate *sociography* as *offersumption*. More precisely, *offersumption* is also coined to describe that art of presenting any locally used non-functioning electronics to *merchantabilizers* in exchange for one that is repaired and functional (tested) at a little cost. *Offersumption* makes it possible for owners of locally and recklessly used and, therefore, non-working electronics to present to *merchantabilizers (technicians)* their disused electronics in exchange for functional ones at a token (an amount charged). Whether or not these electronics would eventually function after repairs, the token symbolizes an honorarium for the prospective service of *merchantabilizers* who would employ their skill to attempt regenerating non-functional electronics for the *Offersumers* patronizing them. An interviewee admits to *offersumption* when he said:

Yes, you can always bring any kind of electronics that is non-functional to this market for sale and sellers can buy it from you. Be it LCD, amplifiers, computer, TVs and the like. All you need to do is just to pay a little amount of money (IDI/Seller/2014).

One can argue that *Offersumption*, enabled by *merchantabilization*, presents imported and locally generated e-waste with a whole new commodity value biography and a lifetime identity in the market. The subtle consequence of both *merchantabilization* and *Offersumption* is that unsuspecting consumers patronizing this market strictly with the intention of purchasing imported *non-tested* and *tested* electronics are faced again with a level of deception symbolized by the presentation

of non-tested and tested that comprise both locally used and imported used electronics. The covert nature of this mixture presents buyers with the complex difficulty of sorting out and differentiating between what is the real and what is fake in imported electronics. This account of electronics in the *regenerate -sociography* presupposes that within the meanings, practices and social relations of the Lagos market, abject objects, irrespective of their use histories and materiality are perpetually enabled with the capacity to constantly find a way back to life.

Discussion of Findings

Discarded used electronics objects may exit from their inaugural utilities as non-functional, and may thus proceed into an abject state identified in pure-scientific research as e-waste (Puckett et al, 2002; Jeffries, 2006; Schmidt, 2006; Lepawski & McNabb, 2010; Lepawski & Billah, 2011; Herat & Paratiamby, 2012). But in the Lagos second-electronics, as *appreciated* goods, these same electronics proceed into new fates through contextually specific value frames/biographies and lifetime identities, depicted as *sociography*, which would delay their materially presumed end-of-life. Pure-scientific assumptions proposing that the material life of things are terminal and abject, are inadequate for understanding the social life of things. This is because the *foregoing* makes it possible to see that what image and life a used or waste object takes depends neither on the decision of the original user (discard) nor on its end-of-life label by anyone but on what people (especially within reuse and second-hand contexts) decide or choose to define such object as depending on their subjective meanings and interpretations of them. At least, in the sociography account of used electronics, we see how otherwise abject electronics can and do voyage from physical labels of end-of-life to subjectively assigned frames, biographies and episodes of value and lifetime identities in the second-hand market culture context.

The three sociographies show that there is reinvention of waste into tradable goods using the term *non-tested* electronics. This happens through the allocating of value to supposed waste electronics through various means ranging from, evasive-coinages, fabrication-culture, consumer seduction among others, all of which thrive on the innovative exploitation of naïve consumer meanings and their untamed affections for imported materials by sellers in the Lagos

market. The consequence of seller-consumer relations in the Lagos second-hand market culture is that otherwise abject (non-functional) electronic materials acquire an exchange value by which they are transformed from waste to valuable materials. The transformative possibility of materials from stigma into objects of enigma is no doubt a reflection of the polycentric contradictions characterizing the typical Lagos moral order.

The mobilization of the non-usable, non-functioning electronics into a functional state and, therefore, as tradable goods by technicians - *merchantabilizers* offer new possibility for the electronics to be compared comparatively along with imported used electronics in an exchange described here as – *Offersumption*. Offersumption illustrates the entry of abject materiality into new value identities and empirical biographies. Undiscerning consumers may be lured into buying with the subtlety of sellers and the technicians, desperate to survive, using this market space, to create a blurred distinction between the real and the fake. In the market, anything can come alive again as a commodity, and anyone clever enough can innovatively make a living with such transactions. The transformative value and sociographic experiences of object materiality are not the making of the materiality of objects themselves, but the direct and indirect outcomes of changes being made to the material.

A critical issue underpinning the *sociography* thesis employed in the foregoing discussion is that other than used and even waste electronics, the sociography of other objects do exist and can be explored and identified. This is because diverse contexts of object use, reuse and second-hand cultures can provide illuminating insight into spatially unique and contextually significant value frames and encounters of objects depending on the local usages, creativities and innovativeness being employed in relation to things outside mainstream or even contextual academic frames and labels of objects. And because people's meanings are rarely the same across societies, occupations, specializations and ethnicities, future studies would do well to unravel the contextual biographies and identities into which different objects are mobilized particularly within the context of use, reuse and second-hand culture as the sociography thesis posits.

A fundamental issue raised in the study relates to the concepts of lifespan and lifetime. 'Lifespan of things' is a phrase that has embodied the notion of materiality's finitude in pure-scientific

debates and research on things. But we have in this paper, argued the opposite: suggesting the finite materiality of used object is limiting. The major weakness of the *lifespan concept* and *discourse* is its abject conception of electronics as wastes, as end-of-life. For its tendency to undermine and to blight holistic comprehension of the value experiences and social life of used objects materiality, following their exit from inaugural utilities, the term remains altogether inadequate. The concept of *lifetime* is therefore proposed in place of the *lifespan* of things to understand and comprehend empirical value frames and biographic identities, experiences and situations of used objects. The term *lifetime* relocates focus from the presumed physical materiality and terminality of things to their socially constructed and subjective attributes and fates acquired within reuse and second-hand cultures. Irrespective of their histories (as disused and discarded), the *lifetime* construct therefore obligates object researchers and research towards incarnate and social life episodes of used objects beyond their technologically foretold lifespans as conditioned by subjective meanings within second-hand reuse cultures space(s).

Conclusion

In engaging the Social Life of things (Appadurai, 1986) and the Cultural biography of things (1986), this study's discussion of *sociography* has attempted to remold understandings of used object materiality. It proposes the use of *lifetimes*, in place of *lifespan*, to capture the interpretive and therefore the indeterminate fates of used objects within social relations. It queries the finitude thesis underpinning the end-of-life object research. Using sociography as a heuristic device for articulating the socially constructed materiality of things, the thesis empirically accounts for the empirical value-biographies and contextually specific biographic identities and experiences through which 'abjectified' used objects do witness voyage into transformative value within the second-hand market culture space. The proposition of materiality *lifetimes* in place of materiality *lifespan* is thus supposed to enrich the social life theorizing of used objects. The shift from 'lifespan' to the socially constructed 'lifetime' dimensions of used object materiality, also urges re-thinking on pure-scientific e-waste policies erected on material abjection (toxicology) and finitude (obsolescence) of electronics to situate

policy design in the direction of symbolic significance and fates of used objects by actors. In essence, the sociological exploration of socio-materiality of e-waste would, and do establish the significance of social relations of reuse as important to determining the end-of-life of any good, particularly of used goods in Nigerian markets.

The two major contributions of this work are to the epistemology of object materiality and market studies using the *sociography* postulate. We have been able to identify a process involving different phases of social actions, contemplations and meanings. The process of redeeming the abjection of materiality by commercializing them again into commodities with exchange value, as well as an evolution of a new transaction characterized by presentation of disused and non-working electronics in exchange for functioning ones. These, challenge quotidian construction of actors and transaction underpinning social relations in the second-hand market. It particularly compels second-hand research to begin to examine not only the *merchantabilizers* work as regenerators of imported used electronics but also the fabricator's ingenuity in keeping the "dead" alive.

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