I or We? How Self-Categorization Shapes Decision-Making in Team Sports

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ABSTRACT

Introduction: According to the Social Identity Approach, self-categorization influences how individuals define themselves, either as individuals or as members of a group, thereby affecting performance outcomes. To deepen our understanding of social identity's role, we conducted an experiment to examine its impact on a critical objective performance determinant: decision-making.

Method: Ten professional basketball players viewed 14 immersive video clips twice, under two conditions: (a) personal identity and (b) social identity, with randomized conditions and clip orders. Upon each clip's conclusion, participants mimed and verbalized their decision as in a real game. In the personal identity condition, they were instructed to compete individually and make decisions that would maximize their own performance in this type of match situation. In the social identity condition, they were instructed to compete on behalf of their team and make decisions that would optimize team performance. To strengthen self-categorization, additional induction strategies were used, including image projections, team-specific jerseys, and tailored questionnaires. The data were analyzed using generalized linear models.

Results: The analysis of 270 decisions revealed that players shot significantly more in the personal identity condition and passed more in the social identity condition. Reaction times also differed between conditions, but only for the drive decision.

Discussion: These findings contribute to a growing body of research highlighting the influence of psychosocial factors on decision-making in team sports. They suggest that social identity can shape athletes' choices, underscoring the importance of integrating social and psychological dimensions into models of decision-making.

HIGHLIGHTS

- Self-categorization influences decision-making in team sports.
- Players shoot more in the personal identity condition and pass more in the social identity condition.
- This study provides objective evidence that self-categorization impact performance factors.
- Individual differences exist, with some individuals exhibiting significantly reduced responsiveness to social identity effects.

INTRODUCTION

Team sports represent a complex ecosystem where individual and collective goals intersect. The contrast between these goals can influence decision-making, as highlighted by Levi & Jackson (2018): *"If you're on the verge of getting a new contract, you want to give yourself the best negotiation cards that you can have, then you get pressure from that."* Yet, athletes' objectives are closely tied to their identity positioning (Oyserman, 2015), especially in team sports (Campo, Champely, et al., 2019). This raises the question of whether identity positioning genuinely impacts decision-making in sports settings.

Drawing on Social Identity Theory (Tajfel & Turner, 1979) and Self-Categorization Theory (Turner et al., 1987), the Social Identity Approach (Haslam, 2004) suggests that individuals can define themselves at different level of self-abstraction, leading them to adopt either a personal identity (i.e., the "I" dominates, pursuing individual interests) or a social identity (i.e., the "we" is predominant, pursuing group-related interests). This process is known as self-categorization (Turner et al., 1987). Particularly in sport, studies on the *Social Identity Performance Hypothesis* (Stephen et al., 2023) show that self-categorization has a causal effect on team performances (Thomas et al., 2019). Social identity processes are also correlated with performance-related variables such as personal sacrifice (Lopez-Gajardo et al., 2021), cohesion (De Backer et al., 2022), team confidence (Fransen et al., 2014), increased effort (De Cuyper et al., 2016), self-efficacy, performance control, social support (Miller et al., 2020), psychological safety, collective resilience, team performance satisfaction (Fransen et al., 2020), or emotions (Campo, Mackie, et al., 2019). However, further research is needed to fully understand the impact of team identification on sports performance.

First, most research predominantly hinges on self-reported methodologies (Rees et al., 2015). Consequently, researchers have called for investigations into the effects of self-categorization on objective performance-related variables (Stevens et al., 2021). In team sports, decision-making is a key objective performance variable, distinguishing experts from novices. Experts demonstrate superior decision-making (Ashford et al., 2021; Hinz et al., 2022) and enhanced tactical creativity (Memmert, 2013), especially under time constraints (Raab & Laborde, 2011; Silva et al., 2020). Many studies have explored the decision-making process to understand differences between experts and novices. Experts demonstrate superior perceptual abilities, enhanced action capabilities, and greater knowledge of effective decision-making

strategies (Ashford et al., 2021). Despite extensive research on expert decision-making in team sports, few studies have examined psychological factors influencing decision-making, beyond affective components (Laborde & Raab, 2013; Tenenbaum et al., 2013) and self-confidence (Hepler & Chase, 2008). Thus, psychosocial antecedents remain largely unexplored in sport decision-making literature, as seen in Tenenbaum's model (2003) and its updates for soccer refereeing (Samuel et al., 2021).

Second, alongside advancements in understanding decision-making in sports performance, research outside of sport has shown the influence of social identity processes on cognitive mechanisms. When a shared social identity is salient, group decisions tend to align with prototypical ingroup decisions and prioritize group success and interests (Haslam, 2004). This alignment can significantly impact strategic choices and performance outcomes. Therefore, it is relevant to investigate this impact on decision-making in team sports, a prototypical intergroup context.

Third, most research on the *Social Identity Performance Hypothesis* (Stephen et al., 2023) relies on correlations. However, it would be interesting to implement experimental protocols to test the causal relationship between self-categorization and performance-related outcomes. For this reason, Campo et al. (2019) developed an innovative approach to induce self-categorization in participants. Building on Oysterman's (2015) work, which links self-categorization to goal pursuit, the authors manipulated participants' goals to alter their self-categorization. This methodology allows for experimental studies where the independent variable is controlled, thereby enabling the examination of causal relationships between self-categorization and performance variables.

The present study aims to test the causal effect of self-categorization on an objective performance-related variable in team sports, namely decision-making. We hypothesize that individuals' identification with their team influences decision-making tendencies, leading participants to prioritize collective actions at the expense of self-oriented actions. Conversely, we anticipate that under conditions where personal identity is emphasized, individuals will prioritize self-oriented actions which could be associated with individual performance. Thus, our hypotheses predict a significant increase in shot and drive attempts under conditions emphasizing personal identity compared to those emphasizing social identity. Conversely, we expect to observe a higher frequency of passes in situations where social identity is salient. We

also expect these differences to be reflected in shorter reaction times for shooting and driving in the personal identity condition compared to the social identity condition, and shorter reaction times for passing in the social identity condition compared to the personal identity condition. This pattern would indicate greater confidence in these decisions within their respective conditions (Ratcliff & Starns, 2009).

MATERIALS AND METHOD

Participants

Our participants were recruited within a French third division professional team (N = 10, Mage = 26.3, SD = 4.67) and covered various playing positions on the field (i.e., point guard, forward, center). The challenges of recruiting professional athletes account for our limited sample size. All participants signed an informed consent form before participating.

Procedure and Measures

While this study is non-invasive and thus did not necessitate approval from an ethics committee in accordance with relevant institutional guidelines and regulations, we proactively sought validation from a consortium of independent researchers in the humanities and sports sciences. This verification process ensured that our procedures adhered to the principles outlined in the Declaration of Helsinki, thereby upholding ethical standards in research conduct.

In our study, participants viewed 14 short video clips under two conditions: personal identity and social identity, resulting in 28 total viewing (14 video clips x 2 conditions). The condition order was randomized, as was the order of clip presentation. The video clips, filmed from a first-person perspective, portrayed authentic 5-on-5 game scenarios to ensure ecological validity and enhance immersion. This approach aligns with previous research emphasizing ecological validity in sport studies (Kredel et al., 2017, 2023; McGuckian et al., 2018; Vaeyens et al., 2007). Participants were instructed to make decisions promptly by mimicking and verbalizing their responses at the moment of clip occlusion, thus preserving the perception-action coupling. This methodology ensures a close alignment between perceptual information and action execution, as supported by previous literature in the field (Araújo et al., 2019; Dicks et al., 2010).

Video Sequence Creation

To create first-person video clips, we equipped players with two GoPro Hero 8 Black cameras (GoPro, San Mateo, California, USA) and one GoPro Hero 6 camera (GoPro, San Mateo, California, USA) on their torsos during 5-on-5 game phases. These cameras recorded at 1920x1080 pixels and 60 frames per second, using "Superview" mode and stabilizers for wide-angle images with minimal oscillations. During the recordings, players wore blue or red jerseys. We consistently positioned the cameras on players in blue jerseys to immerse the participants in the role of a blue team player during their laboratory session. We edited the clips using "Video Editor" software (Microsoft, Redmond, Washington, USA) to select temporal sequences where the camera-bearing player had the ball and a decision to make in the game, resulting in 58 eligible video clips. From these, we selected 14 clips with stable fields of view and sufficient length for projection. The average clip duration was 10.43 s (*SD* = 3.69, *Min*. = 6 s, *Max*. = 18 s). Additionally, we chose 2 familiarization clips from the remaining 44, providing players with 2 "warm-up" clips for each session.

We created a clip sequence for each participant by generating a randomized list of numbers using RStudio's "sample" function, ensuring the presentation order of clips was randomized across all experimental conditions.

Each video clip in the laboratory sequence started with a 3-second freeze-frame featuring the word "READY" on a white background, followed by a 3-second freeze of the first clip frame. At the end of each clip, the final image was frozen for 5 seconds, allowing participants time to make their decision (see Figure 1A).

Clip Presentation

During the experiments, video clips (see above) were projected onto a large screen using a BenQ TH585 projector (BenQ, Taoyuan, Taiwan). The projector was placed 4.10 meters from the screen, producing an image with a height of 1.95 meters and a width of 3.5 meters (Figure 1B). Participants stood holding a ball, positioned 3.3 meters from the screen. At this distance, the image had a size of 32.9 (height) by 55.9 (width) in degrees of visual angle (Figure 1C).
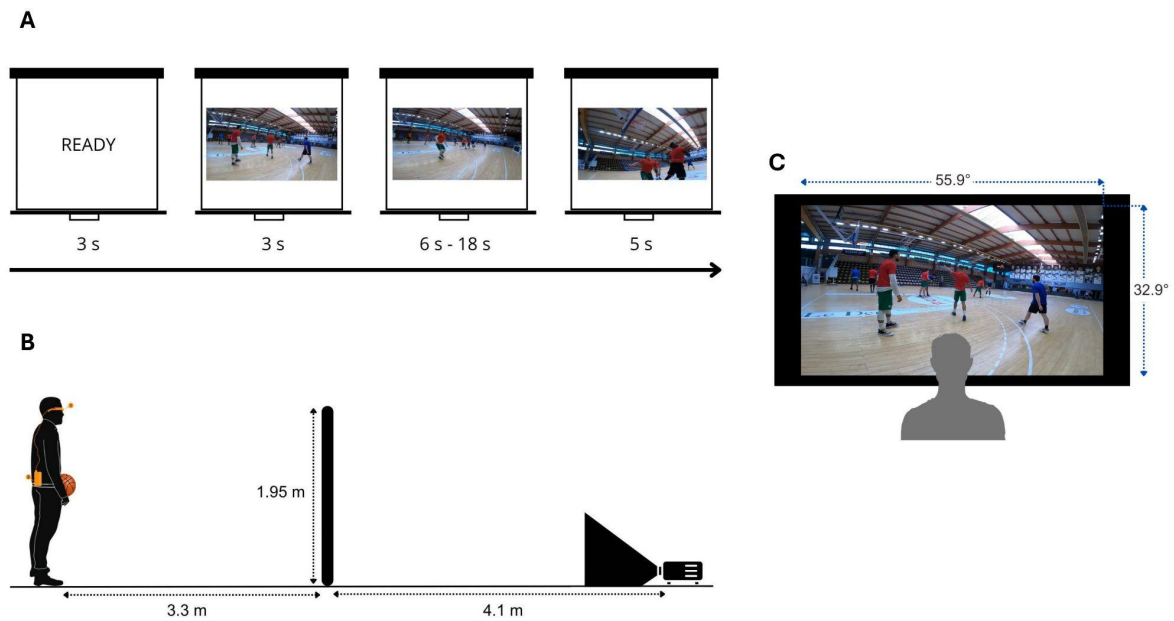
Figure 1. Experimental protocol. A) Trial description. Each trial begun with a blank screen ('Ready') for 3s, followed by a static image for another 3s. A short video sequence (6 to 18s) was then displayed. The last frame of this sequence remained on screen for 5s and participants had to report their choice ('Drive', 'Pass' or 'Shot', see the 'Materials and Methods' section). B) Side view of the experimental setup. Participants were positioned at 3.3 m from the screen. An 1.95 m high image was projected onto the screen by a video projector positioned 4.1 meters behind. C) Rear view of the experimental setup with an example of a frame presented to participants. The projected image had dimensions of 32.9 (height) by 55.9 (width) in degrees of visual angle.

Identity Induction Protocols

To manipulate participants' self-categorization, we combined multiple methodologies. Among other strategies, we manipulated the goals pursued by participants (Campo, Champely, et al., 2019) by designing two distinct decision-making challenges. In the personal identity condition, individual goals were emphasized, whereas in the social identity condition, collective goals were prioritized. In both challenges, players stood in front of the screen with a ball and were instructed to make a decision by miming and verbalizing it as the clip paused.

For the personal identity induction, players were encouraged to make decisions that would improve their individual performance in this kind of match situation. They were led to believe that they would earn a point if their decision aligned with what three coaches had supposedly identified as optimal for individual performance, without receiving explicit information regarding the evaluation criteria. Participants were also told that a ranking would be established at the end of the study, comparing all participating players against each other. In reality, no coach actually analyzed the decisions, and no ranking comparing players' decision-making performance was established. As in Pellet et al. (2025), players were reminded every two clips that they were competing individually in the individual decision-making challenge and needed to make choices that would maximize their personal success in this type of match situation. In addition to this goal manipulation, further strategies were employed to reinforce personal identity induction. Upon entering the laboratory, participants were greeted by a screen displaying a large image of themselves alongside their competitors. They were then instructed to write their name on a sheet attached to a black jersey, ensuring their jersey color differed from their teammates' on-screen. Participants were required to wear the black jersey and complete an induction questionnaire designed to strengthen their personal identity by exploring their personal history, characteristics, and individual goals.

For the social identity induction, players were encouraged to make decisions that would enhance their team's performance in this kind of match situation. Participants were led to believe that they would earn a point if their decision aligned with what the coaches had purportedly identified as optimal for team performance. They were informed that each point earned would contribute to their team's collective score. Additionally, they were informed that a ranking would be established at the end of the study, comparing their team's performance to that of a (fictitious) opposing team. Thus, in the social identity condition, participants competed on behalf of their team against the (fictitious) opposing team. Every two clips, they were reminded that they were representing their team in the collective decision-making challenge and needed to make choices that would optimize their team's success in this type of match situation. Beyond this goal manipulation, additional strategies were used to reinforce team identification. Upon entering the laboratory, participants were shown a screen displaying a photo of their team. They were then instructed to write their team's name on a sheet attached to a blue jersey, ensuring their jersey color matched that of their teammates on screen. Finally, they completed an induction questionnaire designed to strengthen team identification by exploring team characteristics, distinctiveness, and pride in membership.

Decisions Analysis

Reaction times (RTs) were recorded using a camera recording at 30 Hz. RT was measured by counting the number of frames that elapsed between the end of the video clip and the onset of the vocal response. These procedures allowed us to examine whether self-categorization influences decision-making (i.e., choices to drive, pass or shoot) and reaction times in high-level team sports.
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RESULTS

Decisions

During the study, participants were instructed to make decisions across 280 trials. Since four decisions were missing for one participant in one condition, we removed the corresponding four decisions associated with the same clips in the other condition for that participant. Additionally, one decision was excluded because the participant did not report anything. We deleted the decision associated with the same clip in the other condition to equalize our data. As a result, out of 280 total decisions, we analyzed 270.

Type of Decision depending on Experimental Condition

All statistical analyses are available in the online open-access repository. The type of decision made, depending on the experimental condition was analyzed using a Generalized Linear Mixed Model (GLMM) for multinomial data with a logit link function, as implemented in the GAMLj3 Jamovi package. In this model, condition was included as a fixed effect and participant as a random effect. The distribution of decision types across experimental conditions is shown in Figure 2. Post-hoc Bonferroni-corrected comparisons on the model revealed that participants were less likely to pass in the personal identity condition than in the social identity condition, z = -4.102, p < .001, and more likely to shoot in the personal identity condition than in the social identity condition, z = 3.890, p < .001. The frequency of drives did not differ significantly between conditions, z = -0.357, p = .721.
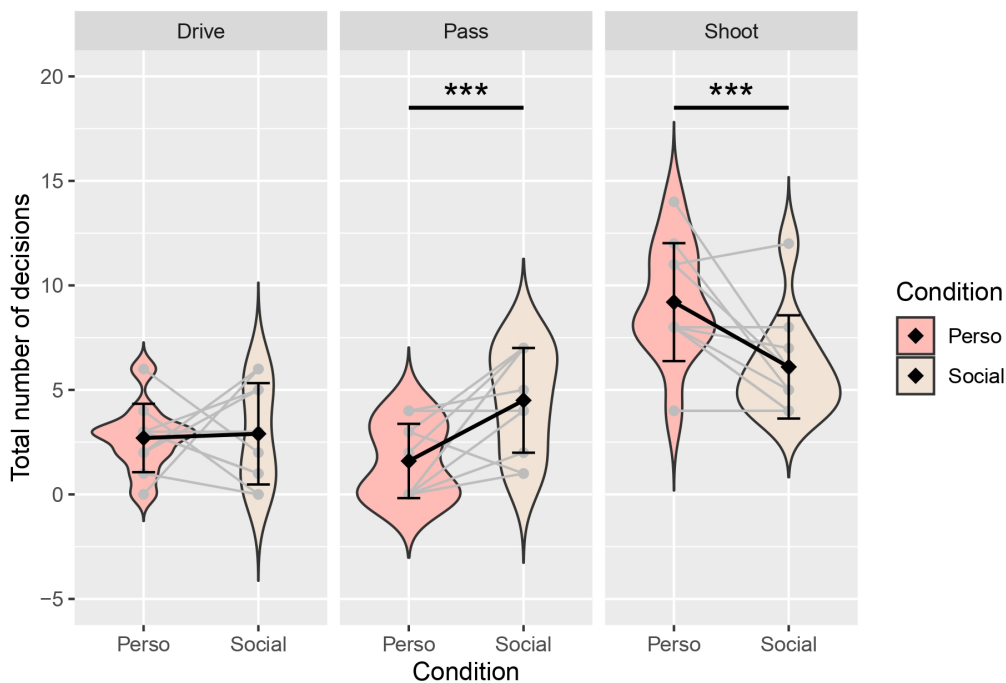

Figure 2. Distribution of decision-making across personal (red) and social (beige) identity conditions. The black diamonds provide the group-level means and the error bars the corresponding group's standard deviation. The grey circles provide the individual data points of the distributions. Stars indicate significantly different distributions (***p < 0.001).

Individual decision analysis revealed specific patterns highlighting individual differences. Unlike all other participants, who shoot at least as often in the personal identity condition as in the social identity condition, participant 4 exhibited the opposite trend, shooting more frequently in the social identity condition (see Table 1). A similar pattern was observed for participant 8, who passed more often in the personal identity condition than in the social identity condition.

Participant	Drive perso	Drive social	Pass perso	Pass social	Shoot perso	Shoot social
1	6	2	0	7	8	5
2	3	3	3	7	8	4
3	2	5	0	4	12	5
4	3	1	0	1	11	12
5	4	0	2	7	8	7
6	3	1	0	7	11	6
7	0	6	0	2	14	6
8	3	5	3	1	4	4
9	2	6	4	4	8	4
10	1	0	4	5	8	8
Mean (SD)	2.70 (1.64)	2.90 (2.42)	1.60 (1.78)	4.50 (2.51)	9.20 (2.82)	6.10 (2.47)

Table 1: Individual Decision Counts Across Identity Conditions.

Finally, we note that some participants (e.g., participants 4, 8, and 10) showed limited variation in their decisions across conditions. Thus, except for participant 10, those who made unexpected decisions based on the experimental condition were also the ones whose decision-making was less influenced by identity positioning compared to other participants.

Reaction Times

Reaction times (RTs) were analyzed using a linear mixed model, as implemented in the GAMLj3 Jamovi package. The model was built using a feedforward procedure. Decision type (drive, pass, and shoot), block (1, 2), condition (personal, social), the interaction between decision and block, and the interaction between decision and condition were included as fixed effects.

Participants and clips were modeled as random effects. Reaction times for each decision type in each condition are presented in Figure 3, and individual data are shown in Table 2. Post-hoc Bonferroni-corrected comparisons revealed that participants were significantly slower to choose drive in the personal identity condition than in the social identity condition, $t(244) = 2.977$, $p = .048$. However, there were no statistically significant differences across conditions for RTs associated with shoot, $t(244) = -0.611$, $p = 1.00$, or pass, $t(248) = 0.248$, $p = 1.00$. These results suggest that the experimental condition influenced RT only for the drive decision. Finally, there were no statistically significant differences in overall RT between conditions, $t(247) = 1.74$, $p = .084$, nor between blocks, $t(240) = -1.29$, $p = .198$. Thus, the condition did not significantly affect RTs associated with decisions, and no learning effect was observed, as indicated by the absence of a statistically significant difference between blocks.
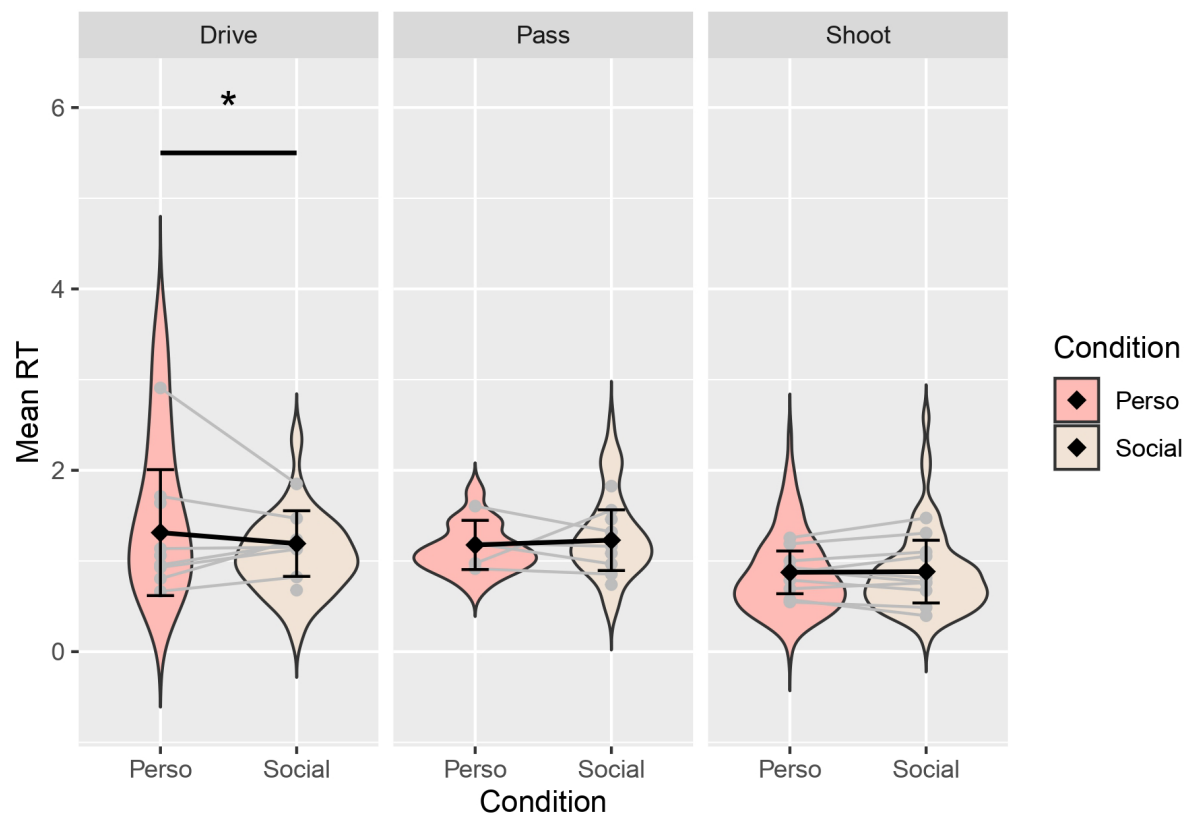

Figure 3: Reaction times by decision type across personal (red) and social (beige) identity conditions.

Participant	Drive perso	Drive social	Pass perso	Pass social	Shoot perso	Shoot social
1	2.91	1.85	NA	1.83	1.26	1.47
2	0.96	1.20	1.19	0.97	0.69	0.76
3	0.80	1.24	NA	1.46	1.19	1.31
4	0.93	1.13	NA	0.74	0.79	0.67
5	1.64	NA	1.60	1.32	0.87	1.05
6	1.71	1.47	NA	1.32	1.00	1.10
7	NA	0.68	NA	1.08	0.57	0.40
8	1.14	1.15	0.97	1.56	0.93	0.81
9	0.67	0.82	0.92	0.85	0.55	0.49
10	1.06	NA	1.20	1.16	0.91	0.77
Mean (SD)	1.31 (0.69)	1.19 (0.36)	1.18 (0.27)	1.23 (0.33)	0.87 (0.24)	0.88 (0.35)

Table 2: Mean Reaction Times for Decisions Across Identity Conditions.

DISCUSSION

The present study aims to test the effect of self-categorization on decision-making in team-based sport. Our findings indicate that professional basketball players tend to shoot more in the personal identity condition than in the social identity condition, while they pass more in the social identity condition than in the personal identity condition. The frequency of drives was unaffected by self-categorization, and only minimal effects were observed on reaction times. These results partially support our hypothesis Indeed, we predicted that players would choose the drive and shoot decisions more frequently in the personal identity condition, whereas we hypothesized that they would opt for the pass decision more frequently in the social identity condition. However, the expected effects on reaction times did not emerge.

Our results align with findings in social psychology that demonstrate self-categorization's impact on decision-making. Specifically, m*inimal group* studies (Tajfel et al., 1971) show that when social identity is salient, participants tend to allocate more resources to in-group members, even at a personal cost. Similar effects have been documented in economic contexts (Brown, 1978). More recently, research has shown that social identification can shape decision-making

in areas such as sports fan consumer behavior (Kwon et al., 2022), political choices (Bornschier et al., 2021) or judicial decisions (Shayo & Zussman, 2011).

To the best of our knowledge, our study is the first to bridge the gap between self-categorization and decision-making in the context of sport. From a theoretical standpoint, our findings can be explained by the core principles of the *Social Identity Approach* (Haslam, 2004; Tajfel & Turner, 1979; Turner et al., 1987). According to this framework, when social identity is salient, self-esteem can be reinforced by promoting group interests, whereas when personal identity is salient, self-esteem is enhanced by prioritizing personal interests. In this context, shooting appears to be perceived by most players as serving individual interests, while passing seems associated with group interests. Moreover, we hypothesized that participants would drive more in the personal identity condition than in the social identity condition. However, this was not the case, as the number of drives remained consistent across experimental conditions. A plausible explanation for this result is that driving, contrary to our initial assumption, allows players to create opportunities both for themselves and for their teammates. Specifically, a player may drive to the basket to take a shot (i.e., self-oriented action) or to draw a defender and then pass to a teammate (i.e., team-oriented action).

Regarding individual differences, it is interesting to note that some outliers tended to make very similar decisions across both experimental conditions (i.e., participants 4, 8, and 10). One possible explanation is that, for these individuals, actions that maximize personal interests are closely aligned with those that benefit the team. This pattern may emerge when group identification is particularly strong, resulting in a blending of the 'I' within the 'we' level, regardless of the context. Conversely, another possible explanation is that these players may be less inclined to identify with their group—potentially due to cultural factors (Butalia et al., 2025) or other individual differences—making them less susceptible to be influenced by a social identity induction protocol. Drive reaction times (RTs) differed across conditions, while overall RTs remained unchanged. We hypothesized that reaction times for the shoot and drive decisions would be shorter in the personal identity condition than in the social identity condition, whereas reaction times for the pass decision would be shorter in the social identity condition than in the personal identity condition. Indeed, based on the RTCON model (Ratcliff & Starns, 2009), we predicted that reaction times would vary because players would be more confident in taking self-oriented actions (i.e., shoot, drive) in the personal identity condition than in the social identity condition, and more confident in taking team-oriented actions (i.e., pass) in the social identity

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condition than in the personal identity condition. The absence of self-categorization effects on reaction times may be explained by the fact that expert athletes exhibit high confidence in their decisions (Pérez et al., 2014). However, to our knowledge, no research has demonstrated that expert confidence in their on-court decisions can be influenced by psychosocial factors. It therefore seems possible that expert decision-making in sports is consistently accompanied by a high level of confidence, regardless of the situation. Following this idea, our results suggest that expert athletes can adapt their decisions to the psychosocial context (i.e., self-categorization) while maintaining confidence in their chosen action, although this hypothesis remains to be tested.

This work opens practical perspectives for enhancing sports performance. First, manipulating players' sense of belonging to the team can be a strategic tool for coaches to enforce a specific game plan. For instance, if a coach wants their team to take more shots and shorten possessions, they can collaborate with the sport psychology consultant to modulate players' sense of group belonging. This approach also applies at the individual level. If a coach aims to encourage a player to take more self-oriented actions or, conversely, more team-oriented actions, self-categorization can be leveraged as a key mechanism.

Limitations and Perspectives

One of the limitations of our study is the use of a 5-second freeze frame at the end of each clip. Ryu et al. (2015) demonstrated that players' decisions do not differ when viewing only the freeze frame compared to watching both the video and the freeze frame. Thus, despite imposing time pressure on participants to make quick decisions, it is possible that their choices were based solely on the freeze frame rather than the full clip. Additionally, to better understand why three participants showed little variation in their decisions across conditions, it would have been useful to assess their self-reported levels of group identification. We encourage future replications to include a manipulation check procedure. Finally, our decision analysis methodology did not allow us to determine the player's intention when driving. For instance, a more flexible approach, such as the *option generation methodology* (Laborde & Raab, 2013), provides a more nuanced understanding of decision-making. However, this comes at the expense of action-perception coupling (Araújo et al., 2019; Dicks et al., 2010).

Despite these limitations, this pioneering work opens several avenues for future research. First, it would be valuable to determine whether the differences observed based on

self-categorization enhance or hinder performance. A widely used approach involves asking elite coaches to rate decisions in the scenarios presented to participants (e.g., Roca et al., 2018). Although such methods may lack specificity regarding individual player characteristics and remain somewhat detached from in-game dynamics, they can still provide valuable insights. Moreover, this approach would allow us to determine whether certain players make more relevant decisions in a specific identity configuration and, from an applied perspective, would enable the individualization of match preparation based on an individualized ideal identity configuration.

Another promising direction would be to investigate the relationship between identity positioning and decision-making using phenomenological approaches, which are increasingly employed in sport psychology research and can provide insights into players' individual perspectives on the impact of self-categorization on the decision-making process (Gleeson & Kelly, 2020).

It would also be of interest to explore the mechanisms underlying these decision-making differences. Accordingly, eye-tracking could offer valuable insights by helping determine whether variations in decision-making stem from differences in visual search strategies or information processing. Indeed, studies examining the effects of anxiety on decision-making (e.g., Nieuwenhuys et al., 2008) have often combined decision analysis with eye-tracking to gain a deeper understanding of these processes, leading to models that distinguish between visual search strategies and cognitive processing. Eye-tracking has also been employed to explore the cognitive mechanisms underlying tactical creativity, providing deeper insights into the differences between more and less creative players (Roca et al., 2018). Investigating these underlying mechanisms would allow to determine the effects of identity positioning on decision-making, participating to the emerging field of social neurosciences in sports.

Ultimately, our demonstration that self-categorization is an antecedent of decision-making raises the inverse question: does decision-making influence self-categorization? Indeed, it seems plausible that making individual-oriented decisions or, conversely, team-oriented decisions could impact both one's own identification with the team and that of teammates. Research in this direction would further expand the body of knowledge on the antecedents of social identity (Benson & Bruner, 2018; Pellet, Gérat, et al., 2025), and position decision-making training (Gil-Arias et al., 2019; Silva et al., 2021) as a key factor in group dynamics in team sports.

For example, if this hypothesis is confirmed, players could learn to identify moments in which they can adapt their decisions to enhance collective dynamics.

Contributions

Alan Guyomarch (1st author): Conceptualization, Methodology, Investigation, Formal analysis, Investigation, Resources, Data Curation, Writing - Original Draft, Visualization, Project administration. **Benoit R. Cottereau (2nd author)**: Methodology, Writing - Review & Editing, Visualization. **Simon Martin (3rd author)**: Conceptualization, Methodology, Resources, Supervision. **Julien PELLET (4th author)**: Writing - Review & Editing. **Emilie Pété (5th author)**: Validation, Data Curation, Writing - Review & Editing. **Mickaël Campo (6th author)**: Conceptualization, Methodology, Resources, Writing - Review & Editing, Supervision, Funding acquisition.

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Open Practices Statement

This study was not preregistered. The task materials, data, and analyses resulting from this study are available at https://osf.io/hrf8c/.

Declaration of generative AI and AI-assisted technologies in the writing process

During the preparation of this work the author(s) used ChatGPT in order to improve the readability and language of the manuscript. After using this tool/service, the author(s) reviewed and edited the content as needed and take(s) full responsibility for the content of the published article.

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