Product Analysis Based on Botswana's Postcolonial Socio-cultural Perspective

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Products designed and manufactured in any country are influenced by local factors, such as the availability of raw materials, human skills, tradition, and socio-cultural culture. The tendency to use available natural resources in harmony with the eco-system is expected that culture plays a crucial role in designing contemporary, socially-acceptable products. This paper describes a comprehensive experimental study involving several products made in Botswana and identifies the underlying socio-cultural factors that influenced their design. The study was conducted in collaboration with design students at the University of Botswana. Visual and verbal data were collected. The results indicate that material, emotional, socio-cultural factors, and social practices have not yet been incorporated completely in contemporary product design. The paper proposes how designers can integrate socio-cultural factors by "contextual design efforts" rather than by "accidental" design, thereby leading to innovative, culturally-oriented and desirable products with wider product acceptance.

Keywords: Culture, Botswana, Design, Product Analysis, Socio-cultural Factors.

Relevance to Design Practice: The research challenges the idea that products are designed for different cultures and supports the idea of local context for the design and development of new products.

Introduction

From a social perspective, and using a postcolonial socio-cultural framework of analysis, this paper describes a socio-cultural study of indigenous products that were designed and manufactured in Botswana. It has been observed that Botswana’s contemporary designers have not yet been able to integrate cultural phenomena to the same extent as physical and cognitive human factors (Moalosi et al., 2005). Therefore, the current study was motivated by a need to conduct research that could assist designers attempting to integrate socio-cultural factors in their design practices. The paper proposes how designers can integrate socio-cultural factors by 'contextual design efforts' rather than by 'accidental' in product design. This would ultimately be expected to lead to more innovative, culturally-sensitive, environmentally-sound, desirable, and user-friendly products in Botswana, which in turn may lead to wider product acceptance.

First, the paper outlines economic and social information about Botswana, proposing that its economy can be diversified through product design. Next, the paper analyses Botswana’s culture, drawing on postcolonial theory. This was done to identify and articulate elements of socio-cultural tradition characterizing indigenous products. Such elements assist designers to draw on a foundation upon which they could extend to new experiences, since the past helps to form the present and future. These traditional socio-cultural factors were then divided into material practices, socio-practices, and emotional factors.

The paper proceeds to report on an experiment conducted on a focus group comprising of University of Botswana design students. Participants, having studied the socio-cultural analysis outlined above, analysed certain selected products relative to the socio-cultural factors incorporated within them and their importance to Botswana’s society. The paper concludes by proposing how socio-cultural factors could be employed in the design of culturally-oriented products.

Botswana’s Socio-economic Framework

Botswana is a landlocked country situated in Southern Africa with an area of approximately 581,700 square kilometers. The population of 1.6 million practices a democratic political system of multi-party politics (Central Statistics Office, 2004). Botswana attained its independence in 1966 from the British Protectorate. There are over fifteen ethnic groups, which together represent a rich and diverse cultural heritage. Of these ethnic groups, 74% speak the Setswana language with its myriad dialects. This valuable heritage must be preserved, nurtured, and developed to foster a strong sense of national identity, pride, and unity (Ministry of Labour and Home Affairs, 2002). However, even though Setswana is the national language, English is the official language.

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The average gross domestic product (GDP) per capita annual growth has been 8%, while the average per capita income is US$3160. This puts it in the category of middle-income, newly-emerging economies. Botswana’s economy relies heavily on diamonds, which generate much of the country’s revenue, as they contribute 45% to the GDP. Tourism is viewed as the next pillar of the economy, contributing 15.9% to the GDP (Central Statistics Office, 2004). Agriculture today provides a livelihood for more than 71% of Botswana’s population, who live in semi-urban and rural areas. These major areas of survival are farming and the rearing of livestock. The most significant agricultural enterprise is cattle rearing. Approximately half (51%) of the households own cattle (Bosworth-United Nations, n.d.). These farmers are supported by the Ministry of Labour and Human Affairs (2002), which points out that the rural Botswana mode of life is inextricably tied to land, manifested in agro-pastoralism. Beef exports to the European Union constitute 5% of the GDP, making this the third largest income generator. Botswana, like all other countries in Africa, is on a quest to diversify its economy so as to avoid over-reliance on natural resources. A possible area for economic diversification could be the design of culturally-oriented products for the country’s booming tourism industry.

Layers of Culture

Culture is not a static and monolithic body of value systems that remains unaltered by social change, but it is dialectic and incorporates new forms and meanings, all the while changing and reshaping traditional ones (Fairclough, 1995). Consequently, it is conceived as a coherent body of beliefs and practices that are dynamic and changing within particular historical periods. Culture consists of multi-layered systems. Schama (2004) suggested that there are two layers, visible and invisible, and that these layers are: 1. Basic assumptions, values, and artefacts, 2. Articulation and transformation, 3. Systems and institutions, and 4. Products, rituals, and behaviours. However, it is hard to draw a precise line between the notions of ‘basic assumptions and values’ (Spencer-Oatey, 2000). In his model, Spencer-Oatey proposes combining the two concepts, because they form the core layer of culture. ‘Basic assumptions’ are deeply held by a society and are subconscious and invisible, while ‘values’ involve the observable culture that a given society claims to hold. This level introduces a useful distinction between what is expressed and what is more internal, or even non-existent, level. Group members are unlikely to share identical sets of beliefs, attitudes, and conventions, which comprise the second layer. The second layer in turn influences the third layer, consisting of systems and institutions.

Culture is associated with social groups, and people are simultaneously members of a number of different groups and categories. This layer is entwined by a split outer layer of culture composed of ‘artefacts and products’ (material objects) on one side and ‘rituals and behaviour’ (non-material elements) on the other side. Articulation includes the visible and easily described elements of culture, which have an immediate emotional impact. (Schama, 1999). Designers tend to overlook incorporating the inner core layers of culture and instead design products that are largely based on the outer layer (Lee, 2004). Lee’s observation is particularly useful to a design approach based on a holistic understanding of culture, which is the approach employed in this paper.

Dynamics of Socio-cultural Factors From a Postcolonial Perspective

Bearing in mind this background, this study analyses the products from a socio-cultural perspective that relates to Botswana’s culture. The paper does the following:

1. Develops an approach for analysing socio-cultural factors that accurately represent Botswana’s culture;
2. Proposes a culture-based set of core values that are applicable for making product design in Botswana more human-centred.

In this context, human-centred design is based on the premise that design is meaningful only when the focus of its activities and outcomes accommodates the largest possible number of people with their diversity. The approach goes beyond the designer’s traditional focus on the physical and cognitive needs of users, and encompasses cultural, social and emotional human factors (Moscetti et al., 2004). This study has been based on this foundation in order to develop a Botswana socio-cultural product analysis that will assist designers in designing culturally-sensitive products.

In order to establish socio-cultural factors, it was useful to draw on postcolonial theory, which points to the importance of viewing Botswana’s culture, like that of other newly-independent nations, from the perspectives of the pre-colonial and post-colonial era (Moscetti et al., 2004). Postcolonial theory recognises the importance of exploring the interactions between the colonising, colonised, and decolonising cultures, and the factors involved in the production of hybrid cultural identities. Botswana’s culture has been shaped by colonisation and has started to decolonise, but the process has yet to proceed very far. The country needs to decolonise its education, values, language, religion, technology,
and social organization, which are heavily influenced by colonialism and globalization. For example, developing countries - and Botswana in particular - need a different approach to design education, challenging the current system that is so predominantly based on Western values that tend to be detached from the needs of some Botswana’s social group.

However, decolonisation is a continuous process that carries on long after formal political independence is achieved. Decolonisation cannot restore a historically continuous and allegedly ‘pure’ pre-colonial heritage. It requires the imaginative creation of a new form of consciousness and way of life (Bhabha, 1994). Postcolonialism involves the coming together of two or more cultures as a result of colonialism and the production of new and different hybrid cultural identities, characteristically distinct from the cultures that initially merged (Hall, 1996). In the process, old habits give way to new attitudes, values, and modes of action.

Botswana’s contemporary socio-cultural factors are a result of this hybridization. The valuable continuities with people’s pre-colonial culture should be maintained while welcoming valuable contributions from other cultures in order to construct a healthy and unique synthesis derived from all these facets (Chinweure, 1975). The understanding of Botswana’s socio-cultural framework that is developed in this paper will be based on the foundation outlined by Chinweure.

Socio-cultural Factors and User Behaviour

Social and cultural factors influence all aspects of user behaviour. Cultural values and basic assumptions in design are often taken for granted or even viewed as being incontestable (Roberts, 2001). Socio-cultural factors become important to designers when they develop product characteristics, functionality, innovation, and form, especially for a particular user group (Roberts, 2001). However, recognising these issues in the first place is a basic problem. Socio-cultural factors can be so innate, so assumed, that even when they are articulated, one may fail to grasp their significance (Mezali et al., 2004). They include reference groups, family, role, and status. Social class and social factors are closely associated by cultural factors (Keller, 1997). This means that designers must consider socio-cultural factors in their practice, bearing in mind the subtle, hard-to-describe yet critical issues surrounding the identity and behaviour of any particular user group.

The paper stands on the premise that research into socio-cultural human factors should begin with the assumption that products succeed when they resonate with users’ values, norms, and behaviours. When a product appeals to an individual, it does so relative to that individual’s cultural framework, worldview, and past daily life experiences (Roberts, 2001). The implication for design is that designers should work with an understanding of how users perceive their experiences of the world around them. These experiences shape the users’ conceptions and perceptions of their environment. As a social level, designers interpret their experiences relative to societal norms and values. However, Roberts (2001) was unable to explain how cultural constructs place general parameters around design ideas, indicating ways in which products will be positioned within value systems and identifying how quickly users’ worldviews may need to change in order to accept new products (Mezali et al., 2004). Socio-cultural factors are deeply, inextricably interwoven, and they are also constantly changing. As a result, products that openly conflict with socio-cultural factors may be rejected by users.

It is therefore important to develop a socio-cultural approach to product analysis that relates more adequately to the needs of Botswana’s contemporary product design, challenging the practice of creating products that resonate with cultural identities, rather than of which reflects local culture and needs. Designers who are key cultural intermediaries must embody culture in the products they design (Roberts, 2001).

Research Method

To meet the objectives of this study, the research was organised into two parts. The first phase involves conducting an experiment with two groups of design students (years 3 and 5) at the University of Botswana. The participants comprised 17 fifth-year students and 23 third-year students. The participants’ challenges were to individually analyze and identify socio-cultural factors embedded in particular indigenous products commonly used in Botswana. This task was based on the postcolonial socio-cultural analysis discussed with the students. Socio-cultural factors must be interpreted through the eyes of people being studied (Boymans, 2001). This helps to prove the relevance of surface appearances and provides detailed information about how socio-cultural factors have been transformed into product features. The process enables one to assess how different elements of a social system (values, norms, beliefs, and behaviors) interconnect in designing products. Through discussions, the participants agreed that selected socio-cultural factors should be considered in postcolonial design that advance local thought processes and problem solving. The profile of the participants is summarised in Table 1.

Table 1. Participant profile

<table>
<thead>
<tr>
<th>Participant Profile</th>
<th>Number of participants</th>
<th>Age range</th>
<th>Male</th>
<th>Female</th>
<th>Occupation</th>
<th>Educational background</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>40</td>
<td>16-25</td>
<td>25</td>
<td>5</td>
<td>Students</td>
<td>2nd and 3rd year undergraduates</td>
</tr>
</tbody>
</table>

Participants were presented with products to analyse the Botswana’s socio-cultural factors that are associated with them; these included the following: a paradise mirror, a blanket, a wooden spoon, a drum, and a pottery set, wooden spoons, a drum, a piano, a wooden sculpture, clay pots, necklaces, and baskets. The researcher selected these indigenous products with the belief that they contain Botswana’s core traditional cultural factors with little influence from global values. The assumption was that once these socio-cultural factors
are identified, they could be used in the future as a foundation for designing contemporary products. At the end of the experiment, participants were asked to write a report on the products they analysed, describing it together with the socio-cultural factors they identified and the product features that represent them.

The second phase of the study involved dividing the participants into two different focus group to share, critique, and corroborate their initial findings. This approach assisted in transcribing the data and in building a mosaic of cross-references. All focus-group sessions were tape-recorded with the data transcribed.

Data Analysis and Findings

Data from the experiment were analysed using the constant analysis method. This method allows closeness to text, which can alternate between categories and relationships. It is an inductive means of analyzing social interaction. This process was facilitated by the use of Atlas.ti software in the coding and data analysis. The analysis was based on the functions of the product, design features that carry messages about users’ culture (meditation), social activities directly or indirectly associated with the product, its aesthetic value, and emotions resulting from using such a product. Socio-cultural factors were divided into three themes: material artefacts, emotional factors, and social practices. These themes emerged from the data when socio-cultural factors were grouped together. A sample of the constant analysis results from the participants is shown in Figures 1 and 2. It is important to note that the socio-cultural factors in Figures 1 and 2 might be similar to those of any other culture, but their interpretation is specific to the local context. The specificity stems from portraying local identities and meaning that is influenced by the users' previous experiences. Thus, the factors are highly context-specific.

Material factors are the elements that form a given artefact. For example, clay is the material factor in clay pots. The nature of the clay and local traditions both influence the way in which a pot is designed (Table 2: Images 3 and 4). A thumb piano (Table 2: Image 15) is associated with socio-cultural factors that relate to the playing of music while seated around a camp fire, social gatherings, fun, and entertainment. These factors were extracted from focus-group participants’ statements during Phase 1 of the current research (Table 3).

The participants’ analysis of the listed products (Table 2) revealed that most were inspired by the local eco-system. For example, the basket designs have a local meaning or inspiration behind them. Many traditional basket designs are representations of African patterns and motifs, animals, and flora (Shonong & Sabone, 2008) (Table 2: Images 1 and 2). Examples include the roof of a reed hut (Batswana) thatched with reeds, thatched roofs with leaves (Images 13 and 14), the ears of a giraffe (signifying women following men as a habit), back of a python, and the flight of a swallow (when swallow migrate, it is a sign of rain or grain, which is supposed to signify good fortune). This indicates that the indigenous products studied have meaning which users can easily understand and appreciate. This principle is important for good product design.

Examples of emotional and social factors extracted during

<table>
<thead>
<tr>
<th>Material Artefact</th>
<th>Categories</th>
</tr>
</thead>
<tbody>
<tr>
<td>Closed and open baskets</td>
<td>Image 1, Image 2</td>
</tr>
<tr>
<td>Clay pots</td>
<td>Image 3, Image 4</td>
</tr>
<tr>
<td>Human Sculptures</td>
<td>Image 5, Image 6</td>
</tr>
<tr>
<td>Mortar and pestle</td>
<td>Image 7</td>
</tr>
<tr>
<td>Beaded necklaces</td>
<td>Image 8, Image 9</td>
</tr>
<tr>
<td>Yoruba string</td>
<td>Image 10</td>
</tr>
<tr>
<td>Wooden spoons</td>
<td>Image 11, Image 12</td>
</tr>
<tr>
<td>Roof of rondavels</td>
<td>Image 13, Image 14</td>
</tr>
<tr>
<td>Thumb piano</td>
<td>Image 15</td>
</tr>
</tbody>
</table>

the coding process and their frequency of occurrence are shown in Figures 1 and 2.

Emotional factors involve expressing a strong feeling...
Table 3. Statements associated with the use of a thumb piano (Table 2: Image 16)

<table>
<thead>
<tr>
<th>Participant</th>
<th>Statement</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Families in rural areas usually play the instrument (thumb piano) while seated around a fire in the evening.</td>
</tr>
<tr>
<td>1</td>
<td>The thumb piano displays the following product features: it is appealing, attractive, inviting, and pleasant to watch and use.</td>
</tr>
<tr>
<td>5</td>
<td>The instrument is mostly played for fun, entertainment...</td>
</tr>
<tr>
<td>10</td>
<td>Music can be a catalyst that brings people together, and it portrays the identity of the nation, tribe, family, or individual.</td>
</tr>
</tbody>
</table>

Table 4. Statements associated with traditional aesthetics (beauty)

<table>
<thead>
<tr>
<th>Participant</th>
<th>Statement</th>
<th>Image (Table 2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>13</td>
<td>Most of the time, designers make products by looking at the environment around them. In the case of a necklace, they use earth tones with the locket resembling an animal.</td>
<td>Images 8 and 9</td>
</tr>
<tr>
<td>3</td>
<td>The style of the product was inspired by some cultural products, like the patterns of plants or woods and even the colors of stones, roots...</td>
<td>Images 8 and 9</td>
</tr>
<tr>
<td>19</td>
<td>Patterns are inspired by nature...</td>
<td>Images 1-6</td>
</tr>
</tbody>
</table>

The participants expressed that the products they analyzed were aesthetically pleasing, affecting their users in a visually-pleasurable experience. This has been achieved by using traditional aesthetic (beauty) elements, like motifs, colours, shapes, and forms. The aesthetic dimension is a source of reconfiguration of images designed to make them aesthetically acceptable and culturally appropriate (Algoetosa & Davies, 1995). This acceptance evokes positive emotional factors, such as beauty, pleasure, fun, excitement, satisfaction, serenity, love, friendliness, and joy (Figure 1).

As emotional factors were analyzed (Figure 2), it became clear that beauty has great significance in Botswana. Beauty has been associated with Botswana’s fauna and flora, as well as the use of colour. Participants demonstrated this during Phase I of the research (Table 4).

Forms influenced by the ecosystem attract the attention of the user and invite users to touch the artefact, and this evokes cultural associations. This makes the product simple, honest, and inviting. The invitation engages users so that they develop an emotional attachment to that given product. The shapes and forms were used in a way that relates to the users’ culture that leads to emotional responses from the user, such as a product being perceived attractive or as bringing happiness (Figure 1). The shape and forms of a product make it attractive and compatible with the society’s cultural values.

Another dimension of designing beautiful products is to use colours that resonate with the users’ culture. In this study, participants observed that products were finished using earth tones (brown, orange, and red). These colours express aesthetic values within Botswana’s context and are pleasing to the eye. Colours are chosen to reflect customs and beliefs and have ritual significance (Algoetosa & Davies, 1996). Therefore, colour is considered one of the most useful and powerful design tools. Users respond to different colours in different ways, and these responses take place on subconscious and emotional levels. Colours reflect the social, emotional, and cultural context in which the products are designed.

This calls for designers to be vigilant when choosing and applying colour to products, as they can easily undermine the aesthetic value of an artefact. The participants’ statements (Table 4) demonstrate that the colours used exert an important influence on the emotions certain products evoke. However, while aesthetics is important, approaches to cultural design should extend beyond the obvious; they should stem from a serious understanding of users’ values and basic assumptions (Liu, 2003).

Many different factors influence the overall perception of a product. A sense of beauty is inspired through the use of traditional motifs, such as those that are triangular or heart-shaped (Table 5). Some participants suggested that the use of these shapes in existing decorations expresses aesthetic qualities. These shapes evoke cultural and spiritual associations in users.

This kind of transformation has resulted in products that enhance emotional feelings. This means that traditional motifs trigger positive emotional reactions to products, because they appeal to users and induce some level of interest. This application...
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Table 5. The use of traditional motifs

<table>
<thead>
<tr>
<th>Participant</th>
<th>Statement</th>
<th>Image (Table 2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>The triangular motif is one of the common features in decorating clay pots</td>
<td>Images 1-2 and 13-14</td>
</tr>
<tr>
<td>4</td>
<td>Tilangular and heart-shaped motifs are commonly used in decorations.</td>
<td>Images 3-4, 6, 8, and 12-14</td>
</tr>
<tr>
<td>2</td>
<td>Tilangular motifs are widely used in decorating houses and pots</td>
<td>Images 2-4 and 13-14</td>
</tr>
<tr>
<td>10</td>
<td>The triangular motif is used as a pattern for decoration</td>
<td>Images 1-4 and 11-14</td>
</tr>
</tbody>
</table>

It has been observed that society places great emphasis on activities that are habitually or customarily followed (social practices). Community spirit, peace, the exchange of gifts, family, mutual respect, and social gathering each play a significant role in Botswana's society (Figure 2).

For example, Figure 2 shows that Botswanans place strong values on family relationships. The family factor is featured very prominently (Figure 2). Other factors can be built around family values. Socio-cultural factors that relate to family values include unity, mutual respect, assistance, social gathering, story telling, the spirit of collective use or sharing, and community spirit (Figure 2). It is also important to note that most of the products analyzed were targeted to a given member of the family or to the entire family. The following two examples illustrate how products are designed to fulfill family needs. The coca and pestle are used to pound grain into flour to feed the family. Clay pots are used by the family for cooking and also for storing grain, water, and traditional beer (Table 2, Images 3 and 4). Upon closer analysis, it is apparent that the family is the most important social group among users of these two products. As a result, designers of these types of products should align their efforts in fulfilling family cultural values. Material artifacts designed in a certain way are meant to assist families in performing certain social practices. If this is achieved, families tend to express positive feelings toward those products.

Family, peace, the spirit of sharing, and community spirit are all valued socio-cultural factors within Botswana's society: because they teach principles related to life and morality (Figure 2). Moreover, consultation, community spirit, and assistance provide patterns of problem solving, whereas mutual respect, authority, friendship, peace, and harmony give Botswana a sense of identity. In one way, these factors are means of passing on societal traditions and beliefs from one generation to the next (Mongalo et al., 2005). This section has presented the participants' views regarding the various factors that could be involved in postcolonial design, thereby advancing local thought pertaining to problem solving. This means that postcolonial design should concentrate its efforts on addressing the identified socio-cultural factors, together with the problems and needs associated with them.

Based on the coding system, a relational analysis approach was adopted to examine and identify the relationships among the themes (Figure 3). Individual concepts, in and of themselves, are viewed as having no inherent meaning; rather, the meaning is a product of the relationship among concepts in context (Coke, 1989). Therefore, what emerges is that problems or needs in a society are rooted in social practices (society's customary activities). Users are not in a position to perform certain tasks to their maximum satisfaction. Therefore, appropriate manipulation of material factors in designed products can assist users to perform social practices more easily, so it can enhance the performance of particular social tasks. This outcome has led to an expression of pleasure or appreciation of beauty in products.

![Diagram](https://www.idesign.org)
Some social practices are not easily identified, but they can be embedded within the material product. Participant #16 argued that “the hidden message in a product is often more important than its surface beauty.” Adjei-Danso and Davies (1996) observe that, in African design, the underlying message in a product is more important than its beauty. It is through the use of such products that they become noticeable. The emotions attached to these products might be a result of the aesthetic qualities of the product, the performance of that product, the knowledge it generates, or the message it conveys. Nonetheless, emotional factors should be seen as fluid, complex, and dynamic, and always in a state of flux (Moskoci et al., 2004). What might be exciting or fun today may not be tomorrow, and the opposite is true for something that is currently perceived as testaneous.

Material socio-cultural factors facilitate or enhance social practices; and, in the process, evoke appropriate emotional feelings about products. For example, a product such as a basket, facilitates the ‘spirit of sharing and assistance’ among users, and this could stir up emotional feelings of pleasure or kindness (Figure 1). Another outcome worthy noting is that products conceived from a socio-cultural perspective provide users with cultural meaning (Table 6).

Responses to products often produce a mixture of intimate and extrinsic meaning. A product cannot express its own meaning; conversely, meaning is constructed, assigned, and produced through social discourse and socio-cultural practices. This means that products are no longer seen only as functional objects but also for what they symbolize; that is, their meaning, association, and involvement in building users' self-image. The meaning may represent users' social status or concrete symbols of their intimate experiences. Products are a form of social interaction, participating in a social language. They may represent a memory of a user's past, a sign of a user's current identity, or a symbol of what the user hopes to become (Goodman & Cohen, 2002). In support of Goodman's claim, participant #19 argued that “culturally sensitive products make us connect with history or heritage roots.”

The social environment played a major role in influencing the design of the products listed in Table 3. Nature possesses a wealth of historical imagery (Moskoci et al., 2006). It introduces an era based on what can be extracted and learnt from the natural world. It surfaced that design features, such as forms, shapes, colours, and patterns, were borrowed from nature. Features from nature were used for design improvements and decorations. Visual and tactile cues emerged from landscapes, animals, and vegetation (Table 7).

Postcolonial design from nature should enable users to improve their quality of life and, at the same time, be conscious of the environment. According to Adjei-Danso and Davies (1996), “nature is a source of information and inspiration in African designs” (p. 95). The use of local substances derived from nature may encourage users to accept products designed for them, because they reflect their culture. Products that relate closely to users’ lifestyles will face remuneration in most cases (Dunne, 1990).

Discussion

It is through the use of products that some socio-cultural factors are displayed. For example, a product like a wooden spoon or thumb piano does not immediately reflect the socio-cultural factor of the ‘spirit of collective use or sharing.’ Participant #2 argued that “even though these factors may not easily be visible to some people, they are indeed embedded in the product.” It is through their social relationship with a product that such socio-cultural factors become evident. The products become a mediator of socio-cultural factors. It creates a social communication link between users and their culture. The message embedded in such products shapes and controls the scale and form of human association and action. Postcolonial cultural artifacts should embody, reflect, and mediate the views of the society from which they emerge (Figure 4). Ramazanz (1992) argues that “cultural products of a given society at any given time represent the theme of that society and that era” (p.107). This paper proposes that one way by which designing culturally-oriented products can be realized through the mediation model (Figure 4).

Users receive messages from the designer through the product. Postcolonial products should embody cultural messages by being shaped with a shared use of socio-cultural factors (symbols, forms, signs, values, norms, and beliefs). For example, symbols may convey commonly-held cultural values, and they can be used to gain greater powers if emotional flavour is attached to them. Based on feedback from users, the designer can modify the product to make it more responsive to users' social and cultural needs. However, this process needs to be conducted in the early

<table>
<thead>
<tr>
<th>Table 6: Cultural meaning in products</th>
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<tbody>
<tr>
<td>Participant</td>
</tr>
<tr>
<td>-------------</td>
</tr>
<tr>
<td>12</td>
</tr>
<tr>
<td>14</td>
</tr>
<tr>
<td>10</td>
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<table>
<thead>
<tr>
<th>Table 7: Nature's influence on designed products</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participant</td>
</tr>
<tr>
<td>-------------</td>
</tr>
<tr>
<td>10</td>
</tr>
<tr>
<td>11</td>
</tr>
</tbody>
</table>
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Figure 4. Mediation model.

stages of the design process, when the concept is still relatively fluid. These needs may be utilitarian or expressive, that is, aimed at communicating personal, cultural, and aesthetic experiences. Cultural needs are complex and often blend both utilitarian and expressive purposes. All this is influenced by the local socio-cultural context in which the mediation process takes place.

The premise of this paper is that it is important to identify which of Botswana's core socio-cultural factors are applicable to post-colonial design (Figures 1 and 2). The identified socio-cultural factors will provide a foundation to build upon. These factors can then be integrated with other contemporary socio-cultural factors due to the dynamic nature of culture. The goal is to restore the bygone past but to draw upon the past to create a new future with products designed in line with current users' social and cultural needs.

Conclusions

Critical analysis of socio-cultural factors in products provides a new way of assessing users' needs, preferences, and concerns. This approach leads to users being provided with pleasurable and cherishable products, rather than merely functional and usable products. The approach goes beyond physical and cognitive issues and encompasses emotional, social, and cultural human factors. Product acceptance can be assured by this approach because it delves on the users' culture being critically analysed. The dynamics of socio-cultural factors have been influenced by the impact of colonization and globalization, an impact which has resulted in the hybridisation of traditional and Western values.

The current study has demonstrated how products can be analysed relative to Botswana's socio-cultural perspective. The engagement of modern designers in Botswana to analyse commonly used products that are locally-designed and manufactured, both to identify the socio-cultural factors and to critically examine how they can add value to the products, has been an important aspect of the research. What emerged is that socio-cultural factors can be grouped into three themes: social practices, emotional factors, and material factors. It is concluded that these cultural factors are not only functionally or technologically driven but are also evident generators of ritual or custom. Therefore, postcolonial designers from newly-emerging economies need to incorporate socio-cultural factors to become a pinnacle of good product design.

The long-term goal of this research is that participants (students) become aware of the importance of culture in design, and that, as designers-to-be, they will ultimately design culturally-sensitive products that enhance users' experiences. Another aim is for participants to become familiar with the methods before they are engaged as design practitioners in industry. The findings emphasize the importance of embedding such cultural features as identity, mediation, product meaning, and optimization in post-colonial product design. These features are likely to facilitate product acceptance, and they should be incorporated at an early stage in the design process. That is, designing products that connect cultural and emotional factors with users is likely to facilitate product acceptance. In this long run, this will provide Botswana with products having greater narrative impact, enabling them to survive for over a period of years rather than just a handful of days, while avoiding unnecessary financial wastage and ecologically-hazardous products.

In this paper, it has been argued that designers should strive, not only to create products that combine tradition with contemporary technology, but also to achieve a new way of approaching the development of products from the perspective of a postcolonial culture. The urgency of designing products that users own rather than simply objects aims to be a reflection of their culture and lifestyle. The ultimate aim is to create a framework under which modern Botswana products and ideas can be developed in the long term. This is one way of improving, unifying, and reinforcing the image of traditional Botswana in positive and progressive ways. In the process, indigenous subject matter will be developed. By managing the image consistently and by clarifying and establishing a realistic postcolonial identity, socially-positive concepts and products can be achieved.

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