



Sociological Analysis of the Impact of Video Assistant Referee (VAR) on Iranian Football

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ABSTRACT

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The introduction of technology into various areas of social life, including sports and sports competitions, has grown significantly in recent years. One of these technologies is the video assistant referee (VAR) in football matches, and the present study aims to investigate the sociological nature of this technology and its impact on the social structure of Iranian football. This research was conducted with a qualitative approach and using thematic analysis method.

Data were collected through semi-structured interviews with 20 sports experts (including referees, coaches, university professors, veterans and analysts of the Iranian Premier Football League).

The findings showed that VAR makes sense at three levels: from the perspective of technological determinism as a determining force in behavior and decision-making; from the perspective of technological effects as a tool for promoting justice and social control; and from the perspective of social constructionism as a phenomenon whose meanings and functions are redefined in the interactions and lived experiences of actors. On the one hand, this technology has led to a relative enhancement of the sense of justice and increased social trust in referees, but on the other hand, it has brought consequences such as weakening the referee's symbolic authority, reducing collective emotion, transferring the locus of protests from the field to the media, and creating cultural inequality due to differences in infrastructure. Also, institutional distrust and poor media transparency were identified as the main obstacles to the full acceptance of VAR in Iran.

VAR technology in Iranian football has a dual effect: on the one hand, it increases the accuracy of refereeing and the sense of justice, and on the other hand, it causes psychological tensions and changes in social and cultural interactions. The findings of this study can be beneficial for sports policymakers, the Football Federation, and the media in optimizing the implementation of VAR and reducing its negative consequences.

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1. Introduction and Statement of the Problem

Technological developments over recent decades have transformed the landscape of many social and cultural phenomena. Sport—particularly football—is one of the domains in which technology has directly influenced human experience, fairness, excitement, and meaning (Giulianotti, 2015; Cashmore, 2020). Among contemporary technologies, the Video Assistant Referee (VAR) system is arguably the most prominent and controversial example. Although, at first glance, VAR appears to be a technical tool designed to reduce human error and improve refereeing accuracy, it in fact entails complex socio-cultural consequences that challenge the boundaries between technology, humans, and society (Brown & Martins, 2024; König & Holder, 2024; Haugen, 2019). Since the official deployment of VAR at the 2018 World Cup, this technology has become an integral component of global football officiating and has gradually expanded to numerous national contexts (Li et al., 2024; Spitz et al., 2021). In Iran as well, the introduction and implementation of VAR in recent years has constituted a major development in football (Hajipour et al., 1403). Contrary to expectations, however, public reception has not been uniformly positive; rather, it has been marked by a mixture of hope, doubt, and even social resistance (Scanlon et al., 2022). A substantial share of these reactions can be attributed to the distinctive nature of football—an activity that is not merely an athletic contest, but a “social stage” where emotions, identity, power, and justice are publicly enacted. Accordingly, VAR should be understood not simply as a technical innovation, but as a social phenomenon rooted in the cultural and symbolic layers of the sport (Giulianotti, 2015).

At face value, VAR seeks to restore fairness to officiating and reduce human error (Li et al., 2024; Holder et al., 2022). Yet evidence suggests that the technology itself has become a new source of social contestation (Brown & Martins, 2024). In Iran, although the aim of VAR has been to enhance transparency and fairness, disputes persist in practice regarding the legitimacy of decisions, social trust in referees, and culturally grounded understandings of justice (Hajipour et al., 1403). In some instances, even when the video-assisted decision is technically correct, segments of fans and media still interpret it as unjust (Scanlon et al., 2022). This phenomenon

reflects the broader reality that justice in football—like justice in other social arenas—is less a purely technical concept than a cultural and perceptual one. Consequently, technology not only cannot guarantee justice on its own, but may also contribute to the redefinition of justice or even precipitate a crisis in social perceptions of justice (Giulianotti, 2015).

From the perspective of the sociology of sport, football constitutes a dimension of everyday life. It extends beyond entertainment and becomes a space for the expression of collective emotions, the representation of values, and even symbolic protest (Cashmore, 2020). Within such a context, the introduction of technologies such as VAR is not merely a change of tools; it represents a transformation in the cultural logic of football (Brown & Martins, 2024). Iranian football is strongly grounded in collective emotions, unpredictability, and momentary excitement—elements that sociological literature explains through Durkheim’s notion of “collective effervescence” (Giulianotti, 2015). However, by introducing video reviews, repeated interruptions, and image-based decisions, VAR disrupts this live, ritualized experience. As a result, one of the primary sources of football’s social pleasure—namely, shared surprise—may be replaced by technical waiting and a form of machine-mediated judgement. From a cultural standpoint, this transformation is highly significant, as it demonstrates how technology can reshape the emotional and symbolic structure of a social action (Haugen, 2019; Scanlon et al., 2022).

Moreover, VAR has altered power relations and the production of legitimacy in football. Historically, the referee—as a symbol of human authority and the final arbiter of decisions—occupied a central position on the field. Even when mistaken, the referee’s decision enjoyed a form of symbolic legitimacy, because within football discourse the referee represented the “human face of judgement” (Holder et al., 2022). With the introduction of video-assisted officiating, however, this authority has become destabilized. The referee is no longer the sole decision-maker, but rather part of a technological chain in which images, data, and software also play decisive roles (König & Holder, 2024). In other words, decision-making power is partially transferred from the individual to technology. This shift challenges the notion of social trust in football (Hajipour et al., 1403). Referees who once embodied officiating authority are now

exposed to dual scrutiny—from both technology and public opinion. Simultaneously, fans' understandings of justice have become divided between "human decisions" and "technological decisions" (Scanlon et al., 2022; Cashmore, 2020).

Finally, the importance of the present study lies in its attempt to bridge the gap between technical perspectives on sport technologies and their social interpretations. While many domestic and international studies have focused on the statistical effects of VAR on errors, goals, or decisions, relatively few have examined its cultural and social experience—particularly in societies such as Iran, where the social construction of sport is deeply intertwined with cultural, emotional, and identity-based contexts. This study seeks to understand how Iranian actors engage with technology within a highly emotional, collective, and symbolic arena such as football—an arena in which technology is not merely an instrument of judgement, but also an object of social judgement.

2. Research Background (Literature Review)

Relatively few studies have examined the video assistant referee in football; most of the existing research has focused on the impact of this technology on improving referees' decision-making accuracy. Holder et al. (2022) showed that VAR generally influences referees' decisions, such that prior to the introduction of VAR, home teams tended to benefit in relation to penalty awards, red cards, and similar outcomes. The findings of Spitz et al. (2021) indicated that VAR intervention increased officiating accuracy, with correct decisions improving from 92.1% (initial on-field decisions) to 98.3% (final decisions after VAR review).

Zhiliang et al. (2021), examining 240 matches in the Chinese Super League in 2019, reported that the use of VAR improved the accuracy of penalty-related decisions, helped ensure fairness and justice in matches, and enhanced the league's development programs. They also suggested that the technology improved trust between referees and players and increased referees' confidence in enforcing the laws of the game.

Similar results in other studies Büyükcèlebi et al. (2022) and Gürler and Polat (2021) have likewise emphasized the positive effects of VAR on fairness in football. Nevertheless, some scholars have highlighted negative consequences associated with VAR. For example, Haugen (2019), while acknowledging VAR's role in improving decision-making accuracy, argued that this technology reduces football's attractiveness and may jeopardize the sport's future. Carlos et al. (2019) also reported that although VAR reduced offsides, fouls, and yellow cards, it increased the overall duration of matches. In a related study, Held (2023) found that VAR has transformed football by enabling referees to review on-field incidents, make informed decisions, and enhance fairness; however, due to shortages of referees in many countries and the high cost of VAR infrastructure, only professional leagues are able to benefit from it. The findings of Radzuwan (2024) similarly suggested that fans—especially younger supporters—tend to have a more positive view of this technology, largely due to its technological character.

Within Iranian research, Zare Abandansari et al. (2021), using a qualitative analysis of factors related to VAR implementation in Iran's Premier League, reported that their proposed model included: (a) causal conditions (weak refereeing, growth and improvement in event quality, and opportunities to enhance productivity in football), (b) implementation strategies (educational, cultural, managerial, structural, promotional, financial, operational, and supportive development), (c) intervening factors (economic, managerial, legal, structural, cognitive, organizational, operational, media-related, and social factors), (d) contextual factors (specialized human resources, support and interactions, modeling, motivation, and football-related controversies), and (e) positive outcomes (referee development, improvement in event quality, and enhanced productivity of the football federation). Hajipour et al. (1403) found that the most important drivers of deploying VAR in Iran's Premier League—ranked by impact—include increasing the quantity and quality of filming cameras, standardizing stadiums, equipping stadiums and specifying equipment placement, and adopting the latest technologies. Hajipour et al. (1402) also concluded that attitudinal, managerial, and media factors significantly influenced the use of VAR in the development of professional football in Iran. They proposed strategies shaped by

contextual conditions (infrastructure and culture) as well as intervening conditions (human, equipment-related, legal, and economic factors).

3. Conceptual and Theoretical Framework

From a theoretical perspective, this phenomenon can be examined through three sociological lenses. The first is technological determinism, which views technology as an independent and decisive force shaping social change (Giulianotti, 2015; Li et al., 2024). According to this view, technologies impose a particular trajectory of change and society responds largely passively. Within this framework, the introduction of VAR into Iranian football can be interpreted as a form of “technological imperative” that transforms individual and group interactions both on the field and beyond it (Hajipour et al., 1403). Players, coaches, and referees are compelled to adapt their behaviors to a new officiating logic, even if cultural readiness for full acceptance has not yet been achieved.

The second approach is the technology effects perspective, which focuses on the social and cultural consequences of technologies (Brown & Martins, 2024; Büyükcèlebi et al., 2022). In this view, technologies are not merely technical instruments; they are forces that reshape social order, communication patterns, and collective perceptions (Holder et al., 2022; Nasiri & Khadem-Hosseini, 1402). As a media-related technology, VAR has changed interactions among players, referees, spectators, and the media, producing outcomes such as increased or decreased trust, shifts in collective excitement, and transformations in the legitimacy of officiating. In Iran’s cultural context—where football officiating has long been a socially sensitive issue—the introduction of VAR has not necessarily reduced this sensitivity; rather, it has relocated it to a new level. Even technological errors can now become sources of public dissatisfaction.

The third theoretical approach is social constructionism, which—unlike the previous two perspectives—emphasizes the active role of human actors in producing meanings around technology (Giulianotti, 2015; Cashmore, 2020). From this standpoint, technologies are not inherently neutral; their meanings and functions are constructed through social interaction.

People, referees, and players attribute meaning to technology through interpretation, dialogue, experience, and media discourse. Accordingly, VAR in Iranian football is not merely an officiating tool, but a cultural phenomenon that is reproduced within media conversations, collective beliefs, and the lived experiences of football actors (Scanlon et al., 2022; Brown & Martins, 2024).

Based on these three approaches, the study formulates three research questions:

1. What pressures and forms of compulsion does the use of VAR in football matches generate within individual and group interactions?
2. From the second perspective, what social effects has VAR produced in social interactions and within football sporting arenas?
3. Finally, how has the expansion of VAR technology influenced the cultural and social reproduction of sporting competitions?

These questions map the trajectory of the study from structural dynamics to cultural processes, indicating that analyzing VAR is not merely an examination of a technical tool, but an inquiry into the relationship between technology and culture in contemporary Iran. In effect, Iranian football functions as a “social laboratory” for observing how global technologies become localized within an emotional and culturally specific context. A sociological analysis of VAR in this setting can demonstrate how global technologies are redefined when encountering local contexts—and how meaning, legitimacy, and justice may be transformed through cultural engagement with technology (Giulianotti, 2015; Hajipour et al., 1403).

4. Research Methodology

This study was conducted to provide a sociological analysis of Video Assistant Referee (VAR) technology in Iranian football. The central focus of the research was to develop a socio-cultural understanding of this technology through three theoretical lenses: technological determinism, the social impacts of technology, and social constructionism. Accordingly, the researchers sought to achieve an in-depth understanding of how VAR has influenced Iranian football and its socio-

cultural dimensions by examining the lived experiences and cultural interpretations of key actors in Iranian football.

In terms of purpose, the study is applied-exploratory, and in terms of methodological orientation it is qualitative, employing an interpretive approach. The nature of the phenomenon under investigation required a method capable of capturing social experiences, cultural meanings, and individuals' internal attitudes toward this technology. Therefore, the data were analyzed using thematic analysis. Data analysis was carried out in accordance with the six-phase framework proposed by Braun and Clarke (2006), including: familiarization with the data, generating initial codes, searching for themes, reviewing themes, defining and naming themes, and producing the final report. To enhance the credibility and trustworthiness of the findings, strategies such as member checking, expert review, and data triangulation were employed, which contributed to greater comprehensiveness and diversity in the data.

The study population consisted of individuals who, at a professional and/or academic level, were engaged with VAR technology in Iranian football or possessed specialized knowledge of it. Participants were selected from five main groups to reflect multi-dimensional viewpoints and the diversity of experiences within Iranian football. Purposive sampling was applied, and based on criteria such as experience in professional football, familiarity with VAR technology, and the ability to provide a socio-analytical account of the introduction of this technology into Iranian football, 20 key informants were interviewed. The composition of the participants is presented in Table 1.

Table 1. Composition and Characteristics of Participant Groups in the Study

Group	Number	Codes
Football Veterans	4	E01, E11, E13, E19
Football Referees	4	E03, E08, E16, E18
Football Coaches	4	E04, E06, E10, E12
University Expert Scholars	4	E05, E14, E17, E20
Football Analysts	4	E02, E07, E09, E15

5. Findings

5.1. Technological Determinism and VAR-Induced Structural Pressures

The interview data indicated that the introduction of the Video Assistant Referee (VAR) system into Iranian football was not merely a technical modification in officiating; rather, it brought about a profound transformation in interactional structures, decision-making processes, and the social order of the football field. Two interrelated levels of impact emerged from the qualitative data: the individual level (players, referees, and coaches as direct actors) and the collective/institutional level (teams, the federation, the media, and inter-institutional relations).

At both levels, VAR was experienced as a form of technological compulsion—a force that redefines behaviours, decisions, and interactions within the framework of technical protocols and digital oversight. On this basis, six major themes were derived from the interviews. Collectively, these themes capture the broader notion of technological determinism in football, illustrating how the logic of technological review increasingly shapes the conduct, tempo, authority relations, and accountability mechanisms of the game.

Theme 1: Suspension and Decision Uncertainty

One of the most prominent themes was a shared sense of stoppage and uncertainty in the decision-making process. Participants reported that after contentious incidents, the match effectively becomes “frozen,” and until the VAR room communicates its judgement, both play and collective emotions remain suspended. In this suspended state, players struggle to celebrate, coaches hesitate to react decisively, and referees perceive a diminished capacity for immediate on-field response.

This technologically induced pause was frequently described as producing an emotional and psychological rupture, thereby altering the traditional dynamism of football. Several interviewees emphasised that the flow of the match is no longer continuous; instead, it is repeatedly interrupted and held in abeyance by the possibility of video review. As many referees and players expressed, *“football is no longer a game of the moment; it has become a decision that must be ratified by technology.”*

A national team coach explained this uncertainty as follows: “*A team may score, but our celebration remains incomplete because we do not know whether we should be happy or wait for the VAR room’s decision. This uncertainty disrupts the psychological interaction between the players and the coaching staff.*” Such accounts suggest that VAR not only affects technical outcomes, but also reshapes the affective rhythm through which football is collectively experienced.

Theme 2: Caution and Reduced Spontaneity

The findings further indicated that VAR has fostered a new culture of behavioural caution among both players and referees. Players, aware that every action may be reviewed from multiple camera angles, increasingly monitor and restrain their emotional expressions. Goal celebrations, protests, and even the intensity and form of physical challenges were described as occurring under the shadow of an “invisible eye,” whereby conduct is continuously rendered auditable and revisitable.

At the refereeing level, awareness that decisions can be corrected—or publicly contested—through the video system appeared to weaken confidence in instantaneous judgement in some situations. Consequently, referees may delay decisions or await confirmation, contributing to interruptions in match flow and a reduction in individual autonomy. As one coach noted, “*VAR has turned football from a reactive game into a calculated one.*”

A national team coach similarly reflected on the experiential shift: “*The first time we played an official match with VAR, the feeling of ‘being in the moment’ was gone. Now we train players to control their bodies in ways that will not be interpreted as a foul in VAR. Even goal celebrations have changed because an incident might be overturned.*” These narratives suggest that VAR extends its influence beyond decisions themselves, shaping embodied conduct and spontaneous emotional expression.

Theme 3: Reconfiguration of the Referee’s Authority

Interview analysis showed that VAR has conceptually transformed the traditional authority of the referee. Whereas the on-field referee was previously viewed as the ultimate source of decision-making, the referee is now positioned within a broader human–machine decision-making chain.

At the individual level, referees reported that their independence and symbolic authority have diminished, as their calls are subject to continuous technological scrutiny. At the collective/institutional level, a form of networked authority has emerged, in which the final decision is produced through the interaction of the on-field referee, the VAR room, and the federation's technical protocols. This shift effectively transforms power in football from personal authority to systemic authority. As one participant observed, "*the referee has been transformed from a judge into an executor of technology.*"

A university scholar in sport studies summarised this transformation by stating: "*In the past, the on-field referee was the commander and decision-maker; today, the outcome is produced by a coordinated network of human referees and technology.*"

Theme 4: Media Pressure and Public Accountability

In the media-saturated context of Iranian football, VAR was seen as simultaneously increasing transparency and intensifying public accountability. Video replays are rapidly circulated on social media, and decisions are placed under immediate scrutiny by fans, commentators, and pundits.

At the individual level, this environment was described as generating self-censorship and fear of public judgement among players and referees. At the collective/institutional level, the media has emerged as a powerful actor within the officiating field. Through live commentary, repeated replays, and instant "frame-by-frame" analysis, media outlets exert substantial pressure on refereeing bodies and the federation. Under such conditions, football is increasingly transformed from a sporting event into a media-driven public spectacle.

As one media analyst put it: "*Every action can be captured in a single video frame and published online. Football is no longer merely a sport; it is a media product.*" Another noted: "*Once a decision is made via VAR, it immediately enters social media. This creates a hidden form of compulsion—compulsion to react, to explain, and to manage public opinion.*"

Theme 5: Legal and Managerial Challenges

The data also demonstrated that VAR has affected the managerial and legal structures of Iranian football. Ambiguity regarding the locus of authority in contentious situations—whether it resides

with the on-field referee, the VAR room, or the federation—was frequently reported as intensifying tensions and dissatisfaction.

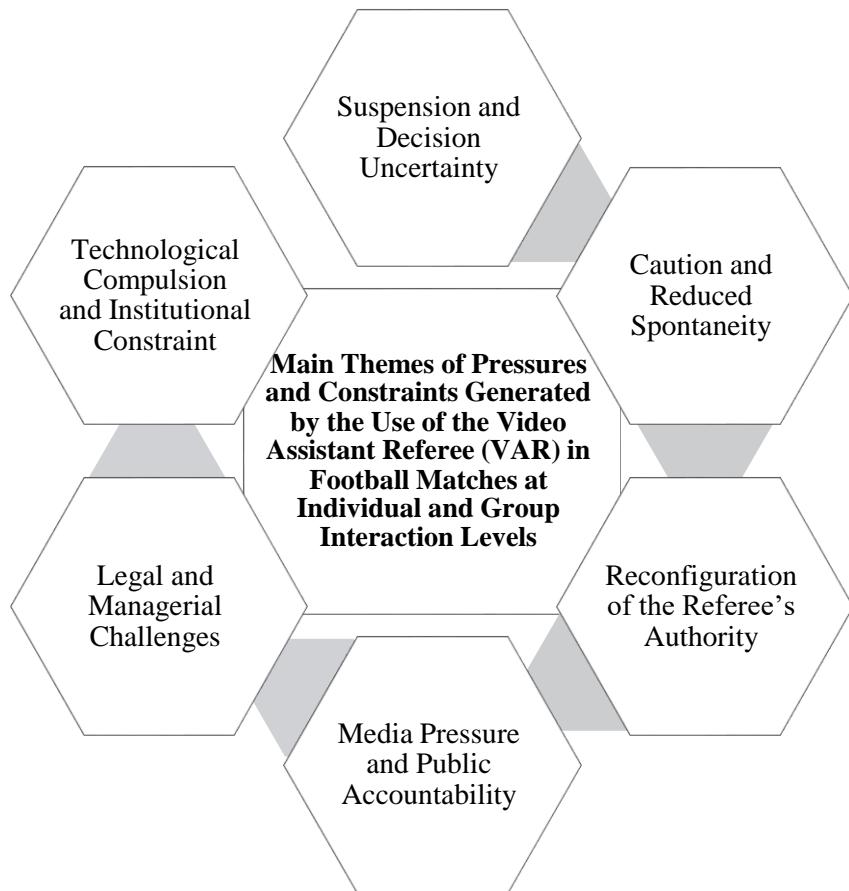
Coaches and club managers repeatedly pointed out that, in cases of systemic or technological error, no clear and effective pathway for lodging formal protests exists. Consequently, rather than simply reducing controversy, VAR introduces new institutional complexities that call for revising legal frameworks and strengthening communication structures among the federation, the referees' committee, and football clubs.

A sport law expert highlighted this ambiguity: “*Many clubs do not know whom they should file a complaint against if the VAR system makes a mistake—the referee, the VAR room, or the federation itself?*” Likewise, a university professor argued that due to multi-layered decision-making and the weakening of a single authoritative reference point, “*the referee is no longer the final supervisor, but a mediator between the pitch and a decision-making system outside the field.*”

Theme 6: Technological Compulsion and Institutional Constraint

Finally, the analysis indicated that VAR has generated a broader form of technological compulsion in Iranian football. Players, referees, and coaches are compelled to adjust their decisions, behaviours, and even emotional expressions in accordance with system-imposed constraints. Technology thus functions not only as an officiating aid, but also as a determining force shaping the social order of the football field.

At the individual level, this results in heightened—and often enforced—self-monitoring of conduct. At the collective/institutional level, it contributes to the emergence of a technologically mediated system of coordination and control among referees, the federation, and the media. A university scholar described this dynamic as follows: “*A form of technological compulsion has emerged in individual interactions—this is precisely technological determinism.*” In a similar vein, an elite referee and international refereeing instructor noted: “*Iranian referees must cope with technological pressure and constantly wait for the VAR room's 'confirmation.'*”

Figure 1. Thematic Map of Themes Related to Technological Determinism in Iranian Football

The set of six identified themes indicates that the introduction of VAR into Iranian football constitutes a salient manifestation of the phenomenon of “technological dominance over social behavior.” On the one hand, by enhancing officiating accuracy and perceived fairness, this technology has taken a step toward the professionalization of football. On the other hand, through technology-driven constraints, it has weakened human authority, spontaneity, and the emotional continuity of the game. In effect, Iranian football’s encounter with VAR has ushered the sport into a phase of “forced modernization,” in which decisions, emotions, and human interactions are redefined under the logic of the system.

5.2. Social Effects of Technology and the Redefinition of Justice, Excitement, and Human Communication

Analysis of the interview data indicated that the use of the Video Assistant Referee (VAR) in Iranian football has transformed not only officiating mechanisms, but also the communicative, cultural, and emotional patterns of the sport. In this dimension, technology operates as a social phenomenon that reconfigures human relations, perceived justice, and communicative order. Six core themes were derived from the qualitative data, each reflecting a distinct aspect of the cultural and social transformations generated by VAR in Iranian football. Taken together, these themes suggest that Iranian football is transitioning from an emotional, tradition-based logic of officiating toward a more rational, documented, and technology-driven one—a transition that, while enhancing transparency, comes at the cost of reduced collective excitement and a reconfiguration of social authority.

Theme 1: Redefining Social Justice

The findings suggest that the introduction of VAR has elevated the concept of justice in football from the realm of emotional and situational perceptions to a documented and reviewable process. In the past, justice was largely tied to human officiating and the referee's individual interpretation, whereas "truth" is now increasingly derived through images, data, and technical protocols. This transparency appears to have strengthened public trust in decision-making, and many interviewees noted that "*when the decision-making process is visible, even an unfavourable decision becomes more acceptable.*"

At the same time, this transparency has reshaped expectations: spectators no longer settle for relative justice but increasingly demand absolute justice. Any perceived error—even one attributable to camera angles or poor broadcast quality—can rapidly become a social and media controversy. Justice in the VAR era therefore has two faces: on the one hand, trust-building through transparency; on the other, heightened sensitivity and intensified expectations of error-free

decisions. Managing this duality requires strengthening media literacy and promoting public education about officiating in order to narrow the gap between perceived justice and actual justice. As an experienced referee explained: *“In the past, the referee was always under suspicion. Now, with replays, the spectator judges for themselves. When a disputed penalty is reviewed through the cameras, a form of transparency emerges. People feel a fairer decision has been made—this is social trust-building through football.”*

Theme 2: Diminished Collective Excitement and Team Celebrations

The data indicated that VAR, in exchange for increased transparency, has sacrificed part of football’s emotional capital. Spontaneous goal celebrations, collective shouting, and the explosive emotions of fans have increasingly been replaced by silence, waiting, and suspension. Participants described a phenomenon that may be termed “suspended excitement”—a pause that disrupts the stadium’s emotional rhythm and weakens the crowd’s shared affective synchrony.

From the sociology of emotions perspective, football is among the few arenas that routinely reproduces collective effervescence; yet the presence of VAR appears to attenuate this experience. At the team level, delays in communicating review outcomes can cause short-term disruptions in behavioural coordination between players and coaches. As one coach stated: *“We score, but we don’t know whether to celebrate or not. Everyone waits to see what the VAR referee says.”* Although such emotional suspension may be manageable, it calls for psychological–tactical preparation and the strengthening of collective emotional literacy so that teams and spectators can adapt more effectively to the new conditions.

A former football veteran also noted: *“With every goal, everyone first has to wait to see whether it will be confirmed or not. That means we have taken that moment of passion and excitement away from the spectators.”*

Theme 3: Changing the Social Position of the Referee

A major social consequence of VAR is the transformation of the referee’s role and status. The referee’s authority has shifted from face-to-face, individual authority to networked authority.

Referees are now embedded within a technology-based decision-making system in which the VAR room, replay technologies, and technical guidelines play decisive roles.

This shift has two key implications. First, it can reduce personal pressure on referees in the public eye, as they are no longer viewed as solely responsible for the final decision but rather as representatives of a collective process. Second, it symbolically weakens on-field authority, because decision legitimacy increasingly depends on the system. To prevent the erosion of refereeing's social capital, it is essential to strengthen referees' communication and explanatory skills so that they can perform their emerging role as "managers of the decision-making process" while maintaining professional standing.

As a former national-team football veteran remarked: *"And now what? The referee has become a mediator between the pitch and the monitor! When a decision is made, players immediately look to see whether it's really the referee's call or something coming from the room behind—that signals distrust in human authority."*

Theme 4: Media Influence and Public Representation

In the VAR era, the media have become central actors in producing meaning and shaping social judgement. The new technology has facilitated a shift from predominantly emotional narratives to more analytical and evidence-based accounts. Whereas the referee once stood at the centre of the narrative, decisions are now represented through a network of images, camera angles, replays, and expert interpretations.

However, this transition is ambivalent. On the one hand, it has raised the level of public discussion and technical awareness among spectators; on the other, it has expanded the arena of social judgement, turning virtually every refereeing decision into a media event. In online spaces in particular, this has contributed to polarisation: some view VAR as a symbol of justice and progress, while others interpret it as a cold, impersonal intervention or even a potential tool of manipulation. For this reason, participants emphasised media responsibility and the promotion of "refereeing literacy" to prevent the escalation of distrust.

As one football media analyst stated: “*Football is no longer merely a sporting game; it is a media product—regulated by technology and reproduced by the media.*” Another analyst similarly argued: “*VAR is not only an officiating tool; it is a communicative and media subject. It doesn’t matter whether the decision is right or wrong—what matters is how it is ‘represented.’*”

Theme 5: Changing Patterns of Communication and Human Interaction

VAR has profoundly altered traditional patterns of communication in football. Previously, interactions among referees, players, and coaches were grounded in body language, direct conversation, and intersubjective cues. Under the new system, these relationships have become increasingly protocol-driven and mediated. The new interactional sequence may be summarised as: incident → suspension → review → announcement. Although this process is more orderly and documented, it reduces certain elements of warmth and flexibility in human communication. In the short term, this transformation introduces greater formality and emotional distance into interactions. In the long term, however, if accompanied by clear communication protocols and appropriate training, it may foster communicative order and reduce verbal and physical tensions. Most interviewees recommended training in body language, appropriate ways of requesting reviews, and the timing and manner of announcing decisions so that human interaction can be preserved within the technological framework.

As an experienced referee noted: “*We are moving from a traditional social model of interaction toward a technological, mediated model—one in which human communication is reduced and the role of technology becomes stronger.*” Likewise, a national-team coach and former CEO in Iranian football stated: “*Before VAR, when the technical staff protested, the referee would explain. But now everything depends on a moment of suspension. This has made human interactions much colder.*”

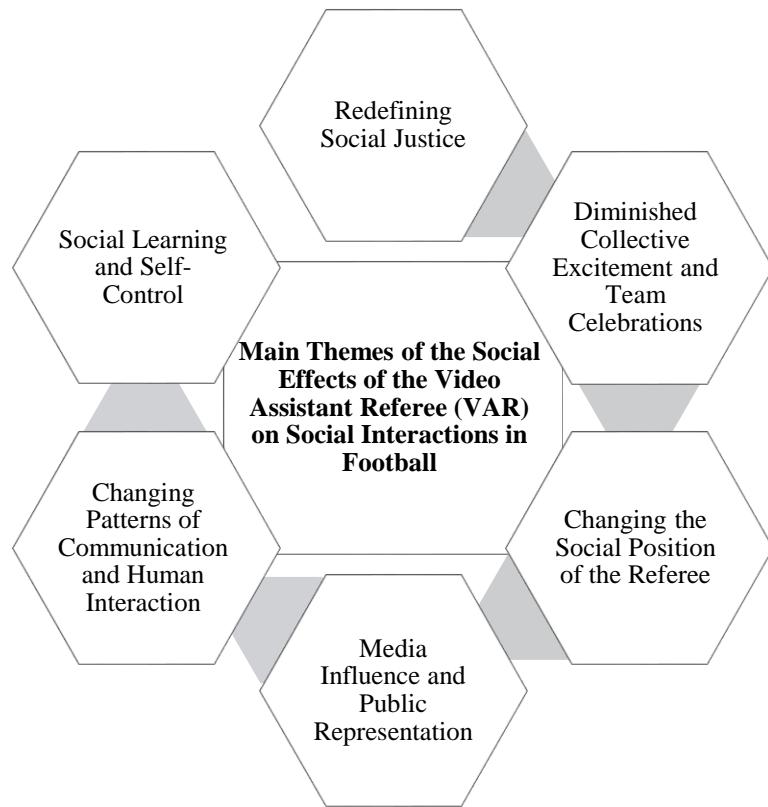
Theme 6: Social Learning and Self-Control

One of the indirect yet profound effects of VAR is the emergence of a form of implicit social learning in Iranian football. In practice, this technology promotes values such as patience,

respect for decision-making procedures, and acceptance of evidence-based officiating. In stadiums, silence and waiting during reviews have become a cultural pattern; on the pitch, players have learned to demonstrate greater self-restraint in both movement and speech; and at managerial and media levels, a new model of responsibility and precision in commentary appears to be developing.

At the same time, interviewees warned that without systematic education and sustained public awareness efforts, these patterns may produce misconceptions about absolute justice or lead to renewed distrust of technology. For this reason, they recommended strengthening media and cultural literacy around football through short training programmes, stadium messaging, and targeted media content.

According to a football analyst in media and communications, “*VAR has, in a way, contributed to civic education. It has taught people that they should wait, accept the final decision, and refrain from making unfounded protests.*” Likewise, a university professor argued that “*VAR carries meanings of precise justice and transparency; it introduces a data-driven language and mindset into public culture and the younger generation.*”

Figure 2. Thematic Map of the Social Effects Dimension of VAR Technology in Iranian Football

The findings of this section indicate that VAR technology in Iranian football goes far beyond being a mere technical tool and has initiated a process of cultural reconfiguration of justice and social communication. Justice has shifted from a subjective and emotion-based notion to a documented and technology-mediated one; however, this transformation has also affected the emotional and human capital of football. In effect, the Iranian football community is experiencing a form of cultural transition: from emotion to rationality, from individual judgement to systemic judgement, and from unmediated excitement to social control. The key challenge for the future is to strike a balance between technological transparency and the social dynamism of football—a balance that will not be easily achieved without systematic education, effective communication, and the active management of collective expectations.

5.3. Social Constructivism and the Cultural–Social Reproduction of VAR in Iranian Football

Interview analysis suggests that the principal consequences of the expansion of VAR in Iranian football are not merely technical, but fundamentally cultural and social in nature. Over time, language, values, behavioural norms, communication patterns, and institutional roles are being redefined and reproduced through everyday interactions among football stakeholders. Two key drivers underpin this process: (1) social learning and self-control, through which new norms—such as patience and acceptance of evidence-based decisions—are gradually constructed; and (2) the strengthening of the media and public opinion, which generates new vocabularies and narratives around “refereeing truth.”

At the institutional level, participants further emphasised that the transfer of decision-making power to a collective human–machine system, coupled with increased managerial pressure, can—when clear rules and equitable infrastructure are lacking—produce an expectation gap and perceptual crises among stakeholders. In other words, the social meaning of VAR is not fixed; it is continuously shaped through interpretation, contestation, and mediation across the football field, clubs, media platforms, and governing bodies.

Theme 1: Changing Interactions Between Referees and Technical Staff

Participants reported that VAR has transformed the traditional hierarchical model of officiating into a networked human–machine model, in which the on-field referee, assistant referees, and the VAR room operate within a coordinated chain. This shift was associated with three main outcomes:

1. Process transparency, including the standardisation of communication within the officiating team and the possibility of documenting decisions;
2. Formalisation of relations with technical staff, reflected in a reduction of spontaneous, on-the-spot dialogue and increased reliance on formal protocols; and

3. A risk of emotional distancing in human interactions, including reduced warmth and flexibility in face-to-face relations.

Taken together, these dynamics indicate a practical role transformation of the referee—from an “authoritative judge” to a process manager—a role that requires new communicative and explanatory skills.

As a national-team coach with training in sport psychology explained: “*The interaction among members of the officiating team has changed as well. The on-field referee is no longer the sole decision-maker; they have to communicate with the VAR team. A kind of culture of consultation and re-checking has emerged.*” In a similar vein, a university professor in sport studies observed: “*With the introduction of VAR, human relationships have shifted toward relationships grounded in law and image; a referee who once could manage the game through verbal authority must now refer back to protocol and footage.*”

Theme 2: Tactical Uncertainty for Coaches and Players

Interviewees indicated that the suspension moments created by VAR reviews reshape the rhythm of tactical decision-making, producing:

- Disruptions in collective celebrations and declines in emotional synchrony;
- Pauses in substitutions and tactical rearrangements, sometimes resulting in the loss of time-sensitive opportunities; and
- Short-term drops in concentration among some players as attention becomes fixed on the review process.

Participants noted that the intensity of this tactical uncertainty is greater in leagues where communication protocols are inconsistent or unclear. Consequently, psychological–tactical preparation aimed at managing “periods of suspension” was widely described as essential.

As one national-team coach remarked: “*A team may score, but our celebration remains incomplete because we don't know whether we should be happy or wait for the VAR room's announcement.*” Another national-team coach with a background in sport psychology added:

“Today, an artificial pause has been created between behaviour and outcome. At the individual level, the player no longer has complete freedom in moment-to-moment decision-making.”

Theme 3: Increased Managerial Pressure on Clubs

The data further showed that VAR has rendered clubs' accountability structures increasingly multi-layered, requiring managers to:

- Respond internally to players and staff regarding contentious decisions;
- Manage public opinion and media dynamics in order to mitigate waves of protest; and
- Pursue legal and administrative procedures related to complaints concerning officiating and the VAR system.

As a result, club managers increasingly function as multi-level intermediaries between the team, supporters, the media, and the federation—thereby heightening the need for standardised media and legal protocols.

A national-team coach and former CEO in Iranian football described this pressure as follows:

“Sometimes we even have to answer to supporters who ask why the club didn’t follow up, didn’t protest, or didn’t issue a statement. This is multi-layered pressure—technical, media-related, and psychological. In practice, we managers have become intermediaries between all these actors and the new officiating structure.” Similarly, a football analyst in media and communications stated: *“This means the player, coach, referee, and even the club manager are under public pressure from that very moment. This creates a hidden form of compulsion—compulsion to react, to explain, and to manage public opinion.”*

Theme 4: Strengthening the Role of the Media and Public Opinion

Participants emphasised that football has become more media-centred than ever in the VAR era.

Key developments include:

- A shift from primarily emotional narratives to more evidence-based, video-centred analysis;
- The expansion of collective judgement through social networks and rapid waves of online reaction; and

- The emergence of a perceptual dichotomy: for some, VAR symbolises justice and progress, whereas for others it appears as a cold, impersonal intervention or even a potentially manipulable tool.

Accordingly, interviewees argued that the tone and professional standards of media commentary now play a decisive role in shaping the social acceptance of VAR and in either reducing or exacerbating perceptual gaps.

A football analyst and sport CEO noted: *“From a managerial perspective, every mistake or every pause immediately becomes a media crisis. One positive outcome is that the media space has become cleaner and more specialised, because the referee is less readily portrayed as the sole culprit.”* Another media analyst stated: *“In online spaces, reactions are highly polarised: one group sees VAR as a sign of progress, while another group treats it as a way to justify mistakes or even as a tool for ‘manipulating results.’”*

Theme 5: Transferring Decision-Making Power to a Collective System

Interview data indicated that refereeing authority has shifted from the individual to a collective human–machine process, characterised by:

- Reduced personal pressure on the on-field referee, alongside increased expectations of technological perfection;
- A shift in the referee’s role toward facilitating and coordinating the decision-making process; and
- The need for new skills to manage moments of suspension, ensure transparency, and communicate effectively with the public.

Participants repeatedly warned that without clear rules and equal infrastructural conditions, this transfer of power may intensify expectation gaps and produce crises of trust.

As a football analyst and sport CEO explained: *“This reflects a transfer of decision-making power from one person (the referee) to a collective system (referee + technology).”* Likewise, an elite referee and international refereeing instructor observed: *“Some referees constantly wait for the VAR room’s ‘confirmation.’ We call this a transfer of decision-making power.”* A senior

national-level referee added: “*Now the pressure has been distributed—between the on-field referee and the behind-the-scenes team. A correct judgement is the product of a coordinated decision-making network of human referees and technology.*”

Theme 6: Cultural and Educational Challenges

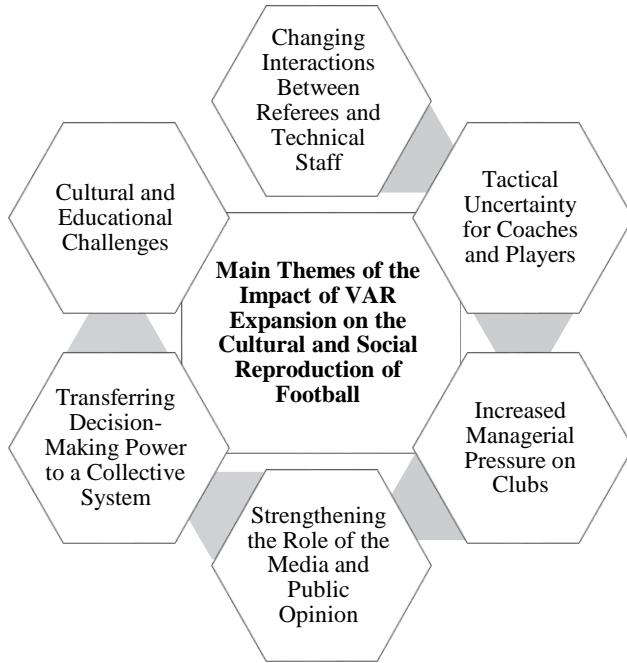
Finally, the prominence of the theme of cultural and educational challenges indicates that the core dynamics of VAR reproduction are essentially cultural. Key challenges include:

- Insufficient technological literacy and refereeing-related media literacy among segments of coaches, players, and supporters;
- Cultural resistance to replacing purely human officiating with a documented, technology-mediated process; and
- The need for structured education spanning football academies, television programmes, and in-stadium messaging.

Participants argued that until such education and culture-building become widespread, the risk of misinterpreting emerging norms—such as unrealistic expectations of absolute justice and the stigmatisation of technology—will remain.

A university professor emphasised: “*VAR carries meanings of precise justice and transparency; it introduces a data-driven language and mindset into public culture and the younger generation.*” A football veteran similarly stated: “*Documented justice has been strengthened, but we also need to teach a culture of accepting technological error, so that expectations of perfection do not produce distrust.*”

Figure 3. Thematic Map of the Social Constructivism Dimension of VAR Technology in Iranian Football



The findings of this study indicate that the cultural–social reproduction of VAR in Iran is shaped by the interaction of three key components: social learning (the formation of norms such as patience and acceptance), the media (the creation of a documented, evidence-based language and narrative), and institutions (the establishment of transparent rules and equitable, standardized infrastructure). Through this transition:

- Human interactions between referees and technical teams have shifted toward a networked, protocol-driven process;
- Tactical dynamics and emotional momentum are increasingly required to adapt to moments of “procedural suspension”;
- Clubs, under new managerial pressures, increasingly function as intermediaries for maintaining public trust;
- The media, through the standardisation of analytical practices, can generate new cultural capital for evidence-based justice; and
- Refereeing authority is redefined within the broader authority of the collective system.

The equilibrium point in this reproductive process depends on aligning three pillars:

1. Comprehensive education on roles and refereeing—media literacy;
2. Transparent and uniform rules and protocols across refereeing bodies, the federation, and clubs; and
3. Media responsibility in communicating the limitations and capacities of the technology.

Table 2. Summary of the Main Themes, Subthemes, and Theoretical Dimensions of the Study

Theoretical Dimension	Main Themes	Sub-Themes / Key Points
Technological Determinism	1. Suspension and Decision Uncertainty	Decision-making delays; reduced emotional continuity; psychological uncertainty among players and referees
	2. Caution and Reduced Spontaneity	Behavioural self-restraint; diminished natural excitement; increased performance anxiety
	3. Reconfiguration of the Referee's Authority	Shift from individual to system-based authority; reduced decision-making autonomy
	4. Media Pressure and Public Accountability	Increased self-censorship; expanded media scrutiny; heightened public accountability
	5. Legal and Managerial Challenges	Ambiguity in decision authority; rise in complaints and institutional tensions
	6. Technological Compulsion and Institutional Constraint	Forced alignment with system logic; changing structures of power and social trust
Social Effects of Technology	1. Redefining Social Justice	Shift from emotional to evidence-based justice; increased trust coupled with expectations of error-free accuracy
	2. Diminished Collective Excitement and Team Celebrations	Suspended celebrations; weakened emotional synchrony; altered rhythm of collective excitement
	3. Changing the Social Position of the Referee	Transition from authoritative judge to process manager; reduced personal pressure; weakened symbolic legitimacy
	4. Media Influence and Public Representation	Shift from emotional to analytical narratives; perceptual polarization; importance of media literacy
	5. Changing Patterns of Communication and Human Interaction	Shift from direct to mediated interactions; increased formality; need for communication protocols
	6. Social Learning and Self-Control	Institutionalization of patience and process-respect; emotional and verbal self-regulation across roles
Social Constructivism	1. Changing Interactions Between Referees and Technical Staff	Emergence of a human-machine network; formalized communication; reduced interpersonal warmth
	2. Tactical Uncertainty for Coaches and Players	Suspension in tactical decisions; loss of timing opportunities; decreased concentration; need for psycho-tactical training
	3. Increased Managerial Pressure on Clubs	Multilevel accountability; managing fans and media; navigating legal processes
	4. Strengthening the Role of Media and Public Opinion	Production of documented narratives; expanded social judgment; dual perceptions of technology
	5. Transferring Decision-Making Power to the Collective System	Shift from individual to collective authority; increased expectation of technological perfection
	6. Cultural and Educational Challenges	Lack of media-refereeing literacy; cultural resistance; need for structured education at all levels

6. Discussion and Conclusion

Human action—and a portion of human knowledge—takes shape through its responsiveness to, and within certain boundaries set by, the technological environment. It is therefore unsurprising that technology constitutes part of a society’s structure and may either constrain or enable human action and knowledge. The findings of the present study demonstrate that the introduction of Video Assistant Referee (VAR) technology into Iranian football is a multidimensional phenomenon that extends far beyond a purely technical change. Here, technology functions not merely as an officiating aid, but as an active force in the reconfiguration of football’s social, cultural, and institutional relations. The three sociological dimensions employed in this study—technological determinism, the social effects of technology, and social constructivism—each reveal a distinct layer of this transformation. In the first dimension, technology appears as a compelling and determining force that constrains the actions and decisions of referees, players, and even managers within the boundaries of technological protocols. In the second dimension, the social effects of technology illuminate how justice, excitement, and human communication are redefined in response to technological transparency. In the third dimension, social constructivism shows how meanings, language, narratives, and culture surrounding the technology are reproduced, and how the technology becomes institutionalised within Iranian football culture through education, the media, and formal institutions. Overall, the results indicate that VAR has accelerated the modernisation of football in Iran; however, it has simultaneously generated new perceptual, emotional, and cultural tensions.

These findings can be interpreted within broader theoretical debates in the sociology of science and technology. From a technological determinist perspective, VAR exemplifies technological dominance over social behaviour. As the McLuhan tradition and later thinkers such as Langdon Winner have argued, technologies are not neutral tools; rather, they function as “structures of power” that impose particular forms of behaviour, order, and control on society. Within this frame, VAR reshapes the logic of action in football: referees engage less in discretionary judgement and more in executing a systemic logic; players behave less instinctively and more

calculatively; and coaches are compelled to align tactics with technology-induced suspension times. This condition closely resembles what Feenberg conceptualises as the instrumental rationality of technology, wherein efficiency and precision increasingly prevail over lived experience and human excitement.

From the standpoint of the social effects of technology, the findings resonate with theorists such as Neil Postman and Manuel Castells, who emphasise the cultural and media consequences of technological systems. VAR facilitates a transition from an emotional and ritualised football culture to a documented and analytical one: transparency and accuracy increase, yet affective synchrony and collective excitement decline. Put differently, the football community encounters a “modernity paradox”: technology strengthens justice, but does so at the cost of diminishing emotional capital and collective excitement.

Within the framework of social constructivism of technology, the findings further show that VAR has not been imposed solely in a top-down manner; rather, it has acquired meaning through interactions among institutions, the media, and users. Media actors have become “meaning-making intermediaries” through analytical narratives; referees and players have redefined their roles; and spectators have shifted from consumers of excitement to secondary adjudicators and image-based analysts. This aligns with Bruno Latour’s perspective in Actor–Network Theory, which treats technology as part of a network of human and non-human actors—a network in which humans and machines jointly produce decisions. In this sense, VAR may be understood not simply as an instrument, but as a new institutional actor within the social field of Iranian football.

The results of this study suggest that VAR in Iranian football is not merely a technical innovation; rather, it signifies a cultural, social, and managerial transition within the country’s sport structure. In this transition, refereeing has moved from individual authority to systemic authority; justice has shifted from emotion-based perception to a documented process; and collective excitement has increasingly been replaced by technological order and enforced patience. However, if this technology is implemented without careful attention to local cultural

and educational requirements, “technological justice” may come at the cost of eroding social trust. In other words, VAR does not mark the end of human officiating; it marks the beginning of a new phase of human–technology coexistence in the cultural field of football—one in which transparency, education, and dialogue can serve as safeguards for a sustainable relationship between technology and culture. Ultimately, the findings of this study can inform educational, media-related, and managerial policy-making aimed at institutionalising emerging sport technologies in Iran, and can offer a contextualised framework for understanding the interaction between the “Iranian actor” and “technology-mediated justice.”

The entry of technology into Iranian football, while creating new opportunities for transparency, has also produced cultural and managerial challenges. Culturally, the gap between “traditional football culture” and the “technological logic of decision-making” has not yet been fully bridged. Football in Iran has historically been grounded in excitement, storytelling, and a sense of human justice; it now confronts a documented, technology-mediated conception of justice whose broader social acceptance requires public education and sustained dialogue. Moreover, emerging technologies and new interactional arrangements still require user participation in evaluation processes. Such evaluation may entail forms of recalibration, validation, and differentiation vis-à-vis existing models and theories of user interaction (Bolboli Ghadikolaei & Parsania, 1403: 443). At the managerial level, the football federation and clubs must develop clear legal, media, and educational frameworks for this technology. Many of the current crises stem not from technical weakness, but from inadequate expectation management and deficiencies in inter-institutional communication. In this regard, the following measures are recommended: Training referees and players to interact effectively with the review process and to manage moments of suspension; Public awareness initiatives—through national media and clubs—regarding the limitations and actual functions of VAR; Designing standard communication and media protocols for explaining officiating decisions and preventing public misinterpretations; Developing short-term educational packages in football academies to enhance refereeing–media literacy among younger generations.

Such actions can contribute to the localisation of the technology and help prevent perceptual gaps between technology and culture.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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