Attitudes Shape Implicit Temporal Trajectories: A Quantitative Test of the Narrative Structure of Collective Memories of Colonialism

Simona Lastrego¹, Charlotte Janssens¹, Olivier Klein¹, Laurent Licata¹

Abstract

This article investigates how Belgian participants’ implicit temporal trajectories regarding the history of Belgian colonialism in the Congo vary as a function of their attitudes towards colonialism and thus create different collective memories. We reasoned that, depending on their attitudes towards Belgian colonialism, individuals may draw on different schematic narrative templates to structure their own implicit temporal trajectory of colonial history. Consequently, we predicted that the shape of individual implicit temporal trajectories should vary according to their attitudes. Specifically, we expected that positive attitudes towards colonialism would be associated with implicit temporal trajectories in which the colonial period is seen as more positive than before and after colonialism, creating an inverted U-shaped implicit temporal trajectory, while negative attitudes towards colonialism should be associated with the opposite trend – U-shaped implicit trajectories. We measured the attitudes towards colonialism of Belgian participants (n = 129), then their social representations of three historical periods: before, during and after Belgian colonialism. Overall, results supported these hypotheses. This study complements previous narrative psychology investigations by bringing quantitative evidence according to which collective memories are structured as implicit temporal trajectories that are in line with people’s attitudes.

Keywords

implicit temporal trajectories, collective memory, colonialism, attitudes, narratives

“It was bullying, there was no negotiation, one didn’t talk with the people, the Africans. It was imposed on them, and it was dehumanising and violent. To this day we still suffer from it, because before the arrival of the colonisers, Africa was very organised. There were ways of talking, of palavering to solve problems, but when colonisation arrived it was the rifle. Either you do that, or you don’t do that, it was either the chicotes [whips] or the rifle” (Figueiredo, Oldenhove, & Licata, 2018).

“It was always in a spirit for evolution, in order to bring the Congo to an evolved stage and make it emerge from its black forest. By saying this I mean that the black man was not cultivated and did not know civilization and he had to learn things about himself and about the world” (Licata & Klein, 2005).

These two quotations illustrate the way collective memories regarding the same historical situation (here Belgian colonialism in the Congo) can be markedly different. The first excerpt, collected among Congolese immigrants living in Belgium, depicts how a peaceful era in Africa was disrupted by violent colonisation. In contrast, the second quotation, collected among former Belgian colonials, portrays an uncivilized precolonial Congo, to which colonisation brought...
enlightenment. In this article, we investigate the role of individual attitudes in shaping such divergent narratives among members of the same national group.

Collective memory can be defined as “a set of shared representations of the past based on group members’ common identity” (Licata & Klein, 2005, p. 241). These representations of historical events or characters are “woven into stories with temporal form referred to as narratives of origin” (Liu & Hilton, 2005, p. 539). In order to create specific narratives about a given historical event or period, individuals rely upon socially shared “schematic narrative templates” (Wertsch, 2008), which are used to embed together social representations of different historical periods (e.g., before, during, and after colonialism), thus giving shape to implicit temporal trajectories. As a function of their attitudes, individuals may refer to different schematic narrative templates and, therefore, they may draw different implicit temporal trajectories. This article investigates how Belgian participants’ implicit temporal trajectories regarding the history of Belgian colonialism in the Congo vary as a function of their attitudes towards colonialism and thus result in different collective memories.

The Narrative Structure of Collective Memories

In contrast with a propositional perspective of memory, according to which elements are stocked independently, Schank and Abelson (1995) suggested that memory embeds different elements into a narrative structure. Events are recounted in a sequential order, with a beginning and an end (Bruner, 1990; Ricoeur, 2000; Teigen, Böhm, Bruckmüller, Hegarty, & Luminet, 2017). Transposing these principles at the group level, László (2011) introduced the concept of historical trajectories – sequential narratives of positive and negative events of the group’s history – which are strongly endowed with emotional significance.

However, it is still unclear how psychological factors situated at the individual level relate with narrative structures situated at the collective level of analysis. According to Wertsch (2008, p. 122), “collective remembering involves an irreducible tension between active agents and textual resources, and it calls for the analysis both of textual resources and the specifics of how they are used by active agents”. This author distinguished two levels of narrative analysis: “specific narratives” and “schematic narrative templates”. Specific narratives regard unique events situated in space and time, whereas schematic narrative templates are abstract narrative structures that can be used to structure different specific narratives. For example, Wertsch identified a schematic narrative template of “Triumph over alien forces” that Russians of different generations refer to when remembering different historical episodes, such as the Mongol invasion, the Napoleonic Wars or WWII. These schematic narrative templates are cultural “textual” resources that group members refer to for organizing their own memories (Lopez, 2021), providing collective memories with a narrative coherence. Even autobiographical narratives have been shown to be structured by culturally defined schematic narrative templates (Fivush, Habermas, Waters, & Zaman, 2011). According to Wertsch (2008), it is through this process that memories become collective.

The Narrative Structure of Collective Memories Varies as a Function of Attitudes

The schematic narrative templates are widely shared among people with the same national identity (Wertsch, 2008). However, previous research has shown that collective memories are not always hegemonic at the national level. Akin to social representations, some collective memories are hegemonic whereas others are polemical – different versions of the same historical events are held by different subgroups (Kus, Liu, & Ward, 2013; Moscovici, 1984). For instance, Schuman and Scott (1989; see also Rimé, Bouchat, Klein, & Licata, 2015) described a generational effect on collective memory’s content. Gaskell and Wright (1997) showed that social class influences how people remember national history, while Kus et al. (2013) demonstrated how social representations of history differed between ethnic majority and minority groups. Baumeister and Hastings (1997) provided several examples of how group members distort historical truth (by creating another version of the past) to derive a more positive image of the group than the truth would offer (see also Klein, Licata, Van der Linden, Mercy, & Luminet, 2012; Licata, Klein, Saade, Azzi, & Branscombe, 2012; Sahdra & Ross, 2007). Thus, different schematic narrative templates may co-exist within the same national context, even more when historical events or periods are subject to debates or controversies (Hammack & Pilecki, 2012).
The colonial past is the subject of very contrasting positions and linked to strong ideological standpoints (Stanard, 2019). People in favour of colonialism often emphasize its positive contributions to colonized populations in terms of development in the fields of economy, education, or health care, as well as the pacification of indigenous populations. On the contrary, people who stand against colonialism denounce racism, the ill-treatment inflicted on local populations, the exploitation of the human and natural resources of the colonized countries, as well as the destruction of cultures and ways of life (Licata, Khan, Lastrego, Cabecinas, Valentim, & Liu, 2018; Licata & Klein, 2005, 2010). Thus, two opposing schematic narrative templates seem to structure the collective memories of colonialism. According to the first, colonialism was a positive event both for the colonizing and the colonized people, whereas, according to the second, colonialism was a catastrophe for the colonized peoples, and a boon for the colonizers.

Previous research has shown that individual psychological factors, such as endorsement of an ideology or social identification could be associated with different historical trajectories. In a recent study, Yamashiro and Roediger (2019) showed that US participants evaluated the events of the origins of America more positively than more normative events and future events, thus creating a temporal trajectory shaped as a negative slope, evoking a historical decline. However, this slope was moderated by participants’ endorsement of the “American exceptionalist ideology”, according to which America has the unique historical mission to bring liberty and freedom to humanity. Hence, the implicit temporal trajectory held by believers in American exceptionalism showed a steeper trajectory of decline than that of non-believers. Similarly, Caron-Diotte, de la Sablonnière, and Sadykova (2021) identified different historical trajectories based on Kyrgyz participants’ evaluations of their country’s situation at different periods in its history. These, however, changed in response to significant social changes and participants’ levels of national identification.

However, so far, the role of attitudes in shaping divergent implicit temporal trajectories has not been addressed. In this paper, we refer to attitude as “a psychological tendency that is expressed by evaluating a particular entity with some degree of favor or disfavor” (Eagly & Chaiken, 1993, p. 1). As a matter of fact, Bartlett (1932) had already pointed out the vicious circle entangling attitudes and memory: memories are constructed upon attitudes, and memories will later be used to justify these attitudes. Likewise, relations between attitudes and social representations have been described as a two-way process. On the one hand, for Moscovici (2008), attitude plays an essential role in the genesis of a social representation. He viewed the attitudinal dimension as the ‘genetic precursor’ of all representations (Moscovici, 2008). On the other hand, he also pointed out that attitudes towards any object are necessarily based on representations of that object (Moliner & Tafani, 1997). In this paper, we focus on the influence of attitudes on the narrative structure of collective memories of Belgian colonialism.

Belgian Colonialism in the Congo: Complex History, Conflicting Memories

The Belgian state’s rule over the Congo officially started in 1908 and ended in 1960. However, King Leopold II had already obtained sole sovereignty over this large territory at the 1885 Berlin Conference (Ndaywele Nziem, 1998), making the Congo Free State his near private property (Godeeiris, Lauro, & Vanthemsche, 2020). During that time, numerous atrocities were perpetrated by the colonial army and private companies against the Congolese population, such as forcing the natives to collect rubber by holding their wives and children as hostages or by using physical punishments, or even by severing their hands to justify the use of ammunitions (Burroughs, 2018; Vellut, 2005). These abuses were met by resistance from the Congolese (Burroughs, 2018) and exposed by a large international humanitarian campaign, strongly criticizing the King, which led him to hand over the Congo Free State to Belgium in 1908, which then became a “proper” Belgian colony. Although the level of violence decreased under Belgian rule, the colonial situation remained inherently unequal, maintaining the Congolese in a subaltern position. In 1960, independence was abruptly declared, and the following decades were difficult in the political and economic domains. Currently, the Democratic Republic of the Congo is one of the poorest countries in the world (United Nations Development Programme, 2017).

The history of Belgian colonialism in the Congo is complex and most people still do not know it well, partly because it is still too vaguely and imprecisely taught at school (Van Nieuwenhuyse, 2014). Recently, this past has resurfaced in the Belgian political sphere as activists of African descent are voicing their critical version of colonial history (Stanard, 2019), confronting positive representations of the colonial past that are still present, particularly among the older generations of Belgians (Licata, 2010). On June 30th, 2020, the current King expressed his “deepest regrets”
for the “acts of violence” and “suffering” inflicted in colonial Congo. Thus, Belgium is currently confronted with the confluence of different and incompatible accounts of its past in the Congo.

Movements of colonial propaganda and counterpropaganda have spread contrasted schematic narrative templates about the colonial past in the public sphere for decades (Goddeeris et al., 2020). The Belgian colonial propaganda (M’Bokolo & Truddaïu, 2018) spread representations of a very dark pre-colonial situation, in which tribal wars were common, and the Congolese were prey to Arab slave-traders (Hochschild, 1998). Describing a dark pre-colonial situation in order to better contrast it with a bright colonial action was part of this propaganda. Conversely, anti-colonialist movements stress the richness of precolonial African civilizations, that were disrupted by colonial violence (Stanard, 2019).

Hypotheses

In the present study, we contend that Belgians may refer to two antagonistic schematic narrative templates about colonial history as a function of their attitudes towards colonialism. These schematic narrative templates influence their accounts of the history of Belgian colonialism in the Congo, thus forming different implicit temporal trajectories. Hence, colonialism can only be considered positive if it marked an improvement compared to the pre-colonial situation. In addition, the situation should have deteriorated after independence. In contrast, to think of colonialism as a negative event implies construing the pre-colonial situation as more positive than the colonial situation. Moreover, the situation should then have improved following independence (unless colonial domination persisted in other forms, see below).

It follows that attitude towards colonialism should influence social representations, not only of the colonial period itself (obviously expected given the tight link between attitudes and social representations), but also of the periods preceding and following it (H1). More precisely, attitude (from negative to positive) towards colonialism should negatively predict social representations of the pre-colonial period (H1a) and social representations of the post-colonial period (H1b). However, this latter relation might be mitigated by the fact that knowledge about the difficult post-colonial situation in the Congo is higher than for the pre-colonial period.

However, we do not expect symmetrical results. Indeed, pre-colonial history is generally unknown by Westerners (Brasil & Cabecinhas, 2017), including Belgians (Van Reybrouck, 2012). Participants will thus be relatively free to imagine the period preceding colonialism as a function of the pro-colonial or anti-colonial schematic narrative template they are referring to. As for the post-colonial period, since its independence, the Congo has been confronted with an extremely unstable political and economic situation, causing harsh living conditions for its population. In contrast with the pre-colonial period, the period following independence is better known among Belgians, as is the present situation. There is thus less narrative freedom for describing the post-colonial than the pre-colonial period, so that we expect less variation in social representations of the situation during this period as a function of attitudes. Yet, the negative post-colonial situation should be attributed to different causes (H2): those in favour of colonialism should incriminate the Congolese themselves or their leaders – “the situation came back to chaos when the Belgians left” (H2a)–whereas those holding anti-colonial attitudes should attribute this difficult situation to either the sequels of colonialism itself, or to the “neo-colonial” actions of Belgium and other Western powers (Rosoux & van Ypersele, 2012) (H2b).

Moreover, we contend that the contrast or continuity between representations of different periods then shapes a straightforward historical narrative demonstrating the legitimacy of a standpoint in line with individuals’ attitudes. We thus present the following hypothesis: The shape of the narrative created by the social representations of—and the Congolese well-being during—the three historical periods should vary as a function of participants’ attitudes towards colonialism (H3). More precisely, a positive attitude towards colonialism should predict the implicit temporal trajectory between three historical periods (before, during, and after colonialism) in an inverted U-shape (H3a: low-high-low), while negative attitude should predict the implicit temporal trajectory in a U-shape (H3b: high-low-high).
Method

Participants

133 participants completed the questionnaire. Four participants were excluded from the analyses because they were not, or not only, Belgian. The final sample included 129 French-speaking Belgians aged 19 to 90 years \((M = 40, SD = 19.1)\). The sample size was decided based on practical constraints (timing especially). This sample size allows to detect an effect of \(\rho = .24\) at \(.80\) power, which corresponds to a medium effect size (Cohen, 1988). Participants were recruited through the social network “Facebook” or email. Among these participants, there were 72 women and 57 men. 101 participants had at least a higher education degree. Our sample included students \((n = 33)\), employees \((n = 45)\), retired people \((n = 24)\), and various professional statuses \((n = 27)\) “unemployed”, “worker”, “manager”, “independent” or “other”. 85 participants had at least one relative who had lived in the Democratic Republic of Congo, and 18 participants had themselves lived in Africa, including 16 in the Democratic Republic of the Congo.

Measures and Procedure

Participants were invited to participate in an online questionnaire, which included several scales (all items are available in the Supplementary Materials). The study was presented as part of a master thesis in psychology, investigating representations of Belgium’s colonial past. Except when indicated, all scales were created for the purposes of this study, inspired by previous qualitative studies on social representations of colonial history (Figueiredo et al., 2018; Licata & Klein, 2005, 2010), and items were rated on a seven-point scale (1 = strongly disagree, 7 = strongly agree).

First, participants were asked to indicate their *Attitude towards Belgian colonialism*, through a five-item scale \((\alpha = .87)\). These items evaluated colonialism from different aspects (e.g., “I think that, to some respect, the Belgian colonisation was a good thing”). High values indicated positive attitudes.

Second, *Social representations of colonial history* were measured by asking participants to indicate how they represented the situation in the Congo in three different historical periods – before, during, and after – Belgian colonialism. Social representations of each three period were addressed through nine items tapping the same domains: peace/conflict, economy, health, well-being, politics, contact with other countries, environment. The participants completed a nine items scale measuring *Social representation of the pre-colonial situation* (e.g., “Before the Belgian colonisation, the Congolese territory was torn up by wars and slavery”) \((\alpha = .71)\), *Social representation of the colonial situation* (e.g., “During Belgian colonisation, the colonial action reduced wars between tribes and slavery”) \((\alpha = .80)\) and *Social representation of the post-colonial situation* (e.g., “After 1960, the Congolese territory was torn apart by civil wars”) \((\alpha = .82)\). Higher values indicated positive representations of each historical period.

Third, participants’ *Perceived Congolese well-being* during each historical period was assessed through a single item: “On a scale from 1 to 100, how would you rate the Congolese population’s well-being at this time?”. This item was added to complement the more complex measures of social representations of the three historical periods and to ascertain that potential effects were not driven by content specificities of these measures. Hypotheses 1 and 2 were tested using both the measures of Social representations of colonial history and the measure of Perceived Congolese well-being.

Fourth, two items were used to assess participants’ *Attribution of responsibility for the current situation in the Democratic Republic of Congo*. First, participants were asked to evaluate Belgians’ responsibility with a single item: “Due to Belgians’ behaviours during colonisation, the country is currently victim of many conflicts”. Then, they were asked to evaluate Congolese leaders’ responsibility with a single item: “Congolese leaders are responsible for the current situation in the Congo”.

Fifth, participants’ *Identification with Belgium* was measured with a four-item scale (e.g., “I identify to Belgium”) \((\alpha = .87)\) adapted from Brown, Condor, Mathews, Wade, and Williams (1986). Identification with Belgium was measured because previous research has shown significant relations between national identification and social representations of colonialism and group-based emotions (Klein, Licata, & Pierucci, 2011; Licata & Klein, 2010). This scale was introduced as a control variable.

Finally, participants were asked to report their gender and age.
Results

Descriptives

Table 1 reports descriptive statistics for all measures. The results indicate that participants tend to represent the pre-colonial and the colonial periods as more positive than the post-colonial period, and that they view the well-being of the Congolese as higher before than during or after colonialism. With respect to responsibility for the current situation of the Congo, blame tends to be attributed more to the Congolese leaders than to the Belgian colonialists. National identification and age significantly correlated with several variables of interest and were therefore controlled in subsequent analyses.

We conducted principal component analyses on all items of identification, attitudes towards colonialism, well-being and responsibility scales. These suggested that, except for Belgian responsibility (that loaded on the “attitudes towards colonization” component), they captured different constructs (see Supplementary Materials).

Interestingly, social representations of the colonial period correlated negatively with social representations of the pre-colonial period: the more participants viewed Belgian colonialism in a positive way, the more they portrayed the historical period before colonisation in a negative way (and vice-versa). These two periods were therefore represented in contrast with each other. However, social representations of the colonial and post-colonial periods did not correlate significantly.

H1: Attitudes Towards Colonialism Influence Social Representations of the Three Historical Periods

As expected (see Table 1), attitude towards colonialism correlated, not only positively with social representations of the colonial period, but also negatively with social representations of the pre-colonial period (H1a) and with social representations of the post-colonial period (H1b). The same trends were observed for perceived Congolese well-being, although the correlation between attitudes towards colonialism and social representation of the post-colonial period did not reach significance.

In order to test these hypotheses while controlling for the potential effects of national identification and age, we conducted multiple regression analyses, which mostly confirmed these results. Attitude (from negative to positive) towards colonialism was negatively associated with social representation of precolonial times\(^1\) (H1a), \(B = -.29, 95\%\ CI [-.39, -.19], \beta = -.47, 95\%\ CI [-.61, -.31], p < .001, R^2 = .37,\) positively associated with social representation of colonial times, \(B = .40, 95\%\ CI [.31, .49], \beta = .61, 95\%\ CI [.48, .75], p < .001, R^2 = .54,\) but not significantly with the social representation of postcolonial times (contrary to H1b), \(B = -.05, 95\%\ CI [-.18, .08], \beta = -.07, 95\%\ CI [-.27, .12], p = .45, R^2 = .13.\) National identification did not significantly predict any of the social representations of the three periods. Age positively predicted social representations of the colonial period, \(B = .01, 95\%\ CI [.00, .01], \beta = .17, 95\%\ CI [.00, .21], p = .01,\) but negatively predicted social representations of the pre-colonial period, \(B = -.01, 95\%\ CI [-.02, .00], \beta = -.22, 95\%\ CI [-.44, .00], p = .006\) and of the post-colonial period only, \(B = -.02, 95\%\ CI [-.02, -.01], \beta = -.32, 95\%\ CI [-.41, -.21] p < .01.\)

\(^1\) We provide both the non-standardized (\(B\)) and the standardized (\(\beta\)) coefficients. The non-standardized (\(B\)) coefficient indicates the change in the dependent variable for each unit of the independent variable: here, the measure of social representations of pre-colonial times decreases of 0.30 for each unit of the scale of attitude towards colonialism. The standardized (\(\beta\)) coefficient indicates the effect size.
Table 1

Means, Standard Deviations, and Correlations With Confidence Intervals

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<td>2. Social Representation Pre-Colonial Times</td>
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<td>4. Social Representation Post-Colonial Times</td>
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<td>5. Perceived Well-being Pre-Colonial Times</td>
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<td>16.03</td>
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<td>6. Perceived Well-being Colonial Times</td>
<td>48.69</td>
<td>19.91</td>
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<td>9. Congolese responsibility</td>
<td>5.19</td>
<td>1.64</td>
<td>38**</td>
<td>-39*</td>
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<td>10. National identification</td>
<td>5.41</td>
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<td>11. Age</td>
<td>39.98</td>
<td>19.07</td>
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<td>-40**</td>
<td>38**</td>
<td>-35**</td>
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Note. M and SD are used to represent mean and standard deviation, respectively. Values in square brackets indicate the 95% confidence interval for each correlation. The confidence interval is a plausible range of population correlations that could have caused the sample correlation (Cumming, 2014).

*p < .05. **p < .01.
Similarly, attitude towards colonialism was negatively associated with perceived Congolese well-being in precolonial times, although only marginally (H1a), $B = -2.08$, 95% CI [-4.28, .12], $\beta = -18$, 95% CI [-.38, .01], $p = .06$, $R^2 = .12$, positively associated with perceived Congolese well-being during colonialism, $B = 5.80$, 95% CI [3.17, 8.44], $\beta = .41$, 95% CI [.22, .60], $p < .001$, $R^2 = .18$, and unrelated with perceived Congolese well-being after colonialism (contrary to H1b), $B = .49$, 95% CI [-1.96, 2.94], $\beta = -04$, 95% CI [-.16, .24], $p = .69$, $R^2 = .09$. National identification did not significantly predict any of the evaluations of Congolese well-being at the three periods; age negatively predicted perceived Congolese well-being before, $B = -.19$, 95% CI [-.35, -.04], $\beta = -.23$, 95% CI [-.42, -.05], $p = .015$, and after colonialism, $B = -.28$, 95% CI [-.45, -.11], $\beta = -.31$, 95% CI [-.49, -.12], $p = .002$. Thus, the more participants held positive attitudes towards colonialism, the more they represented the pre-colonial situation in a negative way and the more they represented the colonial situation in a positive way. However, social representations of the post-colonial period did not vary significantly as a function of attitudes towards colonialism.

**H2: Attribution of Responsibility for the Present Situation in the Congo to Belgian or Congolese**

We tested H2 by regressing each of the two items assessing attribution of responsibility for the current situation in the Congo on attitude towards colonialism, controlling for national identification and age. As expected, attitude towards colonialism negatively predicted attribution of responsibility to Belgian colonialists (H2a), $B = -.71$, 95% CI [-.92, -.50], $\beta = .55$, 95% CI [-.72, -.39], $p < .001$, $R^2 = .36$, and positively predicted attribution of responsibility to Congolese leaders (H2b), $B = .33$, 95% CI [.11, .55], $\beta = .29$, 95% CI [.09, .47], $p < .01$, $R^2 = .17$. This result indicated that participants in favour of colonialism considered that the present Congolese situation was more strongly linked to the Congolese leaders’ incompetence rather than to the Belgian colonial action, whereas participants with negative attitudes towards colonialism made the opposite attributions of responsibility.

**H3: Attitudes Towards Colonialism Shape Implicit Temporal Trajectories**

H3 predicted that the shape of the narrative created by the social representations of the three historical periods should vary as a function of participants’ attitudes towards colonialism: a positive attitude towards colonialism would lead to viewing the colonial period as preferable to the two other periods (H3a: inverted U-shape), whereas a negative attitude towards colonialism should have the opposite effect (H3b: U-shape). Thus, we expected two divergent quadratic trends for both groups: the quadratic term having a positive coefficient when the attitude is positive and a negative one when the attitude is negative. This should result in an interaction between attitude towards colonialism and historical period (before, during, after colonialism). To test such a pattern in a within-subjects design (cf. Judd, McClelland, & Ryan, 2017), two new variables were created:

\[
V_1 \text{ (linear): After-Before} \\
V_2 \text{ (quadratic): During-(After+Before)/2}
\]

Regressing $V_1$ on attitudes towards colonialism (centred) provides two elements of information: The intercept indicates whether there is a mean difference in ratings between social representations of the period before and the period after colonialism. Indeed, it is the predicted value of the outcome when the predictor is set at zero (i.e., its mean since it is centred). The coefficient associated with attitude towards colonialism indicates whether this difference is a function of the attitude: it evaluates the interaction between attitude and historical period. To interpret it, for each change in one unit in attitude towards colonialism, this difference increases (or decreases if it is negative) by a value equal to this coefficient. The examination of the intercepts for models predicting the linear and quadratic terms, respectively, allows

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2) When using contrasts in within-subjects designs, a contrast variable is computed for each participant. One can then build a linear model with this contrast as a DV and a centered predictor. Whether the intercept of this model is significantly different from 0 informs us on the significance of the contrast (as would a simple test against zero) whereas the coefficient associated with the predictor tests the moderation of the relevant contrast effect by this predictor. For a detailed explanation of this procedure see Judd et al. (2017, Chapter 11).

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to determine whether the effect of historical period is linear, quadratic, both linear and quadratic or neither linear nor quadratic (thus, no effect)\(^3\).

The intercept for the first (linear) model (i.e., with \(V_1\) as the DV) was positive, suggesting that participants viewed the period preceding colonialism more positively than the period following it, \(B = -0.41, 95\% \text{ CI } [-0.58, -0.24], p < .001\), although such a comparison should be considered with caution given that the items were not exactly identical from one period to the next. More importantly, attitude towards colonialism exerted a significant positive effect, \(B = 0.24, 95\% \text{ CI } [0.10, 0.38], \beta = 0.33, 95\% \text{ CI } [0.14, 0.52], p < .01, R^2 = .11\). This suggests that the positive glow of precolonial times compared to the present faded as attitudes grew more favourable towards colonialism. National identification or of age had no effect on the linear term.

Turning now to the quadratic term, we find a positive intercept, suggesting that colonial times tended to be perceived more positively than before and after colonial times combined, \(B = 0.77, 95\% \text{ CI } [0.60, 0.93], p < .001\). As expected (H3a and H3b), this effect was stronger for people with positive attitude towards colonialism: The effect of this variable on the quadratic term was highly significant, \(B = 0.54, 95\% \text{ CI } [0.40, 0.67], \beta = 0.55, 95\% \text{ CI } [0.41, 0.68], p < .001, R^2 = .53\). Age, but not national identification, was also slightly positively associated with this quadratic trend, \(B = 0.02, 95\% \text{ CI } [0.01, 0.03], \beta = 0.28, 95\% \text{ CI } [0.14, 0.2], p < .001\). Older participants perceived a more pronounced positive contrast between the colonial era and the periods before and after it than younger participants. In order to describe this significant result, Figure 1 depicts the trends in each group based on expected social representations of each period for values of attitudes towards colonialism 1 SD below, at, and 1 SD above the mean (as suggested by Aiken, West, & Reno, 1991). We clearly see that participants with more negative attitudes towards colonialism view the history of the Congo as becoming direr as we move from precolonial to postcolonial times. Among pro-colonialists, on the other hand, we find the expected inverted U-shape. The implicit temporal trajectory expressed by the neutral participants resembles that of the pro-colonial participants, with more positive representations of the colonial period than of the two other periods. Thus, different implicit temporal trajectories seem to emerge from these analyses.

Figure 1

\textit{Social Representations of the Situation in the Congo for the Three Historical Periods According to Attitude Towards Colonialism}

We then applied the same analysis technique to test H3 with perceived Congolese well-being as the dependent variable. Results for the first model (predicting the linear term) show that there was, once again, a clear contrast between precolonial and postcolonial times in favour of the former as indicated by a significant intercept, \(B = -11.57, 95\% \text{ CI } [-14.68, -8.46], p < .001\). Again, attitude towards colonialism tended to predict positively the linear term (\(V_1\)), though this

\(^3\) H3 was also tested using a K-means cluster analysis, with similar results. They are available in the Supplementary Materials.
trend was only marginally significant, $B = 2.57$, 95% CI [-0.02, 5.15], $\beta = .20$, 95% CI [-0.00, .40], $p = .05$, $R^2 = .03$. Neither age nor national identification significantly predicted the linear term.

In the second model (quadratic term), the intercept was again significant and positive, $B = 54.47$, 95% CI [50.91, 58.04], $p < .001$, suggesting the perception of higher well-being for the Congolese during colonialism than before or after it. Colonial attitude predicted the quadratic term positively (H3a & H3b): This contrast was perceived as greater to the extent that people held favourable attitudes towards colonialism, $B = 4.52$, 95% CI [1.56, 7.48], $\beta = .30$, 95% CI [.10, .49], $p < .001$, $R^2 = .12$. Neither age nor national identification significantly predicted the quadratic term.

**Figure 2** depicts the trends in each group based on expected perceived Congolese well-being at each historical period for values of attitudes towards colonialism 1 SD before, at, and above the mean. It shows that for participants with a negative attitude towards colonialism, Congolese well-being was perceived as much higher in precolonial times than during or after colonialism. These participants’ perception of Congolese well-being increased after colonialism, forming a U-shaped implicit temporal trajectory. In contrast, for participants with a positive attitude towards colonialism, perception of Congolese well-being peaked during colonialism, though it was close to what it was before, but it decreased sharply after colonialism, forming an – imperfect – inverted U-shaped implicit temporal trajectory. Finally, for those who held neutral attitudes, well-being was perceived as higher before colonialism than during or after it.

**Discussion**

The aim of this article was to investigate how Belgian participants’ implicit temporal trajectories regarding the history of Belgian colonialism in the Congo vary as a function of their attitudes towards colonialism. More precisely, we assumed that individuals rely upon socially shared schematic narrative templates (Wertsch, 2008) to adjust together social representations of different historical periods in accordance with their attitude towards colonialism, thus creating different implicit temporal trajectories.

Overall, our results corroborated the hypotheses. First, as expected, social representations of the pre-colonial situation varied widely as a function of attitude towards colonialism, correlating negatively with it, whereas social representations of the colonial period correlated positively with it. The same trends were observed with perceived Congolese well-being. In addition, social representations of the pre-colonial and of the colonial periods were negatively correlated. This suggests that participants evaluated the pre-colonial period – about which very little information is available to them – as a function of their attitude towards colonialism, and in contrast with their representation of the colonial period.
However, we observed little differences between evaluation of the situation of the Congolese after colonialism as a function of attitude towards colonialism. This was expected as, the difficult post-colonial situation being better known than the pre-colonial period, participants had less freedom to adapt their responses as a function of their attitude. This also probably explains the negative linear trends that were observed for both dependent variables (social representations and perceived Congolese well-being). Interestingly, stark differences appeared regarding the attribution of responsibility for this situation: Pro-colonialist participants blamed the Congolese leaders, whereas anti-colonialist ones blamed the Belgian colonialists.

More importantly, results corroborated our main hypothesis that attitude towards colonialism would “shape” implicit temporal trajectories of colonial history: the more positive the attitude, the more inverted U-shaped; the more negative the attitude, the more U-shaped. Indeed, participants with a positive attitude towards colonialism considered the colonial period as better than the pre-colonial and the post-colonial periods, consequently strengthening the idea that colonialism was beneficial for the Congolese. In contrast, those with a negative attitude towards colonialism evaluated precolonial times better than the two following historical periods, suggesting that Belgian colonial action worsened the situation, thus delegitimizing colonialism.

Confirming the results obtained for social representations of the three historical periods, the perceived evolution of Congolese well-being (a single-item measure) through the three historical periods, was also perceived in line with participants’ attitude towards colonialism. For those with a positive attitude, Congolese’s well-being peaked during the colonial period, then decreased after the departure of the Belgians. However, Congolese well-being was also considered rather positively before the Belgians’ arrival. In contrast, for those with a negative attitude, well-being peaked at the precolonial times, sharply decreased during colonialism, and improved after independence, though it did not reach the level of pre-colonial well-being. Participants holding neutral attitudes towards colonialism expressed a narrative in which well-being was highest before Belgians’ arrival, then decreased during colonialism and remained negative after independence.

Age also influenced these implicit temporal trajectories: older participants tended to express more inverted U-shaped implicit temporal trajectories than younger ones. This is in line with research showing the effects of generation on collective memories of colonialism (Licata & Klein, 2010).

However, this study suffers from some limitations. First, it is a single study carried out with a relatively small sample, which should be replicated in the same context (Belgian colonial memories) and/or others to ensure the robustness of these findings.

Second, it is a cross-sectional study, which casts doubt on the causal relation that we hypothesized, as well as on the direction of causality. Hence, it might be argued that social representations of history influence attitudes, rather than the opposite (Liu & Hilton, 2005; Rimé et al., 2015). Experimental studies are needed to ascertain causality and its direction.

Third, the measure of attitude towards colonialism that we used was not completely content-free. Thus, it would be worth trying to replicate these results using a purely evaluative measure of attitude4.

Fourth, in this paper, we have contended that culturally available schematic narrative templates mediate the link between attitudes and implicit temporal trajectories. We assumed that, depending on their attitude towards colonialism, participants would refer to different schematic narrative templates. However, we did not measure these narrative schematic templates, because, per definition, they cannot be measured at the individual level. Only their supposed effect on individual representations can be empirically investigated. It is thus uncertain whether participants adhered to a previously elaborated pro or anti-colonial schematic narrative template that influenced their attitudes, or if they imagined the pre-colonial period as a function of their representation of the colonial period, itself influenced by their attitudes. Since opposite collective memories are available in the public sphere, combining individual and collective levels of analysis (Doise, 1986) seems to better account for our results. Yet, these results do not allow us to unambiguously decide between these two possibilities. Further research is needed for doing so. In any case, this study brings evidence of the coherence between implicit temporal trajectories and attitudes.

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4) We repeated the statistical analyses using a simplified version of the attitude towards colonialism scale comprising only two items (“I think that, in some cases, Belgian colonialism was a good think” and “I consider that Belgian colonialism, in all its forms, was a bad thing (reversed item)”). Results were globally replicated.
Finally, it must be noted that the segmentation used here (before, during, after colonialism) assumes that lay people hold very schematic representations of history (Klein, 2013). History itself is infinitely more complex than this simplistic segmentation.

To address the study’s limitations and strengthen our conclusions, we suggest future studies should be carried out to test the impact of attitude in shaping implicit temporal trajectories. Narratives of any historical event or period that is subject to debates or controversy would be worth investigating. First, we expect similar trends to emerge with regard to other cases of colonialism, especially where colonialism has been legitimised, allegedly, as benefitting the colonised (Young, 2001). Thus, similar studies could be carried out in other countries with a colonial past. The impact of individual attitudes on implicit temporal trajectories should be highest in countries in which a strong controversy about their colonial past is ongoing, and lowest in countries in which collective memories of colonialism are more consensual. It would also be worth investigating whether public apologies for colonial crimes could lead to more convergence in these trajectories (Lastrego & Licata, 2010; Van Assche, Roets, Haesevoets, & Noor, 2021). Second, the shapes of narratives about other historical events or periods may also vary as a function of attitudes. For example, implicit temporal trajectories of fascism in Italy or of communism in Russia may also follow a quadratic curve varying as a function of political attitudes of Italians or Russians. Third, whereas we compared U-shaped and inverted U-shaped narratives, previous research has shown that other narrative shapes (Caron-Diotte et al., 2021; Yamashiro & Roediger, 2019), such as ascending or descending linear curves, best describe some collective memories. Future research should investigate how attitudes relate with different temporal trajectories.

There is clearly room for more research in this field as, to the best of our knowledge, this is the first time that the correspondence between attitudes and the shape of implicit temporal trajectories is demonstrated through quantitative methods. This study thus complements previous narrative psychology investigations by bringing quantitative evidence that collective memories are structured as implicit temporal trajectories, which are in line with people’s attitudes.

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Supplementary Materials

The Supplementary Materials contain all items used in the questionnaire and results from additional analyses (for access, see Index of Supplementary Materials below).

Index of Supplementary Materials


References


