

# Understanding Individual Motivations and Desistance: Interviews with Genocide Perpetrators from Rwanda and Cambodia

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**Abstract:** In this study, I present the results of interviews with forty-nine former genocide perpetrators from Rwanda and fifty-one former members of the Khmer Rouge in Cambodia to better understand motivations and desistance for participating in mass atrocities. I contrast these qualitative interviews with experimental research from psychology and neuroscience to offer an interdisciplinary approach to better understand their participation. The findings from the interviews show that a vast majority of respondents identified obedience to authority as a primary factor in their involvement. Many also cited the significant influence of group dynamics, particularly in Rwanda where many murders were carried out by armed groups. These reports align with two main forms of social influence: obedience to authority and conformity. Research in psychology and neuroscience had shown that obeying orders or conforming to a group can strongly alter our behaviors by affecting several brain processes. When questioned about desistance, a majority from both groups conceded that without intervention from an external military force, they would not have stopped participating on their own. This finding may be pivotal as it emphasizes the necessity of external intervention to stop mass atrocities.

**Keywords:** Genocide, Perpetrators, Interviews, Cambodia, Rwanda

## Introduction

Understanding the motivations behind individuals' participation in genocides and identifying potential reasons for desistance are fundamental societal questions to stop such human destructiveness. Previous studies have indicated that participation in genocide can be understood at two levels: structural

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and individual.<sup>1</sup> Structural-based theories offer explanations grounded in the institutions, culture, and circumstances unique to a society at a specific time. In contrast, individual-based theories propose reasons for participation that are specific to each individual participant.

The Genocide against the Tutsis in Rwanda has provided has provided many academics with a valuable opportunity to study both individual and structural factors that contribute to understanding participation in genocide. Several scientific studies have performed qualitative analyses of interviews with former genocide perpetrators to uncover their individual motivations. For instance, Anderson observes that many genocide perpetrators employed moral neutralization techniques to align with societal norms about morality and sustain a 'good person' self-image.<sup>2</sup> They might, for example, portray their victims as threats to their own lives, deny their victims' humanity, or shift personal responsibility to an authority or group. This finding is consistent with Mironko's study,<sup>3</sup> where he notes that many former genocide perpetrators in Rwanda invoked group attacks (*Igitero*, pl: *Ibitero*) to justify their actions, transferring responsibility to other group members. The literature has also identified several structural factors specific to Rwanda, such as a culture deeply rooted in obedience to authority — sometimes influenced by fear of the government,<sup>4</sup> the endorsement of violence by national leaders at the time, and the backdrop of ethnic conflicts coupled with the nation's economic situation.<sup>5</sup> However, the respective weight of individual and structural elements for participating in a genocide is less clear. The motivations identified in these interviews might emerge from the interplay between individual motivations and the specific structural elements present in Rwanda before and during the genocide against the Tutsi. This problematic is inherent in single-sample studies, lacking comprehensive comparative analyses across different populations. In this regard, a cross-sample ap-

1 Cyanne Loyle, 'Why Men Participate: A Review of Perpetrator Research on the Rwandan Genocide', *Journal of African Conflicts and Peace Studies*, 1.2 (2009), 26–42.

2 Kjell Anderson, 'Who Was I to Stop the Killing? Moral Neutralization among Rwandan Genocide Perpetrators', *Journal of Perpetrator Research*, 1.1 (2017), 39–63.

3 Charles Mironko, 'Igitero: Means and Motive in the Rwandan Genocide', *Journal of Genocide Research*, 6.1 (2004), 47–60.

4 Scott Straus, *The Order of Genocide: Race, Power, and War in Rwanda* (Ithaca, New York: Cornell University Press, 2006); Reva N. Adler, Cyanne E. Loyle, J. Globberman, and E.B. Larson, 'Transforming Men into Killers: Attitudes Leading to Hands-on Violence during the 1994 Rwandan Genocide', *Global Public Health*, 3.3 (2008), 291–307.

5 Gérard Prunier, *The Rwanda Crisis, 1959–1994: History of a Genocide* (London: Hurst, 1998).

proach might reveal whether individual motivations remain consistent across varied cultures and populations despite differing structural elements. Such an approach would foster a more holistic understanding of the motivations driving genocide participation.

Qualitative interviews outside of Rwanda are less numerous, primarily because several genocides may not have been officially recognized, or because genocide perpetrators have never been prosecuted and are therefore less willing to speak.<sup>6</sup> Drawing parallels in individual motivations may thus be an arduous task. However, research conducted in Cambodia has shown that the few testimonies obtained from former Khmer Rouge cadres share some similarities with those from former perpetrators in Rwanda. At the individual level, former Khmer Rouge members cited factors such as the dehumanization of victims, acclimatization to killing, moral justification, and deflection of responsibility.<sup>7</sup> Obedience to the orders of superiors was also frequently cited as a reason for participating in the mass killings during the Khmer Rouge regime.<sup>8</sup> However, the motivations for obeying these orders varied and ranged from strict allegiance to authority, concerns about maintaining one's reputation in front of superiors, or fear of being killed.<sup>9</sup> Thus, a working hypothesis is that some commonalities in individual motivations might emerge from interviews conducted in both Rwanda and Cambodia, despite structural differences.

Surprisingly, reasons for potential desistance have been largely overlooked in prior research, despite their crucial importance.<sup>10</sup> Extensive work has been conducted on 'rescuers', those who risked their lives and defied government orders during a genocide. Previous research has notably focused on personality traits,<sup>11</sup> seeking to understand if specific

6 *Researching Perpetrators of Genocide*, ed. by Kjell Anderson and Erin Jessee (Madison: University of Wisconsin Press, 2020).

7 Alexander Laban Hinton, 'Agents of Death: Explaining the Cambodian Genocide in Terms of Psychosocial Dissonance', *American Anthropologist*, 98.4 (1996), 818–31.

8 Haing Ngor and Roger Warner, *Haing Ngor: A Cambodian Odyssey* (New York: Macmillan, 1988).

9 Hinton, 'Agents of Death', p. 828.

10 Nicole Hahn Rafter, 'How Do Genocides End? Do They End? The Guatemalan Genocide, 1981–1983', in *The Crime of All Crimes: Toward a Criminology of Genocide* (New York: New York University Press, 2016), pp. 181–201.

11 Samuel P. Oliner, *Altruistic Personality: Rescuers of Jews in Nazi Europe* (New York: Touchstone, 1992); Stephanie Fagin-Jones and Elizabeth Midlarsky, 'Courageous Altruism: Personal and Situational Correlates of Rescue during the Holocaust', *The Journal of Positive Psychology*, 2.2 (2007), 136–47; and Nicole Fox and Hollie Nyseth Brehm, '“I Decided to Save Them”: Factors That Shaped Participation in Rescue Efforts during Genocide in Rwanda', *Social Forces*, 96.4 (2018), 1625–48.

traits are more associated with rescue acts during a genocide. Other studies have considered situational factors that might help individuals to rescue.<sup>12</sup> However, these studies predominantly address individuals who never participated in a genocide and who resisted involvement from the outset. In contrast, my focus is on the individual desistance of those who were actively involved in the genocidal process. If the goal of such interviews is to aid in the development of future prevention strategies, then understanding from individuals who experienced this harrowing mindset what might have helped them desist becomes critically important.

In the present study, I report findings from interviews with former genocide perpetrators in Rwanda and former Khmer Rouge members in Cambodia. The same set of questions was posed to both groups to determine potential commonalities or differences in their responses. Participants were probed about their reasons for participation and their emotional states during the acts. Similar to previous studies,<sup>13</sup> I expected that obedience to authority and/or group influence could be reported as major reasons. Fujii has indeed observed that in Rwanda, many ‘joiners’ — that is, the low- and mid-level perpetrators, to contrast with those deciding and ordering — did not necessarily join due to fear or hatred of Tutsis, but rather because of social dynamics, which explains the often-reported influence of social factors on the actions of perpetrators.<sup>14</sup> Phenomena such as hate and dehumanization could also be reported, but potentially less frequently if they were indeed not the main reasons for participation.<sup>15</sup> Furthermore, I asked participants to mention the factors that made them stop or might have helped them to desist from participating in the genocide. For this second question, the lack of previous literature prevents me from forming specific hypotheses. However, based on the studies conducted on rescuers,<sup>16</sup> I ex-

12 Hollie Nyseth Brehm, Christopher Uggen, and Jean-Damascène Gasanabo, ‘Age, Gender, and the Crime of Crimes: Toward a Life-Course Theory of Genocide Participation’, *Criminology*, 54.4 (2016), 713–43; Jacques Roisin, *Dans la nuit la plus noire se cache l’humanité: Récits des justes du Rwanda* (Bruxelles: Les Impressions Nouvelles, 2017); Fagin-Jones and Midlarsky, p. 142; Fox and Nyseth Brehm, p. 1626.

13 Anderson, p. 51; and Alexander Laban Hinton, ‘Why Did You Kill? The Cambodian Genocide and the Dark Side of Face and Honor’, *The Journal of Asian Studies*, 57.1 (1998), 93–122.

14 Lee Ann Fujii, ‘The Power of Local Ties: Popular Participation in the Rwandan Genocide’, *Security Studies*, 17.3 (2008), 568–97.

15 *Ibid.*, p. 571.

16 Fox and Nyseth Brehm, p. 1625; Fagin-Jones and Midlarsky, p. 136; Oliner, p. 1.

pected that some participants might mention a change in their environment or the enhancement of empathy or responsibility.

To discuss the results, I sought to offer a multi-disciplinary approach to provide a deeper understanding of individual motivations for participating in acts involving moral transgressions. Thus, in the discussion, the answers of the interviewees will be further contextualized within an interdisciplinary framework that draws on psychological and neuroscience research. While previous studies have established links between psychological research and participation in mass atrocities,<sup>17</sup> to the best of my knowledge, no such efforts have been made in the context of neuroscience findings.

## Method

As part of the method, a preliminary step involved acquiring an understanding of the cultural context and historical background in both countries before conducting the interviews. This entailed dedicating a year to studying the countries' histories and the work of scholars on related subjects, with a summary presented in the following section. My perspective was deepened through discussions with academics and stakeholders with experience in the relevant countries. After arriving, I engaged in extensive dialogues with local experts and research assistants over several days, enhancing the research process, ethical considerations, respondent interactions, and question design.

### 1. HISTORICAL CONTEXT IN RWANDA AND CAMBODIA

Understanding the historical context surrounding the genocides in Rwanda and Cambodia is crucial for understanding potential similarities and differences between the two events at the structural level. Offering a concise overview of such events may risk oversimplifying key aspects. Nonetheless, I will highlight some of the primary factors that led to these tragedies and present how each nation addressed those responsible for the atrocities.

In 1994, Rwanda experienced one of the darkest periods in its history: the Genocide against the Tutsi. This event resulted in the deaths

<sup>17</sup> Ervin Staub, 'Obeying, Joining, Following, Resisting, and Other Processes in the Milgram Studies, and in the Holocaust and Other Genocides: Situations, Personality, and Bystanders', *Journal of Social Issues*, 70.3 (2014), 501-14.

of an estimated 500,000 to 600,000 Tutsis, as well as many moderate Hutus, over approximately 100 days.<sup>18</sup> Rooted in a history of ethnic tension between the Tutsi and Hutu populations,<sup>19</sup> the genocide was orchestrated by radical Hutu factions who viewed the Tutsi minority as a threat to their power. The assassination of President Juvénal Habyarimana, a Hutu, in April 1994, served as the immediate trigger for the mass killings, though the foundation for mass violence had been laid through years of hateful propaganda. The infamous radio station *Radio Télévision Libre des Mille Collines* (RTLM) played a significant role in this, broadcasting messages that dehumanized Tutsis and incited their extermination. The brutal efficiency of the genocide was shocking, with neighbors turning against one another and many Hutus being forced into killing under threat to their own lives.<sup>20</sup> Throughout this period, the international community largely remained inactive, with notable exceptions of individual acts of bravery, but without a coordinated intervention effort.<sup>21</sup> The genocide was largely ended by the military efforts of the Rwandan Patriotic Front (RPF). In the aftermath, the task of pursuing justice and reconciliation was immense. The Rwandan government, under the leadership of the RPF, established the International Criminal Tribunal for Rwanda with the support of the United Nations to prosecute the masterminds of the genocide. Concurrently, due to the vast number of individuals involved in the killings, Rwanda introduced the Gacaca court system, a community-based justice approach that enabled communities to confront and judge the perpetrators, thereby facilitating a grassroots method for justice and healing.

Between 1975 and 1979, Cambodia endured one of the most brutal genocides of the twentieth century under the Khmer Rouge regime, led by Saloth Sâr, better known as Pol Pot.<sup>22</sup> The Khmer Rouge sought to transform Cambodia into a radical agrarian communist utopia. Cities were emptied, and their inhabitants, along with many others, were forced into labor camps in the countryside. Intellectuals, professionals,

18 Omar Shahabudin McDoom, 'Contested Counting: Toward a Rigorous Estimate of the Death Toll in the Rwandan Genocide', *Journal of Genocide Research*, 22.1 (2020), 83–93; and Luc Reydam, 'More than a Million': The Politics of Accounting for the Dead of the Rwandan Genocide', *Review of African Political Economy*, 48.168 (2021), 235–56.

19 Prunier, p. 135.

20 Mironko, p. 56.

21 Roméo Dallaire and Brent Beardsley, *J'ai serré la main du diable: La faillite de l'humanité au Rwanda*, trans. by Jean-Louis Morgan (Montréal: Libre expression, 2003).

22 Ben Kiernan, *The Pol Pot Regime: Race, Power, and Genocide in Cambodia Under the Khmer Rouge, 1975–79*, 3rd edn (New Haven, CT: Yale University Press, 2008).

urban populations, and those with perceived ties to the former government were systematically targeted and exterminated. Ethnic and religious minorities, such as the Cham Muslims and ethnic Vietnamese, were also persecuted. The regime enforced harsh policies that led to forced labor, executions, and mass starvation. By the time the Khmer Rouge was overthrown, an estimated 1.7 to 2 million people — nearly a quarter of Cambodia's population — had died from executions, forced labor, or starvation. The cessation of the Cambodian Genocide occurred through external intervention. By January 1979, Vietnamese troops, with support from Khmer Rouge defectors, seized Phnom Penh, displacing the regime. The Extraordinary Chambers in the Courts of Cambodia (ECCC), established in 2006, began proceedings to prosecute senior Khmer Rouge officials, seeking justice for the victims of the genocide.<sup>23</sup> Yet, the tribunal faced numerous obstacles, including political interference, funding shortages, and the deteriorating health of many aging defendants. Ultimately, only a handful of senior Khmer Rouge leaders were detained and tried by the ECCC, not accounting for the widespread brutality and the complicity of countless lower-ranking members. Consequently, few perpetrators have been formally acknowledged and condemned, leading most to opt for silence regarding their past.

## 2. IDENTIFYING AND RECRUITING THE INTERVIEWEES

### *ETHICAL PROCEDURES IN RWANDA AND CAMBODIA*

In Rwanda, the study was approved by the Rwanda National Ethics Committee (ref: 167/RNEC/2021). In Cambodia, I obtained approval from the National University of Battambang (ref: 0063/22) because the local ethics committee only evaluated medical studies. The ethical procedures in both countries involved similar steps regarding recruitment, data collection, obtaining consent, remuneration, and data protection.

In both countries, respondents were recruited in small rural villages, where they frequently do activities together in groups. Therefore, I invited them to a determined location based on available infrastructure, giving them the option to come in a group if they felt more comfortable (see Figure 1A). In both countries, many individuals were illiterate and

<sup>23</sup> *The Extraordinary Chambers in the Courts of Cambodia: Assessing Their Contribution to International Criminal Law*, ed. by Simon M. Meisenberg and Ignaz Stegmüller (The Hague: T.M.C. Asser Press, 2016).

thus could not read the information document. Then, together with a translator, we read to the participants the document, line by line, and encouraged them to ask any questions they desired (see Figure 1B). To avoid a group effect on their willingness to participate, consent was obtained individually, by inviting each participant in a separate room (see Figure 1C). Participants were clearly informed that the data and interviews would be processed anonymously and that they could withdraw at any time. We specifically requested that they not mention their own names or those of their relatives during the recorded interviews.



Figure 1. The procedure used to provide information and obtain individual consent in both Rwanda and Cambodia involved the following steps, even though only a single picture represents each step of the procedure. Faces, except for the face of the main author of the present paper, are blurred to prevent identification. The main author took the pictures, either manually (pictures B and C) or using a controlled timer (picture A).

All participants were given the choice to answer the questions in writing or orally to accommodate their preferences and ensure their comfort in responding. The recordings were captured using an audio recorder, to which only I had access. Subsequently, the data was stored on a secure server at Ghent University. However, the data is not publicly available, as specific details mentioned in some interviews, such as dates, locations, or events, could compromise the anonymity of the respondents. Upon returning to Belgium, the interviews were anonymously forwarded to official translators from independent companies who had signed confidentiality agreements. The translators were instructed to maintain the original style and wording as much as possible.

It was crucial that compensation did not serve as an incentive for participation. Thus, in line with relevant authority guidelines, compensation for interviews and electroencephalography studies was based on the participants' daily earnings, ensuring they were not financially disadvantaged. Associations aiding in participant identification were not financially motivated to prevent undue inducement. In Rwanda, recruiters were paid a standard daily wage, not tied to the number of participants recruited. In Cambodia, volunteers, being salaried employees of the association, did not receive additional payment.

In both countries, we collaborated with local psychologists who contacted the respondents if they experienced emotional difficulties or re-experienced trauma during the interviews. Since many respondents did not own phones, we provided one for their use if necessary. We also assured them that we would cover transportation costs and any required sessions with the psychologists. In neither country did this occur.

#### *IDENTIFYING AND RECRUITING INTERVIEWEES IN RWANDA*

The interviews took place between August and September 2021. With the help of two research assistants, I interviewed fifty-five former genocide perpetrators who had completed their prison sentences. All were males and the mean age was 59.58 years old ( $SD=8.34$ ). Obtaining a gender balance was almost impossible, as there were far fewer female perpetrators than male perpetrators.<sup>24</sup>

<sup>24</sup> Philip Verwimp, 'An Economic Profile of Peasant Perpetrators of Genocide: Micro-Level Evidence from Rwanda', *Journal of Development Economics*, 77.2 (2005), 297–323.

To ensure that the individuals interviewed had been officially recognized as genocide perpetrators, we collaborated with a local community-based organization, Prison Fellowship Rwanda (PFR). PFR works with both former perpetrators and survivors, aiming to promote reconciliation. To make initial contact, two volunteers from PFR visited rural villages in Rwanda, going door-to-door to identify and invite the targeted individuals who are willing to be interviewed about their actions during the genocide. This was a critical first step because these volunteers have known the potential interviewees for years, which allowed us to start gaining their trust. I then traveled daily to various villages to meet with the interviewees. Due to movement restrictions resulting from the COVID-19 pandemic, the interviews were limited to former genocide perpetrators residing in the districts of Kayonza and Bugesera. I conducted these interviews in rented buildings within the villages. While some interviewees were fluent in French, I opted to conduct all interviews in Kinyarwanda to maintain consistency. Two research assistants from the University of Rwanda were trained to facilitate these interviews with regards the content of the questions and the ethical procedure. The research assistants posed the questions to the respondents and provided initial translations so that I could follow their responses.

#### *IDENTIFYING AND RECRUITING INTERVIEWEES IN CAMBODIA*

In Cambodia, conducting the interviews was more challenging for several reasons. Firstly, the events occurred roughly fifty years ago, which meant many potential interviewees had already passed away. Secondly, given that only five individuals were prosecuted during the ECCC, those still alive often preferred to remain silent.<sup>25</sup> I received assistance from the Documentation Center Cambodia (DC-Cam), a non-profit organization whose primary mission is to collect testimonies from genocide survivors. DC-Cam operates several centers across the country and works with a range of survivors — including former Khmer Rouge members. Similar to Rwanda, working with DC-Cam was a critical first step in order to start gaining the trust of the potential interviewees.

Between January and February 2023, I managed to secure interviews with fifty-one former Khmer Rouge members across various Cambodian districts: Oddar Meanchey, Kampong Cham, and Takeo.

<sup>25</sup> Hinton, 'Why Did You Kill?', p. 95.

Twenty-three identified as male and the mean age was 68.23 years old ( $SD=6.53$ ). The interviews were conducted in buildings owned by DC-Cam or in the homes of the interviewees. All interviews were carried out in Khmer, and I consistently trained a research assistant to assist with the interview process.

### 3. CONDUCTING AND ANALYSING THE INTERVIEWS

In both countries, I spent several days (between three and ten overall) in the villages. Notably, the interviewees also participated in other research projects conducted in their villages by a larger research team. These projects were unrelated to the present study. In Rwanda, they involved the investigation of intergroup biases between former perpetrators, survivors, and their respective children.<sup>26</sup> In Cambodia, they involved studying how emotional and non-emotional neural alterations persist over generations after a traumatic event.<sup>27</sup> For these projects, it was essential to gain their trust, especially since we were using electroencephalography — a device they had never seen before and that may look intimidating. Direct personal interactions with them were challenging due to language barriers. This was particularly pronounced in Cambodia, where the research assistant's proficiency in English was not as strong as initially indicated. This difficulty echoes the observations by Hinton,<sup>28</sup> who noted a cultural reluctance to acknowledge difficulties for fear of 'losing face'. However, our extended presence in the villages helped ensure that the interviewees grew accustomed to us before deciding to participate in the interviews.

In Rwanda, interviewees were first asked how many years they had spent in prison, their release date, and the crime that resulted in their incarceration. In Cambodia, these questions were not applicable because none of the interviewees had been tried or incarcerated for their involvement. Instead, they were questioned about their roles within

26 Emilie A. Caspar, Guillaume P. Pech, Darius Gishoma, and Clémentine Kanazayire, 'On the Impact of the Genocide on the Intergroup Empathy Bias between Former Perpetrators, Survivors, and Their Children in Rwanda', *The American Psychologist*, 78.7 (2023), 825–841; Guillaume P. Pech, Darius Gishoma, and Emilie A. Caspar, 'A Novel Electroencephalography-Based Paradigm to Measure Intergroup Prosociality: An Intergenerational Study in the Aftermath of the Genocide against Tutsis in Rwanda', *Journal of Experimental Psychology: General*, 153.1 (2024), 241–254.

27 Emilie A. Caspar, Guillaume P. Pech, and Ros Pheak, 'Cognitive and Affective Alterations among Survivors of the Genocide in Cambodia and Their Descendants on Two Generations', *Biological Psychology*, (Under Review).

28 Hinton, 'Why Did You Kill?', p. 102.

the Khmer Rouge regime and whether they had inflicted harm on anyone during that period. All interviewees from both countries were then asked why they participated in the genocide, what their thoughts were during their participation, and what reasons or internal factors led them, or could have led them, to stop their involvement. After carefully reading each interview, I developed categories for responses to each question. Three impartial judges then assessed the answers, indicating whether or not the responses corresponded to the designated categories. I then reviewed the classifications provided by the judges and finalized the categories based on the responses that were agreed upon by the majority of judges.

## Results

### 1. INFORMATION REGARDING THEIR ROLES AND PARTICIPATION DURING THE GENOCIDE

#### *IN RWANDA*

In Rwanda, five of the respondents claimed that they were completely innocent despite having been tried during the Gacaca Trials. Consequently, I did not include them in the final analysis as they maintained their innocence during the following questions. Another interviewee was heavily intoxicated with alcohol during the interview — a condition not uncommon among this population — which made him exceedingly talkative.<sup>29</sup> However, I considered his responses to be potentially unreliable and thus excluded him from the final sample.

For the other respondents, there were three main categories of crimes for which they had been convicted, consistent with previous reports.<sup>30</sup> These crimes included murder, group attacks, and looting. Notably, many of the respondents used a term that would be more accurately translated as ‘killings’ rather than ‘murders’ during the interviews. Killing refers to the act of causing death, whereas murder im-

29 Kevin Barnes-Ceeney, Lior Gideon, Laurie Leitch, and Kento Yasuhara, ‘Recovery After Genocide: Understanding the Dimensions of Recovery Capital Among Incarcerated Genocide Perpetrators in Rwanda’, *Frontiers in Psychology*, 10 (2019), Article 637, <<https://www.frontiersin.org/journals/psychology/articles/10.3389/fpsyg.2019.00637/full>> [accessed 17 April 2024].

30 Scott Straus, ‘How Many Perpetrators Were There in the Rwandan Genocide? An Estimate’, *Journal of Genocide Research*, 6.1 (2004), 85–98.

plies the intent to kill. During the genocide, the intention was to kill, so 'murder' would be the appropriate term. Nonetheless, it is unclear whether the use of 'killings' over 'murders' was deliberate, to suggest a lack of intent, or due to a lack of understanding of the terms. Therefore, I categorized all such instances under 'murder'.

Some of our respondents were convicted of several crimes, and their answers were categorized accordingly. For example, one participant stated, 'The crime I committed against the Tutsis, I was told to go and kill the Tutsis and I went to grab a machete and slaughter them and I looted their cows' and was thus categorized under both murder and looting. Another, whose answer was categorized under both murder and group attacks, reported:

It is Genocide. I committed murder; I went into group attacks and killed. I killed four people, but I killed two by myself and the other two I killed with the help of others that we were together at time.

In order of prevalence based on the frequency of their responses, out of forty-nine respondents, twenty-nine reported being convicted of murder (59.18%), nineteen reported participation in group attacks (38.77%), and eleven indicated they were sentenced for looting or damaging property (22.44%). On average, respondents had spent about nine years in prison and were released around 2004.

### *IN CAMBODIA*

During the Khmer Rouge regime, nearly the entire Cambodian population was assigned specific roles: some were assigned to mobile units and medical units, while others served as teachers, military personnel, prison guards, and so on. I decided to interview all individuals who were active within the Khmer Rouge organization, regardless of their roles and potential association with the murdering at the time. Their perspectives were considered valuable, even if they had not directly inflicted harm, since the majority of the population complied with the regime without resistance.

Of the fifty-one interviewees, twelve indicated they held positions that may have involved harming others, such as soldiers or prison guards who transported prisoners to the killing fields between 1975 and 1979. Twenty-six worked in various mobile units, and three were assigned to the child unit. Two served as teachers, although one was il-

literate in Khmer. Two others were part of the medical units. One individual claimed to have led a cooperative without specifying its nature, and two declined to explain their roles. The remaining three identified as farmers (N=2) and a rice thresher (N=1). All participants were asked if they had harmed anyone during that period or if they had been aware of the killings. Every interviewee (51/51) reported witnessing or hearing about systematic killings. However, when directly asked, 'Did you cause harm or hurt someone between 1975 and 1979?', the unanimous response was 'No'.

## 2. WHY DID YOU COMMIT THOSE CRIMES?

### *IN RWANDA*

In Rwanda, three main categories of answers emerged from the interviews: obedience to authority, group attacks, and being forced to participate (see Figure 2).

Thirty-four of the forty-nine interviewees (69.38%) reported that they participated in the genocide because the 'bad' government asked them to do so. The interviewees reported justifications such as 'The reason why I did it was because of bad government that trained us to kill Tutsis', or 'It is bad leadership that instructed us to kill people and become animals, even though we were not animals. Yes, it is the leadership that did this, not us'.

Out of the forty-nine respondents, nine (18.36%) indicated that *Igitero* was the reason for participating in the murders. Some examples include, for instance, 'My armed group killed seven people. Sorry, it was actually rather seven children and their mother, making it eight in total', and 'I joined group attacks to run after the Tutsis and went on patrol that killed many Tutsis', and 'I committed a crime by joining a group attack that killed and looted'.

Ten of the forty-nine interviewees (20.40%) responded that they participated because they felt forced and feared getting killed as well. They reported, for instance, 'For the government that was in place at the time, the killings were almost the law, which is why people were afraid for their lives. And I chose to do what they told me', or 'The reason why I went is that they took us by force. There is no other reason'.

Some interviewees also reported other rationales. Four out of forty-nine (8.16%) mentioned their readiness to loot, with, for instance, responses such as, 'The reason why I joined group attacks was the govern-

ment's encouragement to loot; we would go because the owners would have been killed or had fled'. Two out of forty-nine (4.08%) reported that the reason they participated was because of the ethnicity of the Tutsis. For instance, one interviewee reported:

I killed the Tutsi because of their race. As the authorities said that Tutsis are bad, they killed the country's leader so they should be killed, and because I was taught in class saying that the Hutu should stand up, or the political parties of CDR<sup>31</sup> who also taught us that Tutsis are bad.

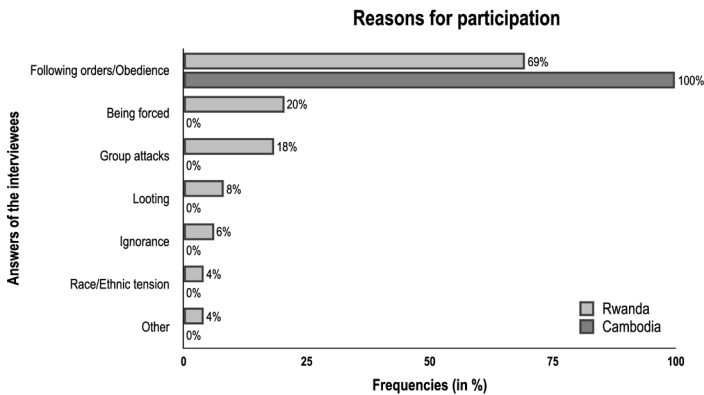


Figure 2. Graphical representation of the frequencies of reasons provided for explaining participation in genocide in Rwanda (light grey) and Cambodia (dark gray).  
Numbers are rounded.

## IN CAMBODIA

In Cambodia, I did not obtain a systematic answer to all the questions. Sometimes, respondents said it was too difficult to explain or to remember, or they preferred not to answer. As a result, even though fifty-one former Khmer Rouges were interviewed, I do not have a systematic answer to all the questions.

Notably, a single category of answer emerged from the interviews: obedience to authority. Forty out of forty respondents indicated an-

<sup>31</sup> The CDR (Coalition for the Defense of the Republic) was a far-right Hutu Power political party active during the period leading up to the 1994 genocide.

swers such as ‘I was ordered to do it, so I had to’, and ‘We were under them. They controlled us’. Most of them also reported clear elements of coercion from authority figures, by mentioning that they were risking their lives if they did not obey orders. Examples were, for instance, ‘Of course it was so difficult living hard, and it was a bitter life. There is no comparison, but we didn’t know how to leave that situation. We needed to do what they told us to do’, and ‘We followed all their orders. If we did not follow them, they said we did not obey the organisation. We could be killed’.

3. WHAT WERE YOUR THOUGHTS AT THE MOMENT OF THE ACT?

This question was asked only of the former genocide perpetrators in Rwanda, since in Cambodia, all denied causing harm to others. Twelve different categories of answers were derived from the analysis. Fourteen out of forty-nine (28.57%) reported that they were afraid when they participated in the genocide (see Figure 3), with answers such as ‘I would say that the emotion I had was the fear of dying’.

Twelve of the respondents (24.48%) again mentioned that their thoughts were to obey the orders received, saying things like, ‘We didn’t have those ideas, the bad government that was in power instructed us to kill and put bad ideologies into us’, and ‘Because of being ordered around and coerced by the government, we had no individual thoughts or feelings’.

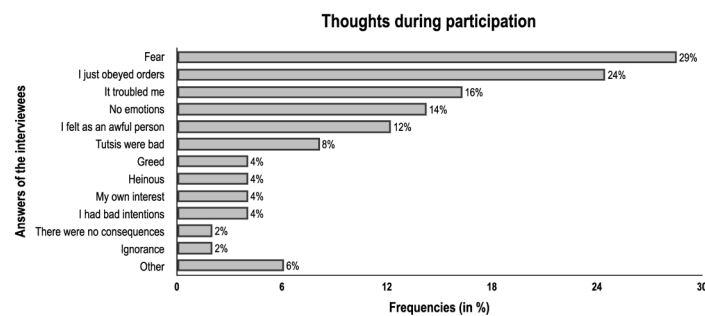


Figure 3. Graphical representation of the frequencies of the thoughts the interviewees reported having during participation. Numbers are rounded.

Seven respondents (14.28%) indicated that they had no emotions or feelings during the genocide, stating that, 'At that time, we didn't have emotions. We were full of heinousness and nothing good was in us', and 'Oh well, we didn't have any conscience we were like animals because the things we would do, were very bad things that are inhumane'. Another interviewee said:

There were no emotions, you were not allowed to have emotions, and you were supposed to do what you were told. There were no emotions, it was about killing and whenever you would start killing, it would become your full-time job, you wouldn't have any other occupation.

Six respondents (12.24%) indicated that they felt like awful or cruel individuals. For instance, one reported:

I felt like an awful killer; Imagine seeing someone who hasn't insulted you and slaughtering them and their cows. As you can understand I was a cruel person. In your opinion, do you think I was normal? It was insanity and greed, would you say I was a normal person then? Taking someone who used to be your neighbor, who you used to share everything with and taking a machete and slaughtering them. Is there any inhumane act worse than that? I was heinous. I am not going to lie to you, during that time it was pure cruelty.

Among the participants, several emotions and thoughts were reported. Eight participants expressed that the events troubled them, while two admitted having bad intentions. Additionally, four participants held negative views about the Tutsis, and two others admitted being motivated by personal greed. Two individuals reported feeling heinous, one mentioned ignorance, and another one thought about the absence of consequences for committing the crimes.

#### 4. WHAT (WOULD HAVE) STOPPED YOU FROM PARTICIPATING IN THE GENOCIDE?

##### *IN RWANDA*

Thirty-three interviewees (67.34%) indicated that only the intervention of the *Inkotanyi* (the name given to the Rwandan Patriotic Front) was

able to stop them (Figure 4). Interviewees reported, for instance, that 'It is the Inkotanyi that came and stopped the killings. I was sent to prison. Otherwise, I might have repeated the crime and motivated my children to do the same', and 'There is nothing else that stopped this apart from the fact that Inkotanyi came; otherwise, due to wanting properties and other things that people were hungry for, we would have killed off each other as well'.

Eighteen interviewees (36.73%) reported that they did stop by themselves at some point for various reasons. Two explained that they stopped for very practical reasons. One reported, 'What enabled me to stop was that the Tutsis who were left lived far, that stopped me from going anywhere else', and another stated, 'It was fatigue, you see if you go from here to there, you would get tired and stop there, so it was fatigue, I would get tired'. In this regard, it could be considered that they would have continued if it were not for the distances involved. Four of them mentioned that it was God who helped them to stop or to refuse murder others, with answers such as 'What enabled me: on my own I didn't have any strength or power. It was only God who helped me; otherwise, it seemed like the end for me'.

Among those who reported stopping for personal values, seven reported that they realized that what they were doing was not good. One said, 'What caused me to stop: I would look at consequences associated with it, I would see my fellows dying and we were neighbors and with whom we had no problems. So, I decided to run away'. Another stated:

I thought about it as well in my heart. When I observed what we were doing to Rwandese I found it bad, I thought about that in my heart, and I still do. That is why we interact and asked for forgiveness from survivors, I still seek their forgiveness and sometimes go to lend them a hand without a problem. It was all due to the corrupt government that made us do evil crimes.

Five interviewees identified emotions that might have helped them desist, had they felt them at the time. Two believed guilt would have made them stop, two thought compassion could have been a pivotal emotion, and one cited love for others.

## IN CAMBODIA

In Cambodia, the answers were all strongly consistent. Out of the thirty-five interviewees who agreed to answer this question, thirty-four (97.14%) reported that they would not have stopped if the Vietnamese troops had not taken over the country. One said, 'Until they [Vietnamese soldiers] disbanded it [the Khmer Rouge regime], I did not dare to leave as I was afraid'. Another stated:

I believe that without Vietnam's intervention, we would not have known what happened to our country because it was very confusing. Even I, myself, did not understand the regime's motives. I did as they told and did not oppose them; otherwise, death awaited me.

One respondent reported that he could have stopped on his own, but did not give further details on how.

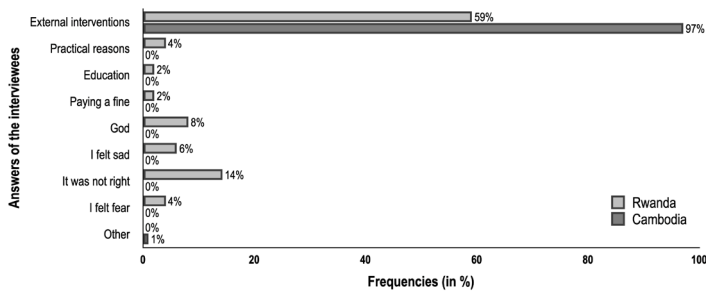


Figure 4. Graphical representation of the reasons provided for what could have helped stop the participation in the genocide in Rwanda (light gray) and in Cambodia (dark gray).

Numbers are rounded.

## General Discussion

Understanding and studying the motivations and reasons for desistance in participation in mass-atrocities is of importance to better apprehend possible interventions that would aim to reduce such engagement. In this paper, I aimed to compare the responses of individuals who participated in two different genocidal regimes to identify common or divergent elements emerging from their narratives. As an addi-

tional contribution, I aimed to discuss these responses through the lens of research in psychology and neuroscience. It is indeed widely recognized that understanding human mass atrocities requires a multidisciplinary approach.<sup>32</sup> However, recent literature on perpetrator studies often overlooks contemporary neuroscience research,<sup>33</sup> which provides critical insights into brain function. Most scholars indeed still focus their discussions on seminal experimental work from approximately fifty years ago, such as Stanley Milgram's studies on obedience to authority,<sup>34</sup> Solomon Asch's research on conformity,<sup>35</sup> or the bystander effect as experimentally studied by Darley and Latané.<sup>36</sup> With this paper, I intend to fill this gap, showing how the integration of more recent research conducted in psychology and neuroscience can offer a larger, and more up-to-date, comprehension of participation in mass atrocities.

Before delving into a discursive framework, it is essential to acknowledge the limitations and benefits of both qualitative and experimental methodologies. Discussions around the truth of perpetrators' testimonies do exist in the literature, as genocidal crimes are intrinsically linked to the denial and destruction of witnesses.<sup>37</sup> Accordingly, alleged, or potential perpetrators may seek to manipulate evidence.<sup>38</sup> However, it has also been argued that perpetrators' accounts are an important source of knowledge, and it would be unjustified to consid-

32 *Researching Perpetrators of Genocide; Perpetrators of International Crimes: Theories, Methods, and Evidence*, ed. by Alette Smeulers, Maartje Weerdesteijn, and Barbora Holá (Oxford: Oxford University Press, 2019).

33 Kjell Anderson and Erin Jessee, 'Introduction', in *Researching Perpetrators of Genocide*, ed. by Kjell Anderson and Erin Jessee (Madison: University of Wisconsin Press, 2020), pp. 3-22 (p. 3); *Perpetrators of International Crimes*, p. 1; Omar Shahabudin McDoom, *The Path to Genocide in Rwanda: Security, Opportunity, and Authority in an Ethnocratic State* (Cambridge: Cambridge University Press, 2021).

34 Stanley Milgram, 'Behavioral Study of Obedience', *The Journal of Abnormal and Social Psychology*, 67.4 (1963), 371-78.

35 Solomon E. Asch, 'Effects of Group Pressure upon the Modification and Distortion of Judgments', in *Groups, Leadership and Men: Research in Human Relations*, ed. by Harold Steere Guetzkow (Lancaster: Carnegie Press, 1951), pp. 177-90.

36 John M. Darley and Bibb Latané, 'Bystander Intervention in Emergencies: Diffusion of Responsibility', *Journal of Personality and Social Psychology*, 8.4 (1968), 377-83.

37 Catherine Coquio, *L'Histoire trouée: Négation et témoignage* (Nantes: L'Atalante, 2004).

38 Chandra Lekha Sriram, 'Perpetrators, Fieldwork, and Ethical Concerns', in *Perpetrators of International Crimes: Theories, Methods, and Evidence*, ed. by Alette Smeulers, Maartje Weerdesteijn, and Barbora Holá (Oxford: Oxford University Press, 2019), pp. 57-71.

er such narratives less credible than those of bystanders or victims.<sup>39</sup> Nevertheless, conducting qualitative interviews presents methodological challenges and issues of reliability since the outcomes are not objectively verifiable,<sup>40</sup> as they depend on what interviewees choose to share. Some responses may be consciously or unconsciously distorted, incomplete, or false. Further, the social desirability bias,<sup>41</sup> where individuals presenting themselves favorably, could also influence results. Testimonies also constitute a discursive practice, which evolves with historical and cultural shifts and is influenced by various institutional frameworks.<sup>42</sup>

Using behavioral, implicit measurements and neuroscience tools offer several advantages that can help address the limitations commonly associated with qualitative interviews. For instance, brain activity measurements, such as functional Magnetic Resonance Imagery (fMRI) or electroencephalography (EEG), are less influenced by an individual's desire to be perceived in a certain way. They also bring a different kind of depth by identifying and investigating specific cognitive processes or brain regions associated with certain state of mind or situations. However, such measurements are not a replacement for qualitative interviews. Instead, they provide complementary information.<sup>43</sup> Experimental approaches can indeed hardly determine whether observed results accurately represent real-life behaviors.<sup>44</sup> Therefore, a combination of both qualitative and experimental approaches can provide crucial insights, compensating for the weaknesses inherent in each method.

39 Sibylle Schmidt, 'Perpetrators' Knowledge: What and How Can We Learn from Perpetrator Testimony?', *Journal of Perpetrator Research*, 1.1 (2017), 85–104; Erin Jessee, 'Seeing Monsters, Hearing Victims', in *Researching Perpetrators of Genocide*, ed. by Kjell Anderson and Erin Jessee (Madison: University of Wisconsin Press, 2020), pp. 67–90.

40 Anderson, p. 40; Lee Ann Fujii, *Killing Neighbors: Webs of Violence in Rwanda* (Ithaca, New York: Cornell University Press, 2011).

41 Ivar Krumpal, 'Determinants of Social Desirability Bias in Sensitive Surveys: A Literature Review', *Quality & Quantity*, 47.4 (2013), 2025–47.

42 Schmidt, p. 96.

43 *Perpetrators of International Crimes*, p. 1.

44 Scott Straus, 'Studying Perpetrators: A Reflection', *Journal of Perpetrator Research*, 1.1 (2017), 28–38.

## 1. SOCIAL INFLUENCE: OBEDIENCE AND CONFORMITY

Even though many historical, political, cultural, and economic differences exist between the genocide against the Tutsi in Rwanda and the Cambodian genocide, a vast majority of the interviews revealed that participation in such mass event coincides with one or several forms of social influence. In psychology, social influence refers to the ways in which individuals change their behavior in response to the real or perceived presence of others.<sup>45</sup> There are three primary forms: obedience, conformity, and compliance. Obedience involves following direct orders from an authority figure, even if it might cause harm to others. Conformity means adjusting one's actions or beliefs to align with group expectations. Lastly, compliance is the act of acquiescing to a request, even when this request does not come from an authority figure. These modes of influence play significant roles in shaping everyday human interactions and broader societal behaviors.

### *OBEDIENCE TO AUTHORITY*

Results show that in Rwanda, the majority of interviewees — about 70% — indicated they participated in the genocide because they obeyed the orders of an authority figure, a result consistent with previous interviews.<sup>46</sup> When asked about their thoughts during the genocide, many reported that their primary concern was following orders. Determining whether this stated denial of responsibility is a mere post-hoc rationalization or an actual influence on behavior at the time of the acts is, however, quite challenging.<sup>47</sup> It has previously been suggested that in Rwanda, such a justification might be widespread because many perpetrators were incarcerated together, potentially leading them to share a common narrative to reduce individual accountability.<sup>48</sup> It has been suggested that these narratives could arise from either internalization or a self-serving motive to create socially acceptable explanations.<sup>49</sup> Mandel, reflecting on the Nuremberg Trials, contends that the 'obedi-

45 Donelson R. Forsyth, 'Social Influence and Group Behavior', in *Handbook of Psychology*, ed. by Irving B. Weiner, 12 vols, 2nd edn (Hoboken, New Jersey: John Wiley & Sons Inc., 2012), V, *Personality and Social Psychology*, ed. by Irving B. Weiner, Howard A. Tennen, and Jerry M. Suls (2012), pp. 305–28.

46 Anderson, p. 51; McDoom, *The Path to Genocide in Rwanda*, p. 320.

47 Anderson, p. 59.

48 Mironko, p. 50.

49 Anderson, p. 45.

ence' argument is more an alibi than a justification, especially in legal contexts.<sup>50</sup> This defense was indeed utilized by Nazi officers during the Nuremberg Trials to mitigate their accountability for the Holocaust.<sup>51</sup> Nonetheless, it has been proposed that many lower-ranking individuals who committed mass atrocities under orders did genuinely believe they were doing the 'right thing'.<sup>52</sup> In the interviews conducted in Cambodia, almost all interviewees provided the same rationale for their actions. Unlike in Rwanda, these individuals had not been imprisoned together, were even from districts located far apart, and in addition never really feared prosecution. It is thus interesting to see this form of social influence consistently cited by a diverse group of individuals spanning different cultures, continents, contexts, and historical periods.<sup>53</sup> While not discounting the potential for post-hoc rationalization, it could be argued that obedience to orders may indeed also affect how decisions are processed and actions executed by the brain.<sup>54</sup>

Obedience to authority has been quite extensively studied in psychology for decades, notably since the studies of Stanley Milgram who showed that ordinary citizens participating in scientific experiments could inflict potential harm on other individuals when following the directives of an experimenter who assumed responsibility.<sup>55</sup> Milgram theorized that a key mechanism might be the loss of agency and responsibility. When people follow the orders of an experimenter, they become 'thoughtless agents of action'; they enter an 'agentic state'. However, his theory faced some skepticism and had not been rigorously tested at the time.<sup>56</sup> In addition, the work of Milgram has been highly

50 David R. Mandel, 'The Obedience Alibi: Milgram's Account of the Holocaust Reconsidered', *Analyse & Kritik*, 20.1 (1998), 74–94.

51 Andrew Sangster, *Blind Obedience and Denial: The Nuremberg Defendants* (Barnsley: Case-mate, 2022).

52 Alette Smeulers, 'Why Serious International Crimes Might Not Seem 'Manifestly Unlawful' to Low-level Perpetrators: A Social-Psychological Approach to Superior Orders', *Journal of International Criminal Justice*, 17.1 (2019), 105–23.

53 *Ibid.*, p. 105.

54 Emilie A. Caspar, *Just Following Orders? Atrocities and the Brain Science of Obedience*, Cambridge University Press (Cambridge: Cambridge University Press, 2024).

55 Milgram, 'Behavioral Study of Obedience'; Stanley Milgram, *Obedience to Authority: An Experimental View* (New York: Harper and Row, 1974).

56 S. Alexander Haslam, Stephen D. Reicher, and Megan E. Birney, 'Nothing by Mere Authority: Evidence That in an Experimental Analogue of the Milgram Paradigm Participants Are Motivated Not by Orders but by Appeals to Science', *Journal of Social Issues*, 70.3 (2014), 473–88; Stephen Reicher and S. Alexander Haslam, 'After Shock? Towards a Social Identity Explanation of the Milgram 'Obedience' Studies', *British Journal of Social Psychology*, 50.1 (2011), 163–69.

controversial. In addition to ethical concerns,<sup>57</sup> the generalizability of the findings as well as their interpretation have also been challenged.<sup>58</sup>

More recently, neuroscience also began to explore the issue related to obedience to authority and how it alters several neuro-cognitive processes related to prosocial decision-making.<sup>59</sup> For example, recent studies have used a paradigm where two (real) participants were assigned the roles of ‘agent’ or ‘victim’.<sup>60</sup> Agents must choose to either administer a real mild shock to the victim for a small monetary reward or opt not to shock without receiving money. One condition allowed the agent to choose freely, while another had the experimenter giving orders on which button to press. Using implicit<sup>61</sup> and fMRI measurements,<sup>62</sup> several studies have shown that when people obey the orders of an experimenter, compared to acting freely, their sense of agency was reduced. These results, replicated in other experimental contexts,<sup>63</sup>

57 Diana Baumrind, ‘Some Thoughts on Ethics of Research: After Reading Milgram’s “Behavioral Study of Obedience”’, *American Psychologist*, 19.6 (1964), 421–23.

58 Rutger Bregman, *Humankind: A Hopeful History* (London: Bloomsbury Publishing, 2020).

59 Emilie A. Caspar, Kalliopi Ioumpa, Christian Keysers, and Valeria Gazzola, ‘Obeying Orders Reduces Vicarious Brain Activation towards Victims’ Pain’, *NeuroImage*, 222 (2020); Emilie A. Caspar, Julia F. Christensen, Axel Cleeremans, and Patrick Haggard, ‘Coercion Changes the Sense of Agency in the Human Brain’, *Current Biology*, 26.5 (2016), 585–92; Emilie A. Caspar, Salvatore Lo Bue, Pedro A. Magalhães De Saldanha da Gama, Patrick Haggard, and Axel Cleeremans, ‘The Effect of Military Training on the Sense of Agency and Outcome Processing’, *Nature Communications*, 11.1 (2020); Emilie A. Caspar, Kalliopi Ioumpa, Irene Arnaldo, Lorenzo Di Angelis, Valeria Gazzola, and Christian Keysers, ‘Commanding or Being a Simple Intermediary: How Does It Affect Moral Behavior and Related Brain Mechanisms?’, *eNeuro*, 9.5 (2022).

60 Emilie A. Caspar, ‘A Novel Experimental Approach to Study Disobedience to Authority’, *Scientific Reports*, 11.1 (2021).

61 Caspar, Christensen, Cleeremans, and Haggard; Caspar, Lo Bue, De Saldanha da Gama, Haggard, and Cleeremans; Guillaume P. Pech and Emilie A. Caspar, ‘Does the Cowl Make the Monk? The Effect of Military and Red Cross Uniforms on Empathy for Pain, Sense of Agency and Moral Behaviors’, *Frontiers in Psychology*, 14 (2023); Emilie A. Caspar, Axel Cleeremans, and Patrick Haggard, ‘Only Giving Orders? An Experimental Study of the Sense of Agency When Giving or Receiving Commands’, *PLOS ONE*, 13.9 (2018); Emilie A. Caspar, Laurene Vuillaume, Pedro A. Magalhães De Saldanha da Gama, and Axel Cleeremans, ‘The Influence of (Dis)Belief in Free Will on Immoral Behavior’, *Frontiers in Psychology*, 8 (2017).

62 Emilie A. Caspar, Frederike Beyer, Axel Cleeremans, and Patrick Haggard, ‘The Obedient Mind and the Volitional Brain: A Neural Basis for Preserved Sense of Agency and Sense of Responsibility under Coercion’, *PLOS ONE*, 16.10 (2021).

63 Zeynep Barlas, ‘When Robots Tell You What to Do: Sense of Agency in Human- and Robot-Guided Actions’, *Consciousness and Cognition*, 75 (2019); Nil Akyuz and others, ‘Revisiting the Agentic Shift: Obedience Increases the Perceived Time Between Own Action and Results’, *Research Square*, 2023.

may suggest that when individuals obey orders, they experience a reduced perception of being the authors of their own actions.<sup>64</sup>

Using fMRI, other studies have focused on moral emotions, such as empathy for pain and the interpersonal feeling of guilt. Guilt is a powerful emotion which usually arises when we violate social norms, and which motivates transgressors or perpetrators to make amends.<sup>65</sup> Empathy is a psychological construct that refers to the ability to understand and imagine what others feel, notably because seeing another individual in pain triggers a neural response in the brain of the observer.<sup>66</sup> Such vicarious activations mostly occur in the anterior cingulate cortex and in the insula, key brain regions that enable us to understand the emotional component of experiencing pain.<sup>67</sup> It has been observed that when agents obey orders, it reduces activity in empathy- and guilt-related brain regions when they witness the victims receiving the electric shocks compared to acting freely.<sup>68</sup> As empathy<sup>69</sup> and guilt<sup>70</sup> have been previously linked to prosocial behaviors, these results may explain how obedience to authority blurs our natural aversion to hurt others. Another EEG study conducted on the first generation of Rwandese born after the genocide further showed that an increased neural empathic response towards the victim's pain was associated with a greater resistance to the experimenter's orders to inflict harm.<sup>71</sup>

64 Shaun Gallagher, 'Philosophical Conceptions of the Self: Implications for Cognitive Science', *Trends in Cognitive Sciences*, 4.1 (2000), 14–21.

65 Jonathan Haidt, 'The Moral Emotions', in *Handbook of Affective Sciences*, ed. by Richard J. Davidson, Klaus R. Sherer, and H. Hill Goldsmith (Oxford: Oxford University Press, 2003), pp. 852–70.

66 Inge Timmers and others, 'Is Empathy for Pain Unique in Its Neural Correlates? A Meta-Analysis of Neuroimaging Studies of Empathy', *Frontiers in Behavioral Neuroscience*, 12 (2018) Tania Singer and others, 'Empathy for Pain Involves the Affective but Not Sensory Components of Pain', *Science*, 303.5661 (2004), 1157–62.

67 Christian Keysers and Valeria Gazzola, 'Dissociating the Ability and Propensity for Empathy', *Trends in Cognitive Sciences*, 18.4 (2014), 163–66; Timmers and others; Singer and others, p. 1157.

68 Caspar, Ioumpa, Keysers, and Gazzola; Caspar, Ioumpa, Arnaldo, Di Angelis, Gazzola, and Keysers.

69 Grit Hein and others, 'Neural Responses to Ingroup and Outgroup Members' Suffering Predict Individual Differences in Costly Helping', *Neuron*, 68.1 (2010), 149–60; Caspar, Ioumpa, Arnaldo, Di Angelis, Gazzola, and Keysers.

70 Amrisha Vaish, Malinda Carpenter, and Michael Tomasello, 'The Early Emergence of Guilt-Motivated Prosocial Behavior', *Child Development*, 87.6 (2016), 1772–82; Costanza Scaffidi Abbate and others, 'The Role of Guilt and Empathy on Prosocial Behavior', *Behavioral Sciences*, 12.3 (2022).

71 Emilie A. Caspar, Darius Gishoma, and Pedro Alexandre Magalhães de Saldanha da Gama, 'On the Cognitive Mechanisms Supporting Prosocial Disobedience in a Post-Genocidal Context', *Scientific Reports*, 12.1 (2022).

In another study that virtually replicated Milgram's experiment,<sup>72</sup> researchers used transcranial direct current stimulation (tDCS) to influence the activity of the right Temporo-Parietal junction (rTPJ), a region linked to understanding others' mental states.<sup>73</sup> They found that when activity in this area was diminished, participants made quicker decisions to harm the virtual avatar than when they underwent sham stimulation. This indicates that impairing our capacity to understand others' mental states can lead to reduced hesitation in causing harm when following orders. Altogether, these findings highlight how obeying orders can weaken our innate reluctance to harm others, potentially leading to more frequent moral transgressions. They draw strong parallels with the insights obtained from interviews with former perpetrators, suggesting that being ordered to harm others can indeed influence human behavior.

### CONFORMITY

In Rwanda, about 20% of the former perpetrators reported that the group strongly influenced their participation, a result already outlined previously.<sup>74</sup> Conformity to the group has been well established in psychological research, notably with the seminal studies of Solomon Asch, who showed that individuals often conform to majority opinions, even when those opinions are clearly incorrect.<sup>75</sup> In neuroscience, it has been suggested that sharing equal responsibility with other individuals affects neuro-cognitive processes associated with decision-making.<sup>76</sup> For example, in a study using EEG, participants had to perform a task alone or with other players.<sup>77</sup> Results indicated that participants reported a

72 Yawei Cheng and others, 'Neuromodulation of the Right Temporoparietal Junction Alters Amygdala Functional Connectivity to Authority Pressure', *Human Brain Mapping*, 43.18 (2022), 5605–15.

73 Andrew K. Martin and others, 'The Right Temporoparietal Junction Is Causally Associated with Embodied Perspective-Taking', *Journal of Neuroscience*, 40.15 (2020), 3089–95.

74 Mironko, p. 47.

75 Asch, p. 177.

76 Marwa El Zein, Ray J. Dolan, and Bahador Bahrami, 'Shared Responsibility Decreases the Sense of Agency in the Human Brain', *Journal of Cognitive Neuroscience*, 34.11 (2022), 2065–81; Frederike Beyer, Nura Sidarus, Stephen Fleming, and Patrick Haggard, 'Losing Control in Social Situations: How the Presence of Others Affects Neural Processes Related to Sense of Agency', *eNeuro*, 5.1 (2018).

77 Frederike Beyer, Nura Sidarus, Sofia Bonicalzi, and Patrick Haggard, 'Beyond Self-Serving Bias: Diffusion of Responsibility Reduces Sense of Agency and Outcome Monitoring', *Social Cognitive and Affective Neuroscience*, 12.1 (2017), 138–45.

lower sense of agency and had a lower amplitude of the Feedback-Related Negativity (FRN), a specific brain marker associated with the negative consequences of an action, when another player was present compared to when they were alone. Similarly, as with obedience to authority, it appears that conforming to a group can influence human behaviors and even influence some neuro-cognitive processes associated with behavioral decisions.

The results of the interviews show that obedience was more commonly reported than conformity. Significantly, there was no overlap between the 'group attack' justification and the 'obedience to the government' justification in Rwanda. This is interesting as it suggests that people may differ regarding their sensibility to different forms of social influence. There is an interesting parallel with neuroscience research, as the literature indicates that authority influence impacts neural processing more than group influence. In a study using magnetoencephalography (MEG)<sup>78</sup>, participants undertook a gambling task either alone, with others (i.e., conformity), or with someone else deciding for them (i.e., obedience). Results indicated that the sense of responsibility felt by participants, but also that MEG activity of bilateral frontoparietal brain regions related to the outcome, diminished more in the obedience condition compared to the conformity condition. Another study confirmed these findings.<sup>79</sup> Participants had to quickly decide whether to buy a book based on limited information. Either they were triggered by the impact of the majority, reflected in positive and negative feedback (i.e., conformity), or were directed to buy books with a majority of negative reviews (i.e., obedience). EEG results showed that obedience decisions induced greater cognitive conflict, as reflected by the amplitude of the N2 component, compared to conformity decisions. Both studies thus highlight that obedience to authority appears to impact human behavior more than conformity. This is consistent with interview responses, where obedience was reported as more influential than group pressure.

78 El Zein, Dolan, and Bahrami, p. 2065.

79 Ying Xie and others, 'Neural Basis of Two Kinds of Social Influence: Obedience and Conformity', *Frontiers in Human Neuroscience*, 10 (2016).

## 2. DEHUMANIZATION

During wars and genocides, perpetrators commonly employ a method of distorting the perception of targeted groups by dehumanizing them, making them appear subhuman or even non-human — a phenomenon observed in the genocides of Cambodia<sup>80</sup> and Rwanda.<sup>81</sup> It has been suggested that while sources of social influence may trigger genocide perpetrators to engage in killing acts, dehumanization is the process that enables the continuation of these killings over the long term.<sup>82</sup> However, the dehumanization process most often begins before the actual perpetration of the killings, making it difficult to discern when each factor plays a role in the decision to engage in the perpetration of atrocities.

Research in psychology and neuroscience has underscored the impact of dehumanization through experimentation. In a 2008 study,<sup>83</sup> researchers investigated the extent to which Dutch citizens felt guilt regarding the involvement of Dutch UN soldiers in the Srebrenica events of 1995. It was found that Dutch participants who dehumanized Muslims felt less guilt when reading about the negative role of Dutch soldiers in the Srebrenica massacre. In another study,<sup>84</sup> researchers recruited Christian participants and exposed them to images from the Abu Ghraib torture incidents. Results indicated that participants who attributed a lower degree of humanity to Muslims were also more inclined to express a higher likelihood of torturing detainees, an effect even stronger if Muslims were portrayed as potential threats. Neuroscience studies have further illuminated the neural impact of dehumanization. In a study,<sup>85</sup> researchers used MRI scans to monitor brain activity as participants viewed images of highly dehumanized individuals, like drug addicts and homeless people, compared to those of non-dehumanized individuals. Activation in the medial prefrontal cortex was observed when participants viewed images of all individu-

80 Hinton, 'Agents of Death', p. 820.

81 Anderson, p. 49.

82 McDoom, *The Path to Genocide in Rwanda*, p. 340.

83 Sven Zebel, Anja Zimmermann, G. Tendayi Viki, and Bertjan Doosje, 'Dehumanization and Guilt as Distinct but Related Predictors of Support for Reparation Policies', *Political Psychology*, 29.2 (2008), 193–219.

84 G. Tendayi Viki, Daniel Osgood, and Sabine Phillips, 'Dehumanization and Self-Reported Proclivity to Torture Prisoners of War', *Journal of Experimental Social Psychology*, 49.3 (2013), 325–28.

85 Lasana T. Harris and Susan T. Fiske, 'Dehumanizing the Lowest of the Low: Neuroimaging Responses to Extreme Out-Groups', *Psychological Science*, 17.10 (2006), 847–53.

als, but not when viewing the dehumanized ones. This indicates a lack of automatic activation of brain networks associated with social cognition when exposed to images of dehumanized individuals.<sup>86</sup> Moreover, viewing dehumanized individuals triggered activity in areas like the insula and amygdala, which are associated with disgust<sup>87</sup> and fear,<sup>88</sup> respectively. Consequently, the study reveals that not only do dehumanized individuals not evoke social cognition, but they also elicit emotions such as fear and disgust.

It is noteworthy that none of the interviews I conducted showed elements suggestive of a dehumanization process. Only two cited hatred for the Tutsis as a reason for their participation, and neither employed dehumanizing language, while in the interviews by Anderson there were elements of dehumanization.<sup>89</sup> One potential explanation for this disparity could be the location of the interviews. Anderson conducted his sessions in prisons and detention centers, while I interviewed individuals post-release, in their free environment. Interviewing within prison settings could have several implications. Firstly, prisons often dehumanize inmates, which could heighten the inmates' awareness of humanity.<sup>90</sup> Another possibility is that their confinement might make them more inclined to identify and perhaps blame others for their circumstances. Another significant factor is the context: half of the former genocide perpetrators I interviewed resided in reconciliation villages, where former perpetrators live with Tutsis and participate in shared activities to foster reconciliation. These contacts might explain their diminished animosity towards Tutsis and the absence of dehumanizing rhetoric in their narratives.<sup>91</sup> However, the fact that dehumaniza-

86 Masaki Isoda, 'The Role of the Medial Prefrontal Cortex in Moderating Neural Representations of Self and Other in Primates', *Annual Review of Neuroscience*, 44.1 (2021), 295–313.

87 Bruno Wicker and others, 'Both of Us Disgusted in My Insula: The Common Neural Basis of Seeing and Feeling Disgust', *Neuron*, 40.3 (2003), 655–64.

88 Michael Davis, 'The Role of the Amygdala in Conditioned Fear', in *The Amygdala: Neurobiological Aspects of Emotion, Memory, and Mental Dysfunction*, ed. by John P. Aggleton (Hoboken, New Jersey: John Wiley & Sons, Inc., 1992), pp. 255–306.

89 Anderson, p. 49.

90 Jason C. Deska, Steven M. Almaraz, and Kurt Hugenberg, 'Dehumanizing Prisoners: Remaining Sentence Duration Predicts the Ascription of Mind to Prisoners', *Personality and Social Psychology Bulletin*, 46.11 (2020), 1614–27.

91 Yuan Cao, Luis Sebastian Contreras-Huerta, Jessica McFadyen, and Ross Cunnington, 'Racial Bias in Neural Response to Others' Pain Is Reduced with Other-Race Contact', *Cortex*, 70 (2015), 68–78; Thomas F. Pettigrew, 'The Intergroup Contact Hypothesis Reconsidered', in *Contact and Conflict in Intergroup Encounters*, ed. by Rupert Brown and Miles Hewstone (Oxford: Basil Blackwell, 1986), pp. 169–95.

tion is reported so infrequently could support Fujji's argumentation that many 'joiners' participated because of social dynamics, rather than out of hate or fear of the Tutsis.<sup>92</sup> It is also interesting to note that the research conducted by McDoom also suggests that perpetrators in Rwanda were not more likely than non-perpetrators to mention either Hutu nationalist feeling or ethnic prejudice against Tutsis.<sup>93</sup>

### 3. DESISTANCE

Little research has been done on how genocides end or why they end.<sup>94</sup> Past historical examples have shown that genocides almost never stop by themselves: the Allied troops stopped the Holocaust by defeating the Nazi, the Vietnamese invasion of Cambodia ended the genocide by defeating the Khmer Rouge, the PRF stopped the genocide against the Tutsi in Rwanda when they took over the country, the genocide in Bosnia and Herzegovina ended in 1995 following an offensive in Croatia and the intervention by NATO.

The answers obtained from the interviewees tend to support this observation. In Rwanda, nearly 70% of interviewees reported they could not have ceased their participation without the intervention of the PRF. In Rwanda, it is important to note that the PRF is the party of the current president, who has been in power for three decades. Therefore, it is possible that interviewee responses may be swayed by a desire to align with current government policies and narratives. Interestingly, in Cambodia, respondents also massively reported that the genocide would not have ceased without the intervention of the Vietnamese troops, despite it being unrelated to the Cambodian government. Although the political climate in each country may influence the responses, the fact that there are strong parallels in the feedback from two distinct populations suggests that external forces may indeed be pivotal in halting genocides.

A few interviewees from Rwanda reported that they ceased their participation due to contextual factors, such as the distance of Tutsis living far away. Other interviewees highlighted personal factors like religious beliefs or moral introspection that helped them stop. Emotions like guilt, compassion, and love were also cited. Investigating these personal factors further might offer insights into

92 Fujji, 'The Power of Local Ties', p. 571.

93 McDoom, *The Path to Genocide in Rwanda*, p. 312.

94 Rafter, p. 181.

potential interventions in regions at risk of mass violence. During the interviews, I however noted that participants were unprepared for and hesitant about the question regarding what might have stopped them, clearly because they did not expect the question. Future research might explore whether their responses would differ if given time to prepare their answers.

#### 4. LIMITATIONS

A limitation of the present study concerns the time gap between the events and the interviews — about thirty years ago in Rwanda and fifty in Cambodia. Many interviewees, due to their advanced age, faced memory challenges. Inconsistencies emerged in dates and roles reported, especially in Cambodia. For example, a woman stated that she had returned to her husband in 1975 but then claimed they had married in 1977. In the same session, she mentioned working in a kitchen between 1976 and 1977, but also indicated she led a military unit during that period.

Another notable limitation was the amount of time spent with the interviewees before conducting the interviews. Previous research has indicated that spending more time with interviewees can elicit deeper and more insightful answers, beyond their routine or commonly shared reasons.<sup>95</sup> In past studies, the duration spent with interviewees varied widely. Some researchers, like Mironko and Anderson,<sup>96</sup> only met participants once for the interview, while others, such as Hinton,<sup>97</sup> spent several days with them. In my case, while direct personal interactions were limited due to language barriers, I did spend several days in their villages conducting other research projects, necessitating the establishment of trust. Although this does not replace the value of significant personal time spent with them, it ensured we were not seen as complete strangers. Furthermore, I collaborated with local associations they trusted and conducted interviews in their homes or villages, fostering a more trusting environment.

The result of the study tends to converge on the idea that obedience to authority is the main motivation for participation. However, as outlined in the introduction, participation in genocides may happen at two levels: individual or structural. The genocide against the Tutsi in Rwanda and the genocide in Cambodia clearly have many differ-

95 *Researching Perpetrators of Genocide*, p. 199.

96 Anderson, p. 40; Mironko, p. 49.

97 Hinton, 'Why Did You Kill?', p. 100.

ences at the structural level, as outlined by major differences in historical, economic, and political factors. However, convergences also exist. A common structural element in both Rwanda and Cambodia is the cultural deference to authority. Hinton highlights that respect for hierarchies is instilled in Cambodians from a young age and remains a dominant force throughout their lives.<sup>98</sup> Although the Khmer Rouge regime sought to dismantle traditional hierarchies in order to create a classless society,<sup>99</sup> it nonetheless established its own order, ranging from Khmer Rouge cadres to soldiers and the rural poor, often leveraging authoritative arguments.<sup>100</sup> Similarly, in Rwanda, many scholars have noted the nation's deep-rooted cultural respect for authority<sup>101</sup> was also manipulated during the genocide. While the present research aims to differentiate individual motivations across countries with varied structural elements, it is crucial to recognize that the frequent mention of obedience in both Rwanda and Cambodia may be influenced by their culturally significant deference to hierarchy. Prior research indicates that genocide perpetrators may be strongly influenced by preexisting cultural models engrained in obedience, rather than just coercion.<sup>102</sup> However, previous work also suggested no difference in deference to authority between perpetrators and non-perpetrator in Rwanda,<sup>103</sup> suggesting that the importance given to authority may not be a crucial determinant of individual's actions. A valuable next step would involve studying perpetrators from other nations where such a cultural model of obedience might be less prevalent.

98 Ibid., p. 98.

99 Timothy Michael Carney, *Communist Party Power in Kampuchea (Cambodia): Documents and Discussion* (Ithaca, New York: Cornell University Press, 1977); John Marston, 'Metaphors of the Khmer Rouge', in *Cambodian Culture since 1975: Homeland and Exile*, ed. by May M. Ebihara, Carol A. Mortland, and Judy Ledgerwood (Ithaca, New York: Cornell University Press, 1994), pp. 105–18.

100 Serge Thion, *Watching Cambodia: Ten Paths to Enter the Cambodian Tangle* (Bangkok: White Lotus, 1993); David P. Chandler, *The Land and People of Cambodia* (Philadelphia: J. B. Lippincott & Co., 1972).

101 Elizabeth Levy Paluck and Donald P. Green, 'Deference, Dissent, and Dispute Resolution: An Experimental Intervention Using Mass Media to Change Norms and Behavior in Rwanda', *American Political Science Review*, 103.4 (2009), 622–44.

102 Hinton, 'Agents of Death', p. 827.

103 McDoom, *The Path to Genocide in Rwanda*, p. 320.

## Conclusion

To prevent future mass atrocities, understanding the motives and desistance of perpetrators is crucial. The methods to gather such insights varied markedly between Rwanda and Cambodia. Rwanda has made significant strides by prosecuting the perpetrators and encouraging them to speak, offering a unique window into their motivations and desistance. Conversely, the judicial and political climate in Cambodia means many perpetrators have not shared their reasons for participation, limiting our knowledge on preventing such events. Interviewing former genocide perpetrators, despite the challenges, remains however essential for understanding their actions. By combining their narratives with interdisciplinary research from fields like history, economics, anthropology, sociology, and neuroscience, we can gain a comprehensive understanding of participation in mass atrocities.

This study seeks to draw parallels between qualitative interviews and research in both psychology and neuroscience. Notably, there are clear convergences across these research domains. Psychological research confirms that obeying authoritative figures or acting within groups can influence behaviors. Neuroscience delves deeper, suggesting that certain neuro-cognitive processes change when people obey authority figures or act collectively. While it is essential to acknowledge that former genocide perpetrators may not fully reveal their actions or motives, research from other fields underscores how these factors can significantly impact human behavior and could have influenced the former perpetrators in the past.

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