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## Undertaking Empirically-Engaged African Philosophy: The Development and Validation of the African Time Inventory

### Abstract:

Cross-cultural conflict is often rooted in variation between values from different cultures, for example, differences in time orientation. Usually, individuals are monochronic or polychronic regarding time orientation. In South Africa, the term *African time* represents a nuanced polychronic time orientation. As this term is often used pejoratively, it is cardinal to break down stigmatization and create cultural awareness regarding this unique time orientation. In this paper, we argue that people must be cognizant of particular time orientations to facilitate intercultural dialogue better and lessen conflict. With this in mind, we employed empirically-engaged African philosophy and developed the *African Time Inventory* (ATI). We theoretically introduce *African time* as a unique time orientation during the scale development process. The psychometric properties of the ATI are presented and proved to be reliable and valid in South Africa. In praxis, utilizing the ATI can facilitate decolonization resulting from some needed cultural awareness for dialogue and conflict mitigation.

### Keywords:

African time, African Time Inventory, cultural awareness, polychronism, time orientation, intercultural communication, African philosophy, experimental philosophy

## Introduction

The concept of culture is notoriously difficult to adequately define, as also explained by anthropologists A.L. Kroeber and Clyde Kluckhohn (1952) in their work titled *Culture: A Critical Review of Concepts and Definitions*.<sup>1</sup> Although the authors present 164 unique definitions for culture, the concept still does not carry a standardized definition more than 70 years later. We pose that *culture* is a group-level phenomenon with multi-levelled practices, attitudes, beliefs, and values that generate sense-making of the world and influence behavior as well as the evaluation of actions. Therefore, culture provides insight about the world, being-in-the-world, being-with-others (in which situational aspects will require more intensive attention and processing capacity from the individual), as well as what would constitute a good life.<sup>2</sup>

Our focus will be on cultural values, which can be described as the building blocks of culture.<sup>3</sup> *Cultural values* are evaluative, normative, and prescriptive of affect, behavior, and cognition of individuals. Here, the normative and prescriptive elements of cultural values clearly link with morality and therefore, cultural values will significantly influence how individuals feel, act, and think. Clyde Kluckhohn defines cultural values as the implicit and explicit abstractions that are distinctive of an individual or a group about what is considered right or wrong, and these abstractions influence the selection from available options of action.<sup>4</sup>

Cultural values motivate behavior and influence interaction between persons. Through diverse means – such as using scales, measurements, or questionnaires – researchers in cross-cultural studies (in various academic fields, like psychology), can quantify cultural values and thus present some of the similarities and differences between cultural groups. By doing this, the researcher contributes to and facilitates a better understanding of cultures, as well as inter- and cross-cultural interactions.

The assumed universalism of cultural values – based on the internationally standardized instruments to measure the values – ignores the unique cultural variations that might exist due to particular social behavior or context.<sup>5</sup> Cultural values and their spectrum categories are frequently considered as one-size-fits-all – that is, all cultures and their values can be measured using instruments that are, in general, created in the Western paradigm (Global North). Furthermore, often in literature, the focus is not allocated to different variations of these values based on distinct cultures.

The realization that various societies might conceptualize X (in this case, cultural values), in different ways based on culture may serve as a catalyst for philosophical contemplation.<sup>6</sup> Unique conceptual variations might be overlooked if philosophers analyze concepts solely from their own culture.<sup>7</sup> Should cultural variations be investigated in more depth there might, in some instances, come an interplay between cross-cultural psychology and some form of philosophy.

As the subject of *time* has always been a prominent topic in philosophy, it will be useful to turn our attention to the corresponding cultural value; specifically, the cultural value (i.e., the implicit and explicit abstraction) that pertains to the utilization and organization of temporality that is distinctive of an individual or

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1) Kroeber and Kluckhohn, *Culture*.

2) Oyserman, Kimmelmeier, and Coon, "Cultural Psychology, A New Look," 114; Schein, *Organizational Culture and Leadership*, 29.

3) Hofstede, "Culture's Consequences," 25; Vaclair, "Measuring Cultural Values," 61.

4) Kluckhohn, *Values and Value orientations in the Theory of Action*, 395.

5) Leung and Ang, "Culture, Organizations, and Institutions," 27.

6) Andow, "Qualitative Tools and Experimental Philosophy," 1137.

7) O'Neill and Machery, "Experimental Philosophy," ix.

group.<sup>8</sup> That is, one important cultural value that philosophers should consider is *time orientation*, which can be described as shared assumptions about time that are socially legitimized. Here, time orientation includes three main aspects. Firstly, the attention allocated to a specific timeframe (viz., time perspective of past, present, or future). Secondly, the focus and order in which the individual or group conducts tasks (viz., sequentially or concurrently). Finally, the subjective use of time (viz., clock-time or event-time).

Often, time orientation is categorized based on a spectrum of monochronism versus polychronism. The three main aspects of time orientation will be dichotomously presented by the categories on the mentioned spectrum.

That is, *monochronism* is characterized by clock-time, the individual conducts tasks in sequence, and focus is predominantly on the future timeframe. More specifically, clock-time is quantitative and objective in nature, and the time individuals will spend completing a task is based on a rigid schedule with the primary focus being on the task at hand. Also, sequential tasks refer to the ordered instances in which one project is completed before starting the next project; there is also a specific order or differentiation between the projects and when each of them are in process. Finally, future orientation refers to emphasis that is placed on what is expected to happen; here, anticipated results will drive decision-making and behavior in the present.

In a dichotomous manner, *polychronism* is characterized by event-time; tasks are conducted concurrently, and attention is on the past and/or present timeframe. That is, event-time is qualitative and subjective in nature; the time individuals will spend completing a task is not based on rigid scheduling; the primary focus is commonly on the interpersonal relationship between individuals when conducting the task. Here, concurrent tasks refer to the unstructured instances in which projects are undertaken in a simultaneous or overlapping manner, and there is no specific order or differentiation between the projects and when they are being done. Finally, past orientation refers to emphasis that is placed on what has already happened; here, the decision-making and behavior in the present are motivated by remembered experiences. Alternatively, present orientation refers to an emphasis on what is currently happening; decision-making and behavior are motivated by results in the here and now.

Often, monochronism is more prevalent in the Global North (e.g., Canada, UK, and USA, etc.), while polychronism is more dominant in the Global South (e.g., South Africa, China, the Arab League, etc.). Furthermore, due to the prominence of globalization in the neo-liberal capitalistic system, persons (from various cultural groups and backgrounds with variations in cultural values, such as time orientation), interact. Often, misunderstandings and possible conflicts occur when culturally diverse persons interact. Additionally, the lack of cultural awareness (that is, knowledge about your own culture and that of others) influences the likelihood of conflict arising.<sup>9</sup> These misunderstandings present when persons assess intentions and behavior from diverse and oftentimes irreconcilable beliefs, values, or worldviews.<sup>10</sup> When considering cross-cultural conflict, there is an identified need to expand cultural awareness in culturally diverse groups. Furthermore, it will be useful to be cognizant of how culture and values influence affect, behavior, and cognition; this can be made prevalent through cultural awareness. This understanding can help individuals anticipate and mitigate conflict situations that might occur when persons approach or handle the same situation in contrasting manners based on their specific cultures.<sup>11</sup>

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8) Nardon and Steers, "The Culture Theory Jungle," 10.

9) Hutchings and Weir, "Guanxi and Wasta," 146.

10) Jones, "Cultural Differences in Temporal Perspectives," 27.

11) Faucher, "Preface," vii.

We now turn our gaze to a particular context in the Global South: South Africa. In multi-cultural South Africa, conflict often presents due to variations in individuals' time orientations. In this context, one cultural value variation which warrants philosophical contemplation is African time as a nuanced form of time orientation.

The term *African time* is often used in South Africa in a derogative manner based on the stereotypical assumption that Black Africans exhibit high levels of tardiness and that they allocate little attention to deadlines and schedules.<sup>12</sup> For many Westerners and contemporary Africans, "African time is tantamount to the non-respect of punctuality, to laziness, to tardiness and to underdevelopment as if Africans have always been culturally and historically time-unconscious and at the mercy of nature."<sup>13</sup> This stigmatization is based on a stance of cultural ignorance – in some cases on the part of the colonizers – and we argue that it is imperative to be cognizant of nuanced time orientations such as African time.<sup>14</sup> Creating a detailed awareness of variations in cultural values (through philosophical engagement), can open up intercultural dialogue and facilitate, for example, the decolonization of time orientations, such as African time situated in the Global South.<sup>15</sup>

From the preceding, we argue that an efficient way to prevent cross-cultural conflict due to the different cultural values of people – such as time orientation – is to develop increased levels of cultural awareness, which refers to the person's ability to become aware of the cultural values of others as well as their own.<sup>16</sup> In the development of cultural awareness, it is worthwhile to study and understand cultural values because diverse people often interact in multi-cultural South Africa. As a start to move in this direction, we developed a scale to measure African time as a nuanced time orientation.

More specifically, the research posed in this article is grounded in some form of empirically-engaged African philosophy. As such, the article will be divided into various parts. To orientate the reader, we will briefly present what we mean with empirically-engaged African philosophy as this is not a common phrase. From there, we start to elucidate how African time is a nuanced time orientation. The unpacking of the term African time will form the foundation or starting point of the more empirical aspect of the development process of a scale because the items of the scale will be developed based on our concise literature review. We use the second part of the article to rigorously present the quantitative data to better illustrate the reliability and validity of the developed scale. We consider this second part cardinal as it focuses on the more quantitative aspects of the research grounded in empirically-engaged African philosophy. The third and final part of the article will explain how this scale might be used in the South African context. Here, the focus will be on cultural awareness that might facilitate cross-cultural conflict anticipation and mitigation.

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12) Dissel, "Scale to Measure Time Perspective," 41; Columbus, "African Cultural Values," 213; Cilliers, "The Kairos of Karos," 113.

13) Sidiki, Sidibe, and Aboubacrine, "Eurocentric Conception and Perception of African Time," 777.

14) As the authors, we recognize that sensitivity must be shown when using the term African time as some people or groups might find the use thereof offensive. Our aim is not to be insensitive. Instead, we would like the term to be reclaimed by Africans to whom this is applicable (and South Africans, alike). By not shying away from its use, we want to break down the stigmatization represented by this term. We also want to decolonize the term through this proposed reclamation and by opening the cross-cultural dialogue between various groups. That is, African time exists as a nuanced cultural value, and it will be useful to discuss the corresponding traits in the academic arena and elsewhere to facilitate cultural awareness. Based on the preceding, we stand by our decision to name our scale the African Time Inventory (ATI).

15) Examples of other nuanced time orientations found in the Global South are Sino time and Arab time; additionally, the time orientations of some Australian Aborigines and New Zealand Māori tribes are also nuanced and warrant closer investigation (cf. Terblanché-Greeff, "Same-Same but Not,"; Terblanché-Greeff, "Different Strokes and Different Folks").

16) Trompenaars and Hampden-Turner, *Riding the Waves of Culture*, 196; Iacob and Dumitresco, "Cultural Awareness, Sensitivity and Competence," 122.

## Empirically-Engaged African Philosophy as a Form of Experimental Philosophy

*Experimental philosophy* (also referred to as X-Phi) is still a new academic field (which became more established in the 21<sup>st</sup> century). Because of its supposed newness, we surmise that it receives limited support and recognition in some philosophical circles. In an attempt to overcome this challenge, we opine that a better term to use might be *empirically-engaged philosophy* (that is, Xe-Phi instead of X-Phi), especially when we consider that the concepts “experiment” or “experimental” might have different meanings in various academic disciplines. The lack of understanding of what is meant by the concept *experimental* in the label X-Phi automatically might cause resistance among some philosophers to recognize X-Phi research as philosophy proper (whatever that might mean to the particular philosopher). Nonetheless, whichever term is preferred, the philosopher becomes empirically-engaged to develop or better support their philosophical arguments or to ground revealing studies of how people view the world and, ultimately, act, think, and behave.

Because our research focuses on African time, a topic in African philosophy, we pose that this study is based on empirically-engaged African philosophy. More specifically, with the help of philosophical contemplation, we will empirically develop a scale to measure African time as a cultural value of time orientation (prevalent in South Africa).

## A Deductive Approach to Scale Development

A first facet of scale development is the articulation and differentiation of the construct(s) to be measured.<sup>17</sup> This step is crucial, and the researcher has “to be conceptually clear by providing a dictionary-like definition with concrete keywords or attributes that are useful for academic audiences, which then should influence the framing and wording of items included [in] the scale.”<sup>18</sup>

For the development of the proposed scale, the constructs and items are identified using the *deductive approach*<sup>19</sup> (instead of the inductive approach).<sup>20</sup> That is, the construct (viz., African time) and dimensions are identified *a priori*. When using this method, the researcher must have a thorough understanding of the phenomena under investigation and, together with a literature review and conceptual analysis (in this case, philosophical), the theoretical construct definitions are developed and used as a reference for item development.<sup>21</sup>

Noteworthy, the deductive approach is based on the researchers’ expertise and knowledge of the subject matter at hand, in this case, the subject of African time. As such, an extensive and comprehensive literature review on African time has no place in this article and would seem inappropriate. Instead, focus is allocated to the specific literature prevalent to the construct African time as formulated by the researchers. That is, the concise literature review is used to define African time, as stated in Table 1.

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17) Furr, *Scale Construction and Psychometrics*, 12; Boateng, Neilands, Frongillo, Melgar-Quiñonez, and Young, “Best Practices for Developing and Validating Scales,” 5; Carpenter, “Ten Steps,” 33.

18) Carpenter, “Ten Steps,” 33.

19) Noteworthy, a disadvantage is the fact that the deductive approach can be extraneous and time-consuming, as the researcher(s) will need to have a working knowledge of the phenomenon under investigation (Hinkin, “Scale Development,” 164). Nonetheless, in explanatory research – such as this research – theory already exists, and here, the deductive approach is the most appropriate (Hinkin, “A Brief Tutorial,” 106; Hinkin, “Scale Development,” 164).

20) The inductive approach obtains opinions from the target population, and the items are developed based on this qualitative information regarding the construct(s) (Hinkin, “Scale Development Practices,” 970; Hinkin, “A Brief Tutorial,” 107).

21) Hinkin, “Scale Development,” 165.

## The Philosophical Conceptual Analysis and Theoretical Formulation of the Construct

To start the scale development process (by using the deductive approach); to break down stigmatization, and open up dialogue to fair discussion regarding African time; it will be of value to elaborate on the characteristics of the construct. More specifically, we can differentiate African time from Western time – which is characteristically quantitative, monochronic, and industrialized. Here, monochronism refers to a focus on clock-time, conducting tasks in sequence, and having a future time perspective. In contrast to monochronism stands polychronism – which focuses on event-time, conducting tasks concurrently, and having a past and/or present time perspective.

The nuanced time orientation of African time is typically polychronic, qualitative, and socialized. To unpack the construct of African time, the concept will be discussed based on these three main traits. Additionally, focus will be allocated to John S. Mbiti's African time perspective.<sup>22</sup>

## African Time as Qualitative, Polychronic, and Socialized

African time is qualitative.<sup>23</sup> Meaning is attributed to time based on shared experiences, which stands in contrast to monochronic time where time is identified as numerical instances.<sup>24</sup> This means that African time is polychronic,<sup>25</sup> as the focus is on the cultivation of time-consuming but enduring relationships.<sup>26</sup> Here, multiple tasks can be conducted simultaneously, and the combination of several responsibilities is motivated by communitarianism.<sup>27</sup> Punctuality is of less importance and polychronic-orientated groups adopt a more relaxed, leisurely, and less schedule-orientated lifestyle.<sup>28</sup>

Just as African time is qualitative and polychronic, so it is also inherently socialized where time usage “does not sacrifice social duties and human relations on [the] clock-time punctuality altar.”<sup>29</sup> Instead, socialized time is structured into socio-cultural norms of human behavior and interpersonal relations.<sup>30</sup> For example, African time will dictate that a person should stay in an engagement until such interaction reaches a natural end instead of ending the transaction based on another scheduled event. Rather than focusing on schedules and punctuality, attention is being allocated to the maintenance of quality relationships. This focus on interpersonal social transactions can be attributed to a collectivistic orientation.<sup>31</sup> Here, social obligations can take precedence over professionalism<sup>32</sup> – time usage in social contexts takes precedence over time use in other contexts.<sup>33</sup>

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22) Note that this is based on more detailed accounts of Mbiti's African time as presented elsewhere; cf. Terblanché-Greeff, “Indigenous African Perspective”; and Terblanché-Greeff, Dokken, van Niekerk, and Loubser, “Time Orientation and Social Self-Construct.”

23) Adjaye, “Modes of Knowing,” 218.

24) Mbiti, *African Religions and Philosophy*, 16–19.

25) Adjaye, “Modes of Knowing,” 218; Darley, Luethge, and Blankson, “Culture and International Marketing,” 198; Columbus, “African Cultural Values,” 213.

26) Kudadjie, “Ga and Dangme Thought about Time,” 142.

27) Matondo, “Cross-Cultural Values Comparison,” 42.

28) Ibid.; Darley, Luethge, and Blankson, “Culture and International Marketing,” 193; Columbus, “African Cultural Values,” 1–11.

29) Darley, Luethge, and Blankson, “Culture and International Marketing,” 193.

30) Matondo, “Cross-Cultural Values Comparison,” 42; Columbus, “African Cultural Values,” 212; Yang, “Chinese Nationals and Black South Africans,” 71.

31) Terblanché-Greeff, “Indigenous African Perspective.”

32) Matondo, “Cross-Cultural Values Comparison,” 42; Sidiki, Sidibe, and Aboubacrine, “Eurocentric Conception and Perception of African Time,” 788.

33) Darley, Luethge, and Blankson, “Culture and International Marketing,” 193.



## African Time Perspective of John S. Mbiti

Any discussion of African time will have to mention the work of John S. Mbiti titled *African Religions and Philosophy*. Mbiti brought the concept into the academic arena for discussion.<sup>34</sup> According to Mbiti, the African time orientation (as polychronic) has unique traits that stand in contrast to a monochronic time orientation.<sup>35</sup> Firstly, humankind can generate time and therefore, time is a tool that can be utilized and exploited as humans see fit – time does not rule humans (instead, humans rule time), and time is not a commodity like money. Secondly, humans allocate meaning to time based on shared experiences between individuals instead of time being classified into numerical instances. Thirdly, African time is boundless, concrete, and infinite; hence, time cannot run out.

Mbiti further expands the concept of African time perspective by introducing the three themes of *actual time*, *potential time*, and *no-time*. Temporality is regarded as the sum of past and present events, with the flow of time being backwards from the present to the past. Here, the past and present timeframes constitute *actual time*.<sup>36</sup> The preceding seems reminiscent of albeit not similar to the *growing block theory* as an ontology of time,<sup>37</sup> where the past and the present are the only timeframes that can constitute reality.<sup>38</sup> More specifically, the growing block theory states that items and events cannot exist in the future; however, past and present items and events are equally real.<sup>39</sup> In African time, only events that are being experienced or have been experienced can constitute time; that is, *actual time*. According to this African temporality posed by Mbiti, limited attention is allocated to future events, as the focus is predominantly on *actual time*.

Mbiti argues that future events make up *potential time* and *no-time*.<sup>40</sup> *Potential time* is delineated by events that are unavoidable and predictable, such as events that “fall in the rhythm of natural phenomena,” for example, seasonal cycles or climate change.<sup>41</sup> *No-time* is made up of indistinct and unknown future events – such events have not been experienced yet, and as time is categorized based on shared experiences, such unknown events cannot constitute time. Furthermore, *no-time* is described as indifferent, as individuals cannot truly plan for the distant future.

Based on the aforementioned, the African time perspective is two-dimensional since future events cannot constitute time because such time has not been experienced yet.<sup>42</sup> However, the notion of the future is not rejected in its entirety. The future perspective is considered near-sighted since anticipated future events – such as those constituting *potential time* – are no more than six months up to two years from the present; and *no-time* cannot represent the future dimension of time.<sup>43</sup> To recapitulate, for Mbiti African

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34) It must be noted that Mbiti’s work focusing on African time is highly contested as his work might be seen as homogenizing diverse African cultures, to mention but one critique (for more critique refer to Gillies, “The Bantu Concept of Time”; Moreau, “Critique of John Mbiti”; Wiredu, “Time and African Thought”; Offe, “Smart Guys Plan for the Future”; and Diagne, “On Prospective”). Nonetheless, the researchers found his work applicable to their study and their formulation of the construct African time, specifically when considering that they only focus on the dimension of time perspective as prevalent in the description of time orientation as a cultural value.

35) Mbiti, *African Religions and Philosophy*.

36) Ibid., 16.

37) Note that attention is not allocated to Mbiti’s ontologies of time as *Sasa* and *Zamani* because these ontologies do not pertain to this study.

38) For a discussion on the growing block theory as an ontology of time, cf. Ney, *Metaphysics*; Koons and Pickavance, *Atlas of Reality*.

39) Ney, *Metaphysics*, 142.

40) Mbiti, *African Religions and Philosophy*, 16.

41) Ibid.

42) Ibid.

43) Ibid.

time is “a composition of events which have occurred, those that are taking place now and those which are to immediately occur.”<sup>44</sup>

The preceding literature focused on the main characteristics of African time as identified by the researchers of this study. Subsequently, it laid the foundation for the development of the *African Time Inventory* (ATI) items as the deductive approach (i.e., logical partitioning or classification from above) was utilized. Next, focus will be allocated to the empirical method employed in this research to elucidate the development and validation of the ATI.

Noteworthy, the following sections (*Method* and *Results*) might seem out of place in a philosophy paper. Nonetheless, the succeeding serves to provide the quantitative aspect of the empirically-engaged, African philosophy study in a manner that is accessible to all. After presenting the quantitative data to better indicate that the ATI can be considered reliable and valid in the South African context, we will return to a more interpretive approach regarding the use and purpose of the scale.

Method: Next, attention is allocated to descriptions of the research participants, instrument, procedure, ethical considerations, and data analysis.

Participants: Convenience sampling was used, and a person could participate in the study if they are a South African citizen between the ages of 18 and 65, who can fluently read and write English, and who is an employee at any organization or business. The validation study sample consisted of 316 respondents who met the criteria. Gender-wise, females represented 59% (n = 187), and males 41% (n = 129). Racially, the 1% Asian (n = 3), 3% Indian (n = 10), 8% White (n = 24), and 12% Colored (n = 37) respondents made up the minority – with the four racial groups contributing 23% to the total sample size. Black respondents represented 77% (n = 242) of the sample. Of the 316 respondents, 11 explicitly indicated they are bilingual. Furthermore, 231 respondents speak an African language, 38 Afrikaans, 61 English, and two respondents speak languages that are not considered official languages in South Africa.

Instrument: The construct, dimensions, and items were identified using the *deductive approach*. In other words, the theme, construct, and dimension used in the scale development process are defined *a priori* (refer to Table 1 for definitions of the theme, construct, and dimensions). The deductive approach has an advantage over the inductive approach as it can help to assure content validity in the end-product scale.<sup>45</sup>

Table 1: Definitions from Conceptual Analysis

Theme	<b>Time orientation</b> refers to socially legitimized and shared assumptions about time, which include the attention allocated to a specific timeframe, as well as the subjective use of time, paired with the focus and order in which the individual or group conducts tasks.
Construct	<b>African Time</b> is qualitative, polychronic, and socialized where tasks are conducted concurrently as focus is on the event and not on clock-time; here the time perspective is focused on the past and present, with little regard for the distant future.

44) Ibid., 17.

45) Hinkin, “A Brief Tutorial,” 106.



Dimensions	<p><b>Concurrent tasks</b> refer to the focus and structure in which the individual or group conducts tasks. Here, tasks are conducted simultaneously, and there is no specific order or differentiation between the tasks and when they are being done. Tasks are often subjected to high levels of interruption. <i>Item example:</i> I do not perform tasks in a specific order.</p>
	<p><b>Event-time</b> is qualitative and subjective in nature; the time individuals will spend completing a task is not based on rigid scheduling as the primary focus is commonly on the interpersonal relationship between individuals when conducting the task. <i>Item example:</i> During events I often use time in a flexible manner with less focus on the clock.</p>
	<p><b>Past-present orientation</b> refers to emphasis that is placed on what has already happened and on what is currently happening. Here, decision making and behavior in the now are motivated by remembered experiences as well as results in the here and now. <i>Item example:</i> The future is unpredictable, so it makes little sense to worry about it.</p>

Subsequently, the scale items for the ATI were based on the three theoretically identified dimensions (*viz.*, *Concurrent Tasks*, *Event-time*, and *Past-present Orientation*) of the construct *African time*. In total, 23 items were generated for the validation study, which represent these three sub-dimensions. A 6-point Likert-type response format with an agreement range was used. The Likert-scale takes on a six-score format, and the range is *Strongly Agree* (+3), *Agree* (+2), *Slightly Agree* (+1), *Slightly Disagree* (-1), *Disagree* (-2), and *Strongly Disagree* (-3).

Procedure: This study used a cross-sectional survey design, and computer-administered surveys (*i.e.*, email or internet) were used to collect the data. Survey software (*viz.* *Alchemer*) was used to administer the validation study to collect data from such a large sample. More specifically, the use of such online technology can “reduce the errors associated with data entry, allow the collection of data from large samples with minimal cost, increase [the] response rate, reduce enumerator errors, permit instant feedback, and increase monitoring of data collection and ability to get more confidential data.”<sup>46</sup> Additionally, the Covid-19 pandemic also made online data collection one of the most viable and safest options as research ethics had to be considered.

Ethical Considerations: The University of Johannesburg’s Research Ethics Committee (Faculty of Humanities) reviewed the study’s proposal. Ethical clearance (REC-01-168-2019) was obtained prior to data collection. Respondents were fully informed of the research project to enable them to give informed consent. Respondents were well aware that principles of anonymity were in place and that participation was entirely voluntary.

Data Analysis: Confirmatory factor analysis (CFA) was employed to determine the validity of the items representing the three dimensions associated with the ATI. More specifically, the following goodness-of-fit statistics were calculated (using EQS):<sup>47</sup> *Standardized Root Mean Square Residual* (SRMR), and *Root Mean-Square Error of Approximation* (RMSEA). The incremental fit index includes the *Comparative Fit Index* (CFI). Li-tze Hu and Peter M. Bentler state that “[a]lthough it is difficult to designate a specific cutoff [sic] value for each fit index because it does not work equally well with various conditions,” a range of cut-off values are applicable.<sup>48</sup> Accordingly, they suggest a cut-off value close to .08 for SRMR, close to .06 for RMSEA, and close to .95 for CFI.<sup>49</sup> Consequently, a model with low SRMR and RMSEA scores and a high CFI score are desirable.

46) Boateng et al., “Best Practices for Developing and Validating Scales,” 8.

47) Bentler, *EQS 6, Structural Equations Program Manual*.

48) Hu, and Bentler, “Cutoff Criteria for Fit Indexes,” 27.

49) *Ibid.*

Results: To describe the results of the empirical study, the dimensionality, inter-factor correlations, and reliability of the scale are presented.

Dimensionality: CFA was conducted on the original set of 23 items associated with the construct of *African time* to determine goodness-of-fit as indicated by Table 2. While these items (associated with each of the three dimensions) can be viewed as having an acceptable fit in terms of both SRMR (.083) and RMSEA (.080), the CFI value (.767) indicated poor fit.

Table 2: Goodness-of-fit Indices of 23 Items

GOODNESS-OF-FIT INDICES	ORIGINAL SET OF 23 ITEMS
SRMR	.083
RMSEA	.080 (.073; .086)
CFI	.767

Consequently, the present study investigated the factor loadings associated with the original set of 23 items (using exploratory factor analysis; EFA: see Table 3). The researchers chose to fit an alternative measurement model using items with the four highest loadings per factor (12 items in total). Factor loadings must be .3 or higher to be statistically significant.<sup>50</sup> The highest loading items for *Concurrent Tasks* (Factor 1) are ATCT5 (.616), ATCT6 (.601), ATCT3 (.560), ATCT4 (.538). For *Event-time Tasks* (Factor 2) items are ATET2 (.770), ATET3 (.678), ATET6 (.594), ATET1 (.569). Lastly, the items for *Past-present Orientation Tasks* (Factor 3) are ATPPO4 (.844), ATPPO5 (.669), ATPPO2 (.382), and ATPPO6 (.347) (see Table 4 below).

Table 3: Factor Loading of 23 Items

Construct	AFRICAN TIME					
	Concurrent Tasks		Event-time		Past-present orientation	
Items loadings	<b>ATCT5</b>	<b>.616</b>	<b>ATET2</b>	<b>.770</b>	<b>ATPPO4</b>	<b>.844</b>
	<b>ATCT6</b>	<b>.601</b>	<b>ATET3</b>	<b>.678</b>	<b>ATPPO5</b>	<b>.669</b>
	<b>ATCT3</b>	<b>.560</b>	<b>ATET6</b>	<b>.594</b>	<b>ATPPO2</b>	<b>.382</b>
	<b>ATCT4</b>	<b>.538</b>	<b>ATET1</b>	<b>.569</b>	<b>ATPPO6</b>	<b>.347</b>
	ATCT1	.441	ATET2.1*	.598	ATPPO4.1*	.726
	ATCT3.1*	.424	ATET4	.539	ATPPO1	.339
	ATCT2.1*	.326	ATET5	.293	ATPPO3.1*	.273
	ATCT2	.296			ATPPO3	.126

\* Indicates the newly revised items after the pilot. However, the original items from the pilot were also included in the validation study.

50) Hair et al., *Multivariate Data Analysis*.

Table 4: Final Set of 12 Items

CODE	ITEM
ATCT3	When I do a task, I stop to take a break for whatever reason(s).
ATCT4	Interruptions are normal and should not be avoided when I am performing a task.
ATCT5	Often there is no clear beginning or end between the tasks I perform.
ATCT6	I do not perform tasks in a specific order.
ATET1	It is more important to me to develop relationships with people than sticking to schedules.
ATET2	The start of an event is not based on a strict schedule and/or pre-arranged time.
ATET3	During events I often use time in a flexible manner with less focus on the clock.
ATET6	I am often a bit late for a meeting because of the way I interact with other people.
ATPPO2	The future is unpredictable, so it makes little sense to worry about it.
ATPPO4	I often do not plan for the future.
ATPPO5	I live for the here and now.
ATPPO6	My past will influence who I am as a person today.

Subsequently, CFA was done on these 12 items to determine the dimensionality of the revised measurement model, as indicated by Table 5. It is evident that the revised measure for African Time (consisting of these 12 items) has resulted in an improved fit in terms of SRMR (.052), RMSEA (.053), and CFI (.951). The goodness-of-fit can thus be used to infer the construct validity of the scale, i.e., the three factors of the ATI provide a good fit to the proposed measurement model as evident from the absolute and incremental fit indices.

Table 5: Goodness-of-fit Indices of 12 Items

GOODNESS-OF-FIT INDICES	REVISED SET OF 12 ITEMS
SRMR	.052
RMSEA	.053 (.037; .069)
CFI	.951

Inter-factor Correlations: The correlations amongst the three factors were investigated (see Table 6). Factor 1 (*Concurrent Tasks*) has statistically significant correlations with both Factor 2 (*Event-time*) and Factor 3 (*Past-present Orientation*). Factor 2 (*Event-time*) has a statistically significant correlation with Factor 3 (*Past-present Orientation*) but not as strong as the relationship with Factor 1 (*Concurrent Tasks*).

Table 6: Correlation Matrix

FACTOR	1	2	3
Concurrent Tasks	1.00		
Event-time	.763**	1.00	
Past-Present Orientation	.764**	.661**	1.00

\*\* Correlation is significant at the 0.01 level or higher.

**Reliability:** Internal consistency reliability through the use of Cronbach's alpha ( $\alpha$ ) coefficient values was determined. As a guideline, a Cronbach's alpha of .60 or higher indicates acceptable levels of internal consistency.<sup>51</sup> The Cronbach's alpha values associated with the three factors of the construct *African Time* are: *Concurrent Tasks* ( $\alpha = 0.676$ ), *Event-time* ( $\alpha = 0.738$ ), and *Past-present Orientation* ( $\alpha = 0.613$ ) (see Table 7). Evidently, all the factors adhered to the aforementioned guideline.

Table 7: Cronbach's Alpha of 12 Items

AFRICAN TIME		
Factors (Dimensions)	Number of Items	Cronbach's Alpha
Concurrent Tasks	4	.676
Event Time	4	.738
Past-Present Orientation	4	.613

### Discussion of Psychometric Properties

This paper started with a brief literature review on which the item development of this scale was based using a deductive approach. The ATI consists of three dimensions (viz., *concurrent tasks*, *event-time*, and *past-present orientation*) which were identified *a priori* and confirmed statistically through factor analyses. The three dimensions were measured using four items each, and the final revised scale consists of 12 items. The goodness-of-fit associated with the measurement model was determined through CFA, and the scale has acceptable levels of goodness-of-fit and reliability. More specifically, goodness-of-fit statistics of SRMR (.052), RMSEA (.053), and CFI (.951) supported the three-factor structure of the measurement. The inter-factor correlations ranged between .661 and .764. Additionally, the scale's three dimensions have acceptable reliabilities ranging between .613 and .738. From the psychometric properties, we determined that the ATI is a reliable and valid measure that can be used in the South African context.

### Praxis: Conflict and Cultural Awareness

Practically, the ATI can be utilized as part of interventions to increase cultural awareness. The preceding has the potential to contribute to the mitigation of cross-cultural conflict in diverse groups.

51) Malhotra and Dash, *Marketing Research*, 291.

Cross-cultural research acknowledges that confusion, misunderstandings, and conflict might arise when individuals with differing time orientations interact.<sup>52</sup> How individuals use time not only influences behavior but also becomes an essential aspect of non-verbal communication.<sup>53</sup> Variations in time orientations can lead to conflict based on the (mis)interpretation of non-verbal communication.

Moreover, power distance comes into play during cross-cultural interactions, as members with higher social status or who are of the dominant in-group will determine which forms of social behavior and communication will be considered adequate for the members of the other group.<sup>54</sup> South African business practices are primarily Westernized, regardless of the nation's multi-cultural nature. Here, *African time* (which is characteristically polychronic) is most often not acknowledged or accepted, and individuals who hold this time orientation (i.e., more flexible time usage) are oftentimes reprimanded, disciplined, or dismissed in the Westernized environment where "time is money" (as prevalent in monochronism).<sup>55</sup>

It becomes apparent that the divergent time orientations held by monochrons and polychrons might cause them to clash.<sup>56</sup> Conflict situations might be approached more appropriately once individuals understand the motivations behind different cultural behavior and the cultural values on which such motivations are based.<sup>57</sup>

With the aforementioned in mind, a level of cultural awareness is required to overcome cross-cultural conflict situations. Here, cultural awareness refers to the individual's ability to distance themselves from themselves, to become aware of their own culture and the culture of others.<sup>58</sup> Cultural awareness therefore refers to the awareness and knowledge of other persons' cultures and requires some introspection through which the individual recognizes aspects of their culture that influence their affect, behavior, and cognition.

To develop cultural awareness and effectively communicate cross-culturally, it is imperative to investigate and understand cultural boundaries. An excellent focal point of investigation is the cultural interaction norms that might seem peculiar, unfamiliar, or cause frustration and conflict. This can be done by using scales, like the ATI, that identify nuanced time orientation.<sup>59</sup>

Being attentive to one's cultural values will facilitate the expansion of mindfulness and encourage openness toward a multitude of cultures. The opportunity to broaden one's worldview, to accommodate others, and will motivate acceptance and respect as virtues. Furthermore, this mindfulness provides cognizance of how cultural values affect behavior in cross-cultural settings, and it helps the individual to see past the stigmatization derived from a shallow understanding of cultural values that can give rise to conflict.<sup>60</sup>

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52) Moustafa, Bhagat, and Babakus, "Investigation of Polychronicity," 7; Naidoo, "Intercultural Communication," 130; Adams, and van Eerde, "Polychronicity in Modern Madrid," 175.

53) Froemling, Grice, and Skinner, *Communication*, 101.

54) James, "Relationship between Individualism vs. Collectivism and the Culturally Intelligent Behavior of Counselor Trainees," 12.

55) Van den Bergh, "Cultural Intelligence," 20.

56) Pumariega, "Mañana, Mañana," 110.

57) Bluedorn, Kaufman and Lane, "How Many Things Do You Like to Do At Once?" 25.

58) Trompenaars and Hampden-Turner, *Riding the Waves of Culture*, 196; Iacob and Dumitresco, "Cultural Awareness, Sensitivity and Competence," 122.

59) An example of another scale that can be used in the South African context is the Metzian Ubuntu Inventory (MUI). Cf. Terblanché-Greeff and Nel, "The Metzian Ubuntu Inventory."

60) Thomas, "Domain and Development of Cultural Intelligence," 86, 90, 92.

## Conclusion

This study aimed to develop and validate a scale that measures African time. Using the deductive approach, we defined *African time* (as a nuanced time orientation) and the three dimensions *a priori*. As expected, the three-factor structure was confirmed. Based on CFA and Cronbach's alpha, the ATI is a valid and reliable scale to be used in various South African contexts to better facilitate cultural awareness.

The theoretical introduction of *African time* as a cultural value of time orientation has the potential to open dialogue where stigmatization is often present. This can facilitate cultural awareness. Additionally, the use of the ATI can increase cultural awareness in contexts where cross-cultural interactions are prevalent, e.g., organizational milieus. It will be valuable to understand how culture influences affect, behavior, and cognition, which might help to better anticipate and mitigate conflict that might arise when individuals handle the same situation in contrasting manners. This might have a minimizing or mitigating effect on cross-cultural conflict situations.

## Disclosure Statement

The data discussed in this article is based on Aïda C. Botha's (Terblanché-Greeff) PhD studies. This data has not been published elsewhere, nor is it submitted for review in any other publication. Additionally, the authors report that there are no competing interests to declare.

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## Data Availability Statement

The data that support the findings of this study are available from the corresponding author, A.C. T-G, upon reasonable request.



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