

**Negotiations, agreements, and understandings:
reconceptualising football referee decision-making in sport
as a social relational activity**

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Negotiations, agreements and understandings:

Reconceptualising football referee decision-making in sport as a social relational activity.

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Abstract

For the past 20 or more years, the study of football referee decision-making has focussed on concepts more suited to functional performance priorities and measurable components of the role, such as assessing fitness levels and foul-discrimination accuracy scores (see Pina et al., 2018). Investigators have rarely sought to access experiential knowledge of match officials, highlighting their personal perceptions, insights and experiences during performance and preparation. Adopting an ecological grounded theory approach (Russell, 2021), we sought to better understand perspectives of officials on how relational elements of decision-making contribute to the development of gameplay. Two key concepts are presented, 'building rapport' and 'developing common gameplay expectations', to analytically explain how referees may seek to use decision-making moments to manage individual- and game-orientated performance goals. Referee observations suggest how competent refereeing can be re-imagined as a *social relational activity* intended to facilitate the game's evolution, rather than a series of deliberated actions or responses to movement infractions (i.e., invariant judging acts). Our findings indicate that, without knowledge of a referee's decision-reasoning or an awareness of relevant context-dependent constraints, decision-accuracy may not always be definitively determined. Our data suggest that researchers might avoid conflating technical accuracy with decision-making 'performance', because constructed decisions may serve a diverse range of psychological, cultural, functional, and socially-relevant task priorities. Furthermore, we caution against the increasing desire for technical accuracy in training and development of referees, as it may lessen the elaboration of more complex relational strategies officials may seek to use to manage a game. Future work in sports officiating can continue to ground theoretical understanding in cultural knowledge to better understand what referees are really seeking to achieve when officiating.

Background

In 2001, Plessner and Betsch published a brief report that decisions by referees and players changed as a function of preceding penalty decisions when using video review. These findings were formative in ensuing academic work adopting expert panel video ‘reference decisions... seen as the golden standard’ to evaluate referee decision-making accuracy (Spitz et al., 2021, p. 150). At the time of this publication, however, Mascarenhas et al. (2002) disputed these findings, suggesting that differences in judgements cannot be ascertained without knowledge of the participants’ decision-reasoning. In response, Plessner and Betsch (2002) countered that there was no theoretical or methodological basis for investigating decision-making reasons because ‘*good refereeing* [emphasis added] should reflect proper craftsmanship rather than an artist’s attitude in dealing with a task that at times surpasses the human capacity to process information’ (p. 336).

What began as a rare epistemological debate surrounding the referee’s decision-making process and function, quickly collapsed into assumptions on a narrow theoretical conceptualisation of *good refereeing* as a perceptual cognitive classification process. Now, more than 20 years on, academic understanding posits that referees ‘*always* [emphasis added] strive to make accurate decisions, however, acknowledge the need to apply game management... [only when faced with] situation[s] in which a decision needs to be somewhat fast and the person has limited resources for making a choice’ (Raab et al., 2020). In this position statement, we outline that this perspective may be a mischaracterisation of the referee’s decision-making function in football, exacerbated by traditional task-analysis methodologies associated with notions of ergonomic efficiency. We propose an ecological grounded theory to re-imagine referee performance as a social relational activity, which emerges in the ongoing transactions (see Woods et al., 2024) of an official with a competitive performance context, integrating key ideas from scientific and referee perspectives of performance.

Introduction

Many previous studies have made a case for improving decision-making accuracy of sports officials on the grounds that this defines performance (e.g., Anderson & Pierce, 2009; Plessner & Betsch, 2001; Schwarz, 2011; Spitz et al., 2021). This predominant view of decision accuracy as a marker of expertise stems from a social cognitive origin, which positions decision-making as a closed, cue-classification task. This framework considers expertise as the gradual process of refining the relationship between an incident being perceived, interpreted, and then deliberated upon, compared against existing knowledge structures, to enable optimal judgement expressed as a decision (Plessner & Haar, 2006). Accordingly, researchers have attempted to quantify the extent that variables, such as contextual influences (e.g., MacMahon & Starkes, 2008), home ground bias (e.g., Downward et al., 2007), and differential memory effects (e.g., Ste-Marie, 2003), cause ‘biasing influences that can occur across different steps in the decision-making process’ (Spitz et al., 2021, p. 147). This mechanistic pursuit of greater accuracy is framed on a premise that ‘one single decision’ can have ramifications ‘...about winning or losing, about a gold or silver medal, about financial consequences’ (Pizzera, 2015, p. 53).

Culturally, a common explanation for an incorrect decision is that ‘they’re [the referees’] *human* [emphasis added]... so expect and accept that they will make mistakes’ (Hoffman, 2013, para 1). Theoretically, theory has often reinforced this view, contending human decision-making processes are limited and vulnerable mechanisms prone to ‘error and bias’ (often subconscious) (Nevill et al., 2002; Raab et al., 2020). To overcome these inherent weaknesses, calls for greater involvement of digital technologies to improve performance accuracy (e.g., such as the Video Assistant Referee in football) and training (e.g., such as Virtual Reality, see Boyer et al., 2023; Kittel et al., 2019) have followed. These technologies are usually heralded as allowing more objective, repeated, and precise review of game

incidents (e.g., by using optic zoom, video-based measurement calibration, multiple camera angles and slow-motion replay features), to be as ‘accurate as possible’ (Schweizer et al., 2011, p. 429).

Research using cognitive task analyses to measure refereeing performance tend to report higher overall foul counts during testing, compared to fouls awarded by gameday referees (e.g., Fuller et al., 2004; Mascarenhas et al., 2009). Moreover, officials are more sensitive to making technical decisions (e.g., foul versus no-foul, corner kicks, and throw-ins) and more severe with their judgements (e.g., giving a red card, rather than a yellow card) when key contextual information such as crowd noise, game time, field position, or previous decisions are removed (e.g., Brand et al., 2006; Spitz et al., 2017, 2018). An explanation for this discrepancy is often that variability (noise) present in real game contexts disrupts perceptual and cognitive ability of referees, meaning that ‘decisions made by referees [on gamedays] are therefore not 100% correct’ (Spitz et al., 2021, p. 147). Often, the inability to determine the correct decision is attributed to poor positioning (Barte & Oudejans, 2012; Oudejans et al., 2000), inadequate gaze behaviours (van Biemen et al., 2023), perceptual ambiguity (Brand et al., 2006) and/or incomplete information under time pressure (MacMahon & Mildenhall, 2012). While not always explicit, these approaches appear to share a common epistemological assumption that foul play incidents can be assessed as discrete moments, interpreted separately from previous actions undertaken by players during the match and/or prior decisions by the referees’ (Plessner & Haar, 2006). In other words, the effects of context-dependent constraints (Juarrero, 2023) (acting as a powerful source of information on decision making behaviours) have been ignored.

Many non-normative research approaches present an alternative characterisation of the referee’s decision-making, conceptualising their decision-making as intertwined with managing the event (see Mascarenhas et al., 2005, Cunningham et al., 2018) and co-

producing the spectacle (see Rix, 2005; Rix-Lièvre et al., 2015, Russell et al., 2019). This contemporary view of the referee's role explains discrepancies between gameday and video review decisions, not as error, but as deliberate alterations of style to support the tenor of the game (Mascarenhas et al., 2005; Boyer et al., 2020) or to manage key personal performance priorities of the referee, such as maintaining control (Russell et al., 2019). Thus, rather than prioritising a uniform assessment of all fouls, these approaches place a greater emphasis on how decisions can afford value and meaning to shape behaviours of participants that work to build 'accountability, transparency and... player acceptance in officials' (Cunningham et al., 2018, p. 160).

Decisions, in this way, have a greater function than simple foul classification but instead, also mediate perceptions about a referee's decision accuracy and/or competence (Burger et al., 2023). For example, Simmons (2010) reported that explanations of decisions and visible equal treatment of both teams, provided security to players that the referee was impartial, ensuring more compliance with the official's directions. Similarly, Dosseville et al. (2014) evidenced that players were more favourable towards officials that were confident, decisive, and seeking to avoid conflict. How these social relational priorities interact with the referees enduring obligation to implement (relatively) fixed Laws of the Game, is a topic of interest for research.

Livingston and Forbes (2003) assert that the nature of this relationship is sport-specific, with certain domains of officiating such as football and basketball, allowing referees greater scope to make situated and contextual assessments. A pertinent example of how this works in practice is evident in MacMahon and Starks' (2008) research on baseball umpires. They reported that umpires tended to make some decisions to enhance the spectators' experiences, e.g., to call borderline decisions as a strike to 'hasten the game'. They postulated that calling strikes likely functioned to 'minimis[e] the cost of future borderline calls by

forcing batters to swing and make future decisions earlier' (p. 759). Interestingly, their analysis revealed how some laws and rules of a sport may require a certain amount of interpretative leeway on behalf of the officials. So, while these decisions seek to maximise certain performance outcomes, it is also possible that umpires in baseball are seeking to clarify the difference between a foul and a strike, to avoid criticism and controversy around close calls for themselves. However, without asking officials directly, this proposition, of course, requires confirmation.

While rare, some research has sought to gather insights and experiences from the perspective of referees to understand decision reasoning (e.g., Cunningham et al., 2018; Lane et al., 2006; Mascarenhas et al., 2005; Rix, 2005; Russell et al., 2019, 2022). For example, Russell and colleagues (2019) took a grounded theory approach to studying national-level football referees to explore 'why referees make decisions at all?'. Their analysis revealed that referee decision-making sought to organise player behaviour to emerge in line with key social expectations of safety, fairness, accuracy, as well as entertainment. A key finding of this work was that although technical aspects of the Laws constrain decision-making choices, foul interpretations may be nuanced, depending on game factors (e.g., where a foul is committed on field), previous decisions (e.g., contextual basis of foul thresholds) and changing personal priorities (e.g., regaining control or building relationships) nested in facilitating socially desirable game outcomes (Russell et al., 2022).

From these findings, the authors proposed that referee decision-making could be conceptualised as an ecologically grounded process (Russell, 2021). An ecological conception of behaviour posits that 'living creatures and their ecosystems can be understood as forming a complex adaptive system, parts of which do not function independently of each other' (Araújo et al, 2020, p. 536). Applied to refereeing, actions of the referee are viewed as interconnected and related to actions by the players, in a symbiotic feedback loop à la

perception-action coupling process (see Gibson, 1986). Then, actions by players related to those refereeing decisions, offers new information further influencing the referee's decision-making activity. Ecological perspectives offer a transactional view of the reciprocating cycle of perception and action as a continuous foundation for all self-regulating human behaviour (Button et al., 2020; Woods et al., 2024).

A key challenge for ecological approaches to understanding behaviour (e.g., referees' decision making), has been finding methodological ways to understand how psychological processes, such as individual performance-orientated intentions, emerge and are regulated by interdependent actions. The methodology of the present study integrates ecological and grounded theory principles (i.e., into an ecological grounded theory) to better understand the referees' perspective on how relational elements of decision-making are invested in the development of gameplay. To this end, this investigation does not seek to verify 'if or how much' an official's decision-making affects gameplay. Rather, this inquiry focusses on considering how their perspective of their task-role shapes their decision-making processes and priorities. Indeed, by including the voices of referees, a clearer understanding can be reached regarding whether variation between gameday and video review decision-making is a negative function of bias, or rather a reflection of the complex strategies officials may use to manage the competitive context of a game.

To meet these aims, our ecological grounded theory approach draws on a broad range of experienced referees' perspectives to better understand their intentions for 'in-game' actions and the information underpinning their decisions. The inclusion of a range of referees from various performance levels (e.g., elite, sub-elite) reflects a principle of grounded theory to enter the research site without a predetermined idea that an arbitrary social category (e.g., different competition levels) will be analytically important (Charmaz, 2006). Including a broad range of refereeing experience also meets a call from the literature to develop more

representative useful theory (see Pina et al., 2018). Introducing the referee's point of view enables science to appropriately evaluate performance and skill, by offering a more complex picture of what they really think, perceive and do when they officiate. This contribution to knowledge can support the development of education and training programmes that are better adapted to referees' reported experiences.

Methodology

Grounded theory prioritises understanding analytic processes that sustain a groups' cultural functioning and formation (Charmaz, 2006). The original statement (Glaser & Strauss, 1967) sought to address the challenge of depicting and understanding important issues in people's lives, while still permitting researchers the freedom to determine their own data collection strategies, as well as the subject of their inquiry (Eaves, 2001). As grounded theory approaches evolved, deeper interrogation was undertaken by scholars on the key proponents of the original methodology, such as the notion of what constitutes 'data', data collection techniques, and to what extent the researcher influences the type and style of an eventual grounded theory.

In line with this developing convention, our ontological view of human behaviour is ecological, that is, that the nervous system, body, and surrounding environments are 'open systems' which are continuously and simultaneously engaged in shaping the nature of one another (Araújo et al., 2016). This specific approach to ecological grounded theory adopts an interpretivist lens to develop theory located in understanding how human values and perceptions define and shape the emergence of behaviour (Russell, 2021). To achieve this, our grounded theory approach was guided by the eight core elements common across the three current variants (Weed, 2009). These are: iterative process; theoretical sampling; theoretical sensitivity; codes, memos, and concepts; constant comparison; theoretical saturation; fit, work, relevance, and modifiability; and substantive theory (*italicised*

throughout). The following section outlines techniques and procedures (i.e., *means*) used to develop this theory (i.e., *ends*).

Participants

Ethics approval was received from a local university. While appropriate governing football bodies gave permission for the study, all elements of study design (e.g., topic focus, participant-involvement, questions asked) were determined entirely independently of the sporting organisations. Before commencing interviews, participants signed and returned an informed consent, with their anonymity preserved always.

Forty-two past and present Australian referees were involved from all levels of senior football (i.e., no junior football), with their experience levels categorised using competition levels that they tended to perform most often at, using mean age (ma), range of total refereeing experience at any level (r) and sex. Participants from local and National Premier Leagues (n = 21, ma = 36.8 years, r = 1-30); A-Leagues and FIFA level (n = 14, ma = 32 years, r = 9-20); and former referees (n = 7, ma = 58.8 years, r = 15-30). Male (n = 36) and female (n = 6) participants. Notably, the non-professionalised nature of officiating in Australia means that most referees participate at multiple levels of football simultaneously, rather than at a single level.

Interview process

The lead author conducted each interview, which lasted between forty-five minutes and one hour and thirty minutes (total time including follow-up with participants ~60 hours). Thirty-eight participants were interviewed 'face-to-face' in a mutually agreed location. One participated by mobile phone and three using Zoom. Transcription data were placed on the university e-store (i.e., a secure network drive). Audio recordings were stored securely in a locked filing cabinet on campus.

The conceptual focus for interviewing, in this work, stemmed from existing scientific literature, personal experience, immersion within the cultural group, and previous decision-making grounded theory work on officials in sport (Russell, 2021). Initially, a question guide was developed that consisted of 60 or more potential decision-making moments that might involve exchanges with players (e.g., such as showing yellow cards, giving penalties, and interactions with coaches). After discussion with critical friends (Smith & McGannon, 2018) in the research team, the guide was simplified into four casting points for discussion around situations where decision-making actions, in their personal view, could have: (i) differed and why, (ii) affected development of play either positively or negatively, (iii) appeared important in terms of how they were able to perform their role during the game, and (iv) affected player-referee relations. Rather than attempting to procure answers to these questions, these ‘departure points’ (Charmaz, 2006) served to encourage participants to share conditions or reasons that may offer insight into the relationship between decisions and the competitive functioning of the game.

An open-ended questioning philosophy to interviews was adopted to give people voice, the opportunity to share their own ideas, to confide in me, and for me to do the same with them (Charmaz, 2017). Approaching the interviews in this way, ensured questions were not overly directive during inquiry. This approach also minimised potential hierarchies, thus ‘locat[ing] myself as a [learner] seeking to better understand a phenomenon that had perplexed me from my own previous experiences’ (Lauckner et al., 2012, p. 10). As such, interview lengths were not predetermined, referees were permitted to discuss incidents from one or more games, and no specific topics were off-limits.

Data development and analysis

All interviews were transcribed verbatim by the lead author to ensure closeness to data (see Seve et al., 2006). Initially, interviews were coded line-by-line (Charmaz, 2006). This produced between 100-150 fragments of data (initial codes) per interview with each initial code accompanied by an analytic term or phrase (provisional codes).

While this early phase of *making* codes helps categorise ‘what is happening’, it primarily works to ignite analytic and conceptual interest, by generating further analytic data for comparison. For example, in one interview, a participant recounted an altercation between two players. He made special mention that he wanted to avoid using a yellow card sanction because it would result in only one player being sent off (the retaliator not the instigator). These became initial codes: ‘you’ll see those teams again’, ‘going to make my life harder going forward’, and ‘not a spectacular game’. Each initial code received various provisional analytic code(s): ‘future working relationships’, ‘future compliance’, and ‘game types / game nature / game quality’, respectively. These provisional codes gave early theoretical insight into how referees moderate their decision-making with respect to how it will shape the games evolution.

Next, codes were categorised for comparison using analytic handles (i.e., the provisional codes). However, when bringing codes together for comparison analytically, you find yourself asking questions of your data. For example, *why* might a referee feel resistant about giving some decisions in certain circumstances? *How* important are ‘relationships’ (with players) to the game’s functioning? *When* might different ‘game types’ sway a referee to take one decision-making course of action over another and *in what ways*? This process of questioning your data functions to enable *theoretical sampling* in two ways. First, it evolves the original casting aims towards more nuanced topics that are important to you and your participants. Second, it encourages you to ‘*think theoretically* [their emphasis] from the start

of a study rather than [waiting] to create a final model or theory at the end' (Holt & Tamminen, 2010, p. 422).

To generate robust codes, constant comparison (Glaser & Strauss, 1967) using techniques of *memo-ing*, *interviewing*, *writing*, and *conceptual mapping* occur at every stage. These techniques function to make connections between codes and emerging categories to 'weave the fractured story [i.e., analytic codes] back together' (Glaser, 1978, p. 72). Together, these processes bring data to a point where codes, categories, and concepts have sufficient conceptual weight to make analytic sense of your topic. *Focussed coding* is then used to pool large amounts of data together comprehensively and formulate theory using a smaller set of higher-level concepts (Glaser & Strauss, 1967; Charmaz, 2006).

Trustworthiness and rigor

To test the *fit, work, and relevance* of the proposed theory, we discussed emerging conceptual categories with 'critical friends' (Smith & McGannon, 2018). The first step in this process was to offer all participants an opportunity to review verbatim transcripts to ensure their accuracy. While no participants accepted the offer to review transcripts, provisional findings (i.e., key codes and concepts) were shared at various football referee seminars for feedback, as well as directly with referees who were involved in the study, as well as those who were not. This offered stakeholders an opportunity to 'react, agree or find problems' with the findings, encouraging reflexive elaboration and critical discussions around the extent the findings were meaningful to the group itself (Tracy, 2010, p. 844). Anonymised portions of text were reviewed at qualitative workshops for critical appraisal by non-referees. This process of *multi-vocality* (i.e., dissent, help, and guidance from within and outside the culture group; Tracy, 2010) ensured thoroughness of conceptual abstractions and their *saturation* in the context of their theoretical claims. In the following section, two major theoretical

concepts of building rapport and developing common gameplay expectations with players to define the conditions of play, are presented as the outcome or *product* (i.e., Results) of this grounded theory *process* (i.e., Methodology).

Results

An ecological grounded theory approach (Russell, 2021) was adopted to better understand the perspectives of officials on how relational elements of decision-making contribute to the development of gameplay. Our analysis of their transactions with the competitive environment indicates that referees sought to use decision-making moments as a site for negotiation, agreements, and understandings to be formed with players about the referee's performance (i.e., 'how you will operate') and the game's performance (i.e., 'how the game will function'). How referees use decisions to establish this social contract (i.e., 'the conditions for play') are conceptualised in two ways: (i) building rapport, and (ii), developing common matchplay expectations. These two concepts are sustained by six sub-analytic processes that decisions serve, including: managing impressions, being reachable, making connections, generating understandings, foul flexibility, and threshold acceptability. When successful, referees appear *human* and *working with players* (i.e., referee's performance) and their decisions lead to preferred or acceptable game circumstances (i.e., game's performance) (see Figure 1). The results (i.e., 'product') are presented using an integrated quote style to draw together narratives and consolidate the authenticity of shared refereeing priorities and processes. Given the nature of this style, names are substituted with numerical labels (e.g., R10 – referee ten) rather than pseudonyms. ##Insert Figure 1 here##

Building rapport

Referee decision-making moments afford transactional opportunities to declare to players 'what kind of referee you are' (R11) and subsequently, what you as the referee, will be like to

work with during the match ('how you'll operate'). Three sub-analytic decision-making categories of managing impressions, being reachable, and making connections, *build rapport* ('keeping players onside') to develop conditions for play.

Managing impressions. Actions by the referee inform players about 'what kind of referee you are' (R11) (e.g., strong, authentic, disinterested, personable). Over time, these traits become viewed as referee personality types (e.g., overbearing, people-person, analytical referee etc.). Consequently, referees are conscious about managing impressions from the moment they arrive at the ground (e.g., 'when you turn up, they [the players] are thinking "what is this guy about"?' , R9), as well as across games, because 'over time, [as] people understand what you are like, you have less problems because they go "oh we have got [name], so we know we can't do this"' (R8).

Even the first whistle of the match provides information to the players about 'what they see from you and what they get from you' (R15) (e.g., 'there is nothing worse than when somebody starts the game with [weak whistle noise], you think "oh what a soft whistle, what is this ref going to be like?"', R31). Referees clarify there is a balance needed between showing you are 'up to the task' and being a 'demeaning or overbearing referee' (R37). They suggested players wished to 'feel like they are being refereed by someone who thinks like them' (R1), is 'taking the match seriously' (R2), and 'making an effort' (R3). Authenticity was essential (e.g., 'you can't falsify that, people will see through it', R38) because you need to show the players that you are truly 'someone [they] can relate to, personable, confident, while looking like [you] are having a bit of fun' (R37).

Officials emphasised that being 'open, positive, and approachable' (R3) was more than merely managing impressions with players around 'who you are and what you are like'. Rather, it was developing an understanding with the players that as the referee you are *willing*

to work with them to ‘provide a game for the players. If you just make their playing time miserable, then you haven’t refereed the game well’ (R1). In the following section, we highlight how this develops an impression of the referee as *being reachable*, that is open to co-producing the conditions of gameplay.

Being reachable. Referees use decision-making moments to appear reasonable, relatable, even fallible, to show players that they are *reachable*. For example, by acknowledging mistakes and considering players’ views, referees are seeking *trust and approval* (i.e., a type of social mandate) to manage the game. R3 begins:

I am a massive believer if you are wrong, say you are wrong and admit it. I will put my hand up and say, ‘sorry, I made a mistake’. I think that goes a long way to building rapport earlier, ‘oh actually, he made a mistake and we will move on’. (R3)

Referees suggested that by ‘listening’ to concerns of players, they are signalling that they are open to building the players’ voices (i.e., is *reachable*) into how the game will evolve (e.g., ‘look, [I] probably stuffed that one up, I will watch out for the next one’, R5).

Referees reinforced that how they choose to treat players (e.g., politely, respectfully) matters, because it sets terms or conditions that will define their emerging working partnership (e.g., ‘if you can talk to players in a civil way, you usually get a better response out of them’, R31). Referees felt that having this rapport gave them a greater capacity to meaningfully reach or alter player behaviour when required (e.g., ‘players that might be losing it a bit... if you can get a bit of rapport going and bring them back to earth, that works really well, R27).

In this way, being reachable is more than developing trust to manage the game, it instead is a process of actively ‘moulding them [players]’ (R6) to prevent certain behaviours happening *at all* (e.g., ‘[while] sometimes a player is going to make a tackle you can’t do

anything about, there are steps you can follow to prevent the tackle happening at all. Having them calm and on your side certainly helps', R3). In the following section, we explicate how referees use decisions as an opportunity to *make connections*, with the aim of having some control over the emerging quality and trajectory of the game.

Making connections. Officials suggested it was the 'responsibility of the referee to ensure the game is played within the spirit of the game' (R35). R4 shows that to deliver this mandate they *made connections* with players to gain their support on foul management:

You can't go in with some [players] with a really hard line to start with. You have to kind of pacify her a little bit: 'yeah I know there was contact, but it would have been a soft foul'. Acknowledge that it was a foul but manage her in a way that feels like you are on her side. (R4)

To *make connections* with players they would often be personal, such as showing empathy and offering reasons for decisions (e.g., 'talking to them like people, we would say "I understand that you are frustrated but you know, this is why it is"', R8). Another method was being concessional and occasionally letting a player have a win (e.g., 'I am happy to take a loss. I have said "yeah I agree with that". I might not agree but it feels like they are being heard', R3).

Referees explained that if you do 'shut them [the players] down too quickly, they feel ignored, and they just get progressively worse and worse. Then you've got to deal with more dissent, more anger'. To avoid these possible game evolutions, another strategy referees used is names (e.g., 'I'll call him by his first name; that can change quite a lot. I will say "listen [name], you are having a good game, but you have to deal with this situation"', R40). This approach extended to referees delegating players' real responsibilities concerning the game's management, such as seeking 'more experienced players in the team [to] work with them... I use the senior players in the team, the older players, to control him' (R41). Referees clarify

that the appropriate level of rapport is a ‘real psychological battle’ [R38] and that better players can adopt the same strategy against them (e.g., ‘they might learn my name because that is what some sensible players do, they want to know the referee’s first name so that they can gain some favour’, R40).

In summary, we have outlined how referee decision-making moments develop rapport with players by managing impressions, being reachable, and making connections. In the following section, we explain how these decision-making acts simultaneously serve as opportunities for the referee to negotiate context-dependent constraints with players, such as unique game styles and foul understandings for the match (i.e., ‘how the game will function’).

Developing common gameplay expectations

Referee’s view decision-making moments as opportunities to attempt to develop common agreement about how the game can be played with the players (i.e., foul tolerance and game style). Three sub-analytic decision-making categories of generating understandings, foul flexibility, and threshold acceptability, work together to define the category of *developing common gameplay expectations* (i.e., ‘how the game will function’).

Generating understandings. So, how will the game ultimately evolve? One answer to this issue lies in how successfully the referee’s decisions make clear to the players ‘what has happened’ to develop acceptable gameplay expectations (i.e., agreement around ‘how you can play’). Seeking agreement of the players, referees offer explanation (e.g., ‘give them [fouls] or talk them through it’, R1), reassurance (e.g., ‘I have seen it, I have noted it... I will get her next time’, R4) and guidance on how to keep playing football (e.g., ‘yeah something has happened...we are going to keep going...[you] can still do something with it’, R3).

Collectively, referees suggest these acts operate to help players *generate specific understandings* of ‘what is going to be tolerated and this is what is not’ (R36):

They expect, the word that first came to mind was clarity. They want to know that what is happening is clear so that they can see what a foul is, what is clearly not a foul, what is a correct decision. So, they want to be able to interpret the game sensibly for them. I think most would accept that if their team commits a foul then they should be penalised, if it is a clear foul. They get upset, and you know this, when they don't think it is a foul and they still get penalised. (R16)

Referees view decision-making acts, therefore, as reference points to delineate the limits of what is acceptable (e.g., 'you need to get in early [and] talk to players, let them know what you expect, pulling up fouls and telling them why, then they get to know their limit', R32). A foul can make clear that a transgression has occurred (i.e., the limit has been breached). However, referees use other decision-making acts as techniques to provide more nuanced understanding of what is acceptable without fouling (e.g., 'that was not on, that was on the edge of being a card', R28). Thus, rather than decision-making moments working to limit play, referees are working to provide augmented information as feedback on how players *can* play (e.g., 'we play [football] on a field with boundaries, but there are those boundaries... that the referee provides. If you are within those boundaries, you can do what you like', R16).

In the following section, we outline how the process of developing common gameplay expectations, however, is not entirely the referee's domain (e.g., 'it depends on a lot of things, who is the referee, what level the competition is and what the expectations of those players at that level are', R11). Therefore, rather than foul adjudication being a set, pre-determined response to an infringement, referees flexibly adjust and explore foul tolerances (thresholds, limits, bandwidths) to inquire about 'the sort of game they [players] want' (R16) to play.

Foul flexibility. To contribute to how the game evolves constructively, referees are flexible with foul tolerances (e.g., 'different games call for different thresholds', R35). Central to negotiating agreeable foul tolerance initially involves the referee 'going along with things'

(R1) and giving players' every chance to show 'if they want to play football' (R12). R2

details:

The first couple of times, I try to get the game to flow. Not that I am 'not' trying to make a decision or anything, but I like to let it flow a bit. If it is getting to the stage that they are frustrated by not getting the free kick, then you give the free kick, regardless. (R2)

R2's approach is an example of how decisions operate as proposals for how the game could be played, with the referee looking to gain informational feedback about whether players are willing to accept the level of foul tolerance the referee has offered (e.g., 'or do they not care? They are not injured, they have got the ball, let's keep going', R1). Referees describe this as a 'tinker tailor process' (R1), which involved adjusting your tolerance (e.g., 'reading players body language – is my foul threshold right? Are they accepting of that level of contact?', R14).

Skill and game competition level often defined tolerances (e.g., 'have they got the skill to keep going?', R1). Referees explained that at lower levels of football 'the players [and] like the teams don't want that little bit of time or advantage accrue. They want the free kick then and there' (R2). Yet at higher levels 'they should be able to not [only] absorb but manage fouls. They are more football aware. They probably in theory want to keep playing' (R4). Occasionally referees were unyielding or inflexible with their foul level (e.g., 'sometimes I get stubborn, and I will be like: that is not a foul', R10). Often, this results in what the referee considered a poor performance. R1 explains:

The players weren't happy at the end. They weren't happy with the ones you chose, or they wanted more advantage but you weren't giving it. Maybe they are at a different level and you weren't used to them being able to keep playing. [R1]

In this way, foul flexibility reflects a critical kind of inquiry to perceive if the understanding around the expectations for play are shared. In the following section, we outline how

threshold acceptability is when the referee feels they have successfully ‘f[ound] that balanced line between, I guess, leading the game down the path that you want’ (R9) while being open to ‘what they are doing and where they are happy’ (R4).

Threshold acceptability. Referees generally evaluated the success of their performance in terms of decision-making acceptance, that is, whether ‘everyone walks away satisfied, not necessarily happy, but satisfied’ (R5). Referees explained that developing *threshold acceptance* did not mean simply giving the players the foul level they want; it was instead more of a ‘manipulation around what they want’ (R4). R4 elaborates:

No [you don’t necessarily give her the foul]. You just tell her there is contact but there is not enough contact. You have to think; this is... the premier league in [country]. If we give a foul for a push and she falls over, yes there is contact, but is that the standard we want to be setting? (R4)

Why though do referees work hard to avoid instituting a low threshold (e.g., ‘you don’t want to reward, you don’t want to say to everyone “you do that you get this”’, R4)? The purpose of this effort is to elevate the quality of gameplay, by developing foul understandings that are so productive they create a ‘game without delays... an attacking game... an attractive game’ (R16). Thus, facilitating ‘the sort of game they want’ (R16) by minimising the need for stoppages. R36 details:

If you do set that line in the sand or bar really high, then you have got a greater ability to enhance the game... They know you have got the game completely under control and if a trifling incident or minor infringement [occurs] they are not going to turn around and belt someone because they know you are playing on, they know you are going to come back and deal with it later. (R36)

The strength of these understandings is productive for the referee and players because it avoids the broken intermittency of ‘a game of free kicks’ (R1) and facilitates players ‘play[ing] as much of the 90 minutes as they can’ (R3). They cautioned, however, that ‘it is a fine line’ (R39) because if you give the players too much leeway (e.g., ‘you let something go

that you really you should have a pulled up’, R30) it can lead to a misunderstanding that certain unwanted behaviours are ‘deemed acceptable, then all of a sudden you will have tackles like that happen[ing] all the time until you eventually...you have got to rein it back in’ (R39).

To this end, referees use decision-making moments to ongoingly negotiate the *game style* and *foul threshold* each party is ‘willing to accept’. This agreement is somewhat context-dependent and unique to participants assembled on that day and reflects an interactive exploratory process of ‘giv[ing] them that every opportunity to play [while having] the ability to talk to them and bring them back when [you] need to’ (R12). In the following section, we discuss how the results of this work show that decision-making work of officials is not invested purely in categorical assessment of isolated transgressions by players, but rather functions as a site for the referee to negotiate game-specific understandings with players concerning the conditions for play.

Discussion

Using an ecological grounded theory approach, we sought to better understand the referees’ perspective on how relational elements of a transactional analysis of decision-making (Woods et al., 2024) are invested in the development of gameplay. Our findings indicate how *good refereeing* can be re-imagined as a social relational activity intended to organise the game’s evolution, rather than deliberated actions or pre-determined responses to movement infractions (i.e., invariant acts). To this end, traditional conceptualisation of the arbitration role as a perceptual cognitive classification task appears to compress the expertise of referees by assuming decisions are a repetitive, instrumental response to intransigent categorical standards or enduring measurable conditions in an analytic matching task. Instead, our findings imply that decision-making performance may be conceived, measured, and

evaluated as a social relational *behaviour*, where emergent decisions serve a diverse range of psychological, cultural, functional, and socially relevant task priorities. Finally, we present implications for repositioning referee decision-making activity as intertwined with a game's functional cohesiveness (i.e., its stability and structure; Russell et al., 2022).

Re-imagining refereeing as a social relational activity.

For more than twenty years, scientific theorising about referee decision-making activity has generally conceived refereeing as a 'rule-driven decision-making' process until reaching a threshold where 'game management' is required to deal with complex cue processing demands (Raab et al., 2020). Our findings offer a stark contrast to this characterisation, suggesting that referees view foul determinations as an adaptive emergent process (e.g., 'is my foul threshold right? Are they accepting of that level of contact?', R14) dependent on their understanding of unique interpersonal synergies developed with players. Football officiating, therefore, is *always* game management focussed, with decisions actively working to facilitate co-adaptive behaviours (Araújo & Davids, 2016) that direct the game's trajectory towards shared social ends (e.g., avoiding 'a game of free kicks', R1).

These findings advance Cunningham et al.'s (2018) suggestions that 'listening to players' and 'showing players respect' function to emotionally manage players and to develop understanding about game events, beyond simply 'selling the decision'. It extends this work by highlighting how these local decision-making acts are invested in producing global psycho-social game states (e.g., a 'game without delays... an attacking game... an attractive game', R16). These complex overarching game synergies then impact on local decision-making, leading to subtle changes in foul tolerance to manage the game's cohesiveness (e.g., 'you will have [bad] tackles...you have got to rein it back in', R39).

Functional relationships between players, their teammates, and the opposition, should not be

viewed as independent from the referee. Rather, referee decision-making should be conceived as emerging from an ecological system, ‘shap[ing] shared affordances available for [players and teams] viewed as crucial for the assembly of synergies [i.e., influencing game flow, physical intensity]’ (Silva et al., 2013, p. 769). Thus, we theorise that how the game functions, the action-based possibilities for the players, and reciprocally, the referee’s ongoing decision-making scope, can be conceived as an emerging, transactionally-relational process regulated by idealised *social* game outcomes.

Training implications for performance development

Many scholars have argued that technology use is ideal because it can overcome human perceptual limitations associated with interpreting difficult ‘measurable criteria... free from bias’ (Bordner, 2019, p. 4). Our findings suggest this traditional conception of the referee’s decision-making function is misplaced. Rather, refereeing activity may be perceived as a human relationship task, working to initiate ‘subtle changes of action which give rise to multiple and marked variations in opportunities for subsequent actions [for both the players and the referee]’ (Button et al., 2020, p. 70). In this way, our findings indicate that decisions cannot fairly be assessed in isolation, as the function of decisions and even their emergence during the game is to continually shape the emergence of ongoing events and the game characteristics, existentially intertwined with previous decisions, actions by the players, and social desires. Even increasingly realistic simulations, or virtual technological efforts (e.g., VR and 360° video), tend to only reinforce foul observation, limiting the extent that referees can ‘construct their own experience’ (Boyer et al., 2023, p. 9) or contribute to the evolution of gameplay (Russell et al., 2022). Thus, educational implications include a philosophical shift away from focussing on whether a foul is right or wrong, towards context-dependent evaluations of the appropriateness of a decision using four criteria (see Russell et al., 2022): (i) consistency with previous decisions (ii) unique game dependent information (e.g., the

players expectations for contact), (iii) contextual considerations (e.g., game time, location, scoreline), and (iv), the decision's purpose (e.g., to maintain control). Adopting this approach would support referees to evaluate how different decision-making responses (e.g., awarding a yellow card despite the infringement being only minor) can potentially resolve negative shifts in individual and collective game cohesion states (e.g., hostility between players).

Social and practical implications

Where 'VAR [Video Assistant Referee] was supposed to resolve, or at least reduce, such disagreements. Instead, it has generated even more discord' (Malik, 2019, para. 3). Our findings explain that this discord is caused by the imposition of technology which may disrupt the important cooperative role that referee decisions, embodying the Laws of the Game, appear to play in facilitating key social aims (e.g., encouraging uninterrupted play and exciting goals). This pursuit of technical accuracy has entirely changed modern football. For example, the incidence of penalties awarded have increased (Arroyo, 2023) and injury time is dramatically greater ('FIFA World Cup', 2022). Player movements have also changed, with it now commonplace for players to adopt an unstable position by defending with their hands behind their backs to avoid the perception on video review of a deliberate handball. Similarly, subtle but fundamental changes to the Laws of the Game have occurred. For example, in the past it was not uncommon to allow goalkeepers some small movement off the goal line during a penalty kick. Recently, Video Assistant Referee use has moved this interpretation away from a 'cultural process' towards a more 'factual decision [where] the number of centimetres doesn't matter' (Collina, as cited in Warshaw, 2019, para. 9).

The introduction of video technology has challenged an officials' perspective (i.e., their epistemological privilege) on being the sole arbiter on what has occurred during gameplay (Ryall, 2012). Despite this, our findings indicate that referee decision-making

actions do play an integral role in developing shared understanding about game events to maintain social cohesion (e.g., ‘...they are not going to turn around and belt someone because they know you are playing on’, R36). Critically, our data emphasises that the expertise of an official is captured in recognising that, while actions may be superficially similar, the decision the game needs may not always be the same. For example, awarding a free kick to a team in the late stages of a game, when they are behind on the scoreline, may instead assist the offending team by denying their attacking momentum. Yet, when the game’s temperature has risen, the referee may need to ‘hammer all fouls, no advantages... you are trying to regain control’ (Russell et al., 2022, p. 553). Thus, suggestions that VAR offers more objective ‘consistent’ foul interpretations are mislaid. Instead, video review prioritises a narrow idea of consistency to treat superficially similar ‘actions’ equally. Consequently, the intervention of the VAR on game-changing decisions may result in less fair match outcomes, by minimising the significance of on-pitch factors that led to a referee’s decision, disrupting chains of agreement established between players and the referee.

Future work and limitations

We acknowledge that interview work may not capture perceptual information that ‘influence[s] a decision at a non-conscious level, leaving the [referee] with no subjective experience of having their decisions altered’ (Beaven et al., 2019, p. 65). Additionally, transactional processes that shape decision-making priorities (Woods et al., 2024) are not always rationally expressed or consciously perceived by participants. Future research methodologies could include in-game refereeing audio to develop deeper understanding of contextual decision reasoning. Evidence of the game being co-developed provides interesting implications for the use of neutral referees in the most significant contests (e.g., world cups) in terms of how this may hamper optimal game cohesiveness. Further research considering how different expectations from football governing bodies (e.g., encouragement to play

advantage or more attention to certain types of infringements) would provide insight into how referee decision-making contributes to gameplay styles which are unique to specific competitions and cultures.

Conclusions

Misconceptions concerning the task function of the referee continue to shape cultural evaluations of their decision-making choices and also the scientific methods that are adopted to assess their expertise. Using an ecological grounded theory approach, we observed that referee decision-making activity is a social relational process, analytically explained as building rapport and developing common gameplay expectations to optimise conditions of play. These findings highlight how scientific investigations can misinterpret social behaviours, leading to fundamental changes to how football is played, watched, and adjudicated. Future work could also consider the relationships that may exist between high performing teams and the decision-making philosophies of their local refereeing organisations.

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Declaration of interest statement

Nil.

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Appendices

Nil.

Tables

Nil.

Figures.

Figure 1: How exchanges between referees and players define conditions of play

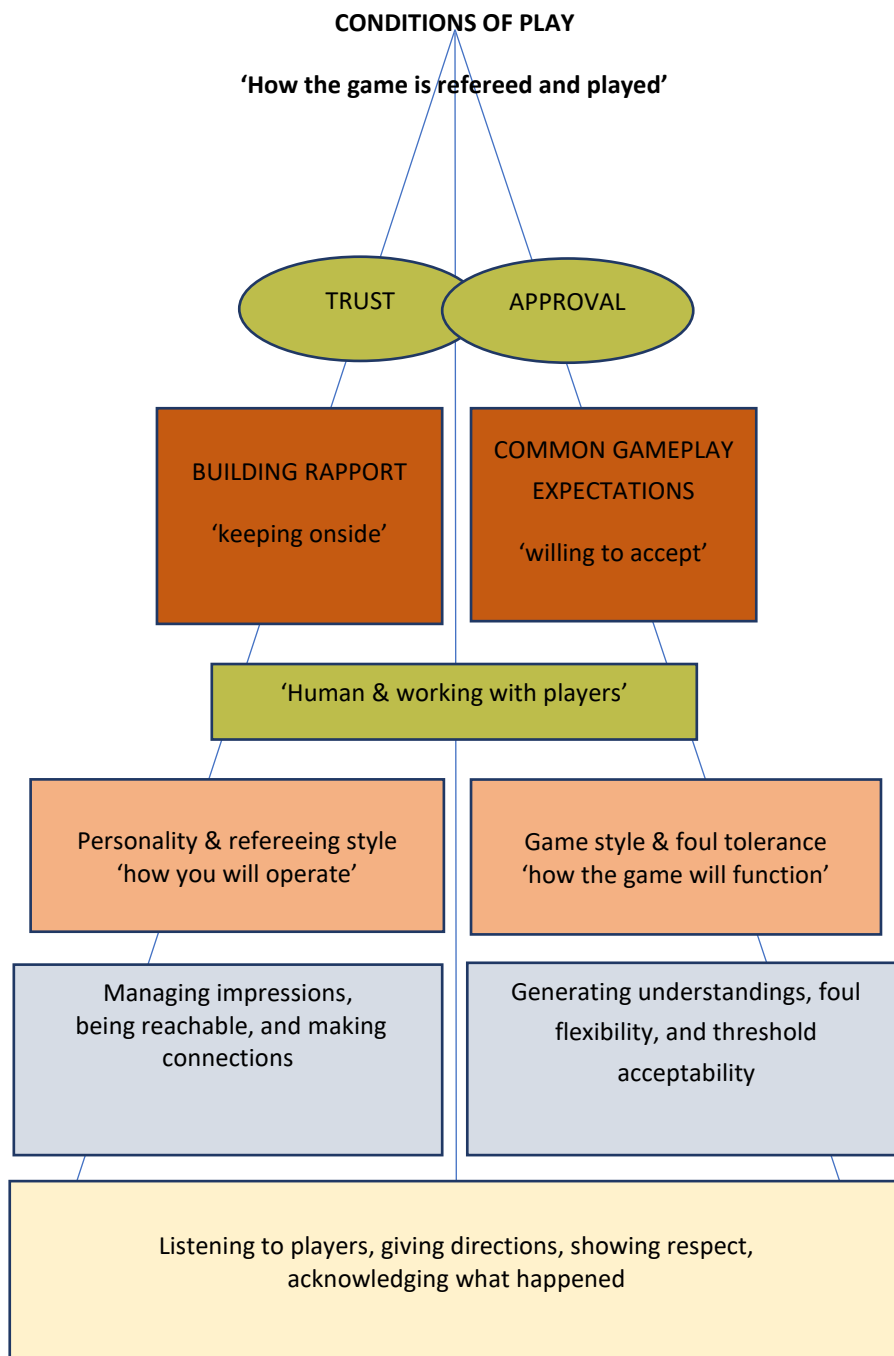


Figure read bottom up. Bottom layer (light yellow) represents initial codes from the analysis. Sub-analytic process (light blue) of ‘generating understandings’ (directly above). These sub-analytic processes achieve decision-making outcomes (orange) pertaining to game’s style and foul tolerance (i.e., how the game will function). Collectively, these *properties* comprise the conceptual priorities of ‘building rapport’ and ‘common gameplay expectations’. Enduring analytic processes (slime green) radiate across all conceptual processes and priorities. This figure is attended as an accompaniment to the running theoretical discussion.