

HAS THE VAR CHANGED THE GAME? A TRY OF AN EPISTEMOLOGICAL APPROACH TO A CURRENT QUESTION

¿Ha cambiado el juego el VAR?

Un intento de enfoque epistemológico de una cuestión de actualidad

O VAR mudou o jogo?

Uma tentativa de uma abordagem epistemológica a uma questão atual

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Abstract: It was the referee's perception of the situation, plus his knowledge of the laws that were the only base for decisions, but the VAR changed this. The various angles of TV images have more power than the human situational perception. Experience was downgraded, while the value of judgement through TV images increased. The figurative character of football and the sport's popularity contribute to this pressure. Refereeing is supposed to become more accurate the higher the level of the match. Still, it is the human factor that is essential for the game and all humans can err. Perception and imagination can err as well. Still, a decision must be made by the match officials. Based on the ideas of Radical Constructivism and John Searle's interpretation of Direct Realism, this article tries to give a view on the essence of football refereeing and how the VAR has changed the game.

Keywords: Football refereeing; VAR; Perception; Radical constructivism; Direct realism.

Resumen: La percepción de la situación por parte del árbitro, además de su conocimiento del reglamento, solía ser la única base para las decisiones, pero el VAR ha cambiado eso. Los diversos ángulos de las imágenes de TV tienen más poder que la percepción humana de la situación. La experiencia se ha degradado, mientras que el valor del juicio a través de las imágenes de TV ha aumentado. La naturaleza figurativa del fútbol y la popularidad del deporte contribuyen a esta presión. Se supone que el arbitraje es más preciso cuanto mayor es el nivel del partido. Aun así, el factor humano es esencial para el juego y todos los seres humanos pueden cometer errores. La percepción y la imaginación también pueden cometer errores. Aun así, los árbitros deben tomar una decisión. Basándose en las ideas del Constructivismo Radical y en la interpretación del Realismo Directo de John Searle, este artículo intenta dar una idea de la esencia del arbitraje de fútbol y de cómo el VAR ha cambiado el juego.

Palabras clave: Arbitraje de fútbol; VAR; Percepción; Constructivismo radical; Realismo directo.

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Resumo: A percepção do árbitro sobre a situação, além de seu conhecimento das leis, era a única base para as decisões, mas o VAR mudou isso. Os vários ângulos das imagens de TV têm mais poder do que a percepção humana da situação. A experiência foi rebaixada, enquanto o valor do julgamento por meio das imagens da TV aumentou. O caráter figurativo do futebol e a popularidade do esporte contribuem para essa pressão. Supõe-se que a arbitragem se torne mais precisa quanto mais alto for o nível da partida. Ainda assim, o fator humano é essencial para o jogo e todos os seres humanos podem errar. A percepção e a imaginação também podem errar. Ainda assim, uma decisão deve ser tomada pelos árbitros da partida. Com base nas ideias do Construtivismo Radical e na interpretação do Realismo Direto de John Searle, este artigo tenta dar uma visão sobre a essência da arbitragem de futebol e como o VAR mudou o jogo.

Palavras-chave: Arbitragem de futebol; VAR; Percepção; Construtivismo radical; Realismo direto.

1. RULES, FOLLOW OR PERISH AND THE FIGURATION OF THE GAME

Every game, every speech act, every kind of (human) interaction follows certain rules. They may be written or unwritten, but they are present, they are there in one way or the other may we like them or not. They regulate the way how humans interact with each other and usually it can be trusted that rules are being followed. Rules (or laws, as some international organisations call them in English) guarantee a certain kind of safety for all participants, they can be considered as some kind of given and agreed on truth, they make clear what is allowed and what is not, what can be done and what cannot be done, what the basics are to participate in this process of interaction or game (and a sporting game is nothing more than some interaction in a ludic way). The game character of the football is described by Norbert Elias the following way that a football match is often considered to exist extra of the participants. He states that it can be played by various groups and at the same time each individual game has a group constellation, in which the various groups form themselves new all the time, just like dancers during a dance. They are small groups of individuals, who change their relations to each other in a constant dependence from each other in a five-dimensional way: in space, time and consciousness (cf. Elias, 2003, p. 339). The dynamics would be fixed and flexible at the same time. Fixed, because the participants would consensually accept the common rule framework (and this would be a fundamental characteristic of a game) and flexible, because if it was not, each match would appear similar to any other match (cf. Elias, 2003, p. 340). By participating in that game, a participant has mutually agreed to follow the written rules and also accept the eventual consequences that come

from breaking them. But breaking the rules is different from cheating. So how can we take a look at this?

Breaking the rules is simple. One steps out of line and goes against them. In football this is considered “foul play”, as the text of the law states in Law 12 (cf. IFAB, 2021). The text of the law itself has the idea that all players try to play by the rules and that there are no intentional fouls. In the same law text, they also mention the word “misconduct” (cf. IFAB, 2021), which takes the ethical point of view into consideration. A participant, here in this case a player, should have some inner force to follow the rules and this inner force should drive the player towards sportsmanlike conduct, which, according to the governing body (and the English language), involves treating the opponent with respect and fairness. “To be a good sport” in English means that a person is not rude or angry about losing and takes it to the chin in case it happens. In fact, the idea regulated sporting events are based on is, to have a fair competition among equals and may the better of them win. Therefore, the rules have to be equal for everybody. There are no exceptions, no privileges based on race, sex, religion or any other criteria.

Cheating on the rules is not that simple. When someone decides to try to cheat on the rules, one has to develop some kind of creativity and think of strategies of how to benefit oneself from this unethical behaviour in order to either go undiscovered, or to make it appear unintentional or at least to minimise the damage for oneself in case of being caught. When taking the example of football again, then one of the most practised ways of cheating is diving, especially in the box in order to mislead the referee to make a free kick or penalty call, even when there is no foul play. Some players have developed some notoriety for diving. So has, for example, the by then German international Jürgen Klinsmann, who, in the 1990 World Cup Final against Argentina, dived in the 65th minute inside the Argentinian box, provoking a red card for the Argentinian player Pedro Monzon by that behaviour and misleading the referee to make a penalty call in favour of Germany. The consequence of this unsportsmanlike conduct was that Germany scored from the spot, winning the World Cup for their third time (1954, 1974 and then 1990), labelling Monzon with the unfortunate historic premiere to be the first player to be sent off in a World Cup Final, and giving Klinsmann the fame of being a cheat and a diver, who would do anything to win. When he was signed by Tottenham Hotspur, managed by the Argentinian Ossie Ardiles, four years later, the English public did not like that very much. They had not forgotten Klinsmann’s behaviour in the final and him additionally being German, a characteristic that is still considered extremely hostile by most Britons, did not really cause a

very warm welcome at White Hart Lane either. Klinsmann was immediately given the nickname “The Diver” by the press and Spurs supporters the moment he set foot on the pitch in North London. During his one season spell with Spurs, he proved that he could do differently as well, terrorising the opponents’ defences and, as the second foreigner since Manchester City’s Bernd Trautmann in 1956, earning the PFA Player of the Year award in 1995, but in Argentina he is still seen as the one who cost them the World Cup by cheating.

So here we talk about written rules, rules that have been petrified and are clear for everybody (although some of the rules leave a lot of room for the interpretation of the laws for the disciplining institution on the field, the referee, who is often considered to be biased by the likewise biased supporters in the stands or in front of the TV screens). But there are some unwritten rules as well, which can also be broken. For example, there is no rule in football saying that someone must not play boring. But George Graham’s Arsenal sides were known for that, they would rather pass the ball to the left and to the right and play defensive instead of trying to score a second goal once they went 1-0 upfront (cf. Morgan, 2020). They did not break the official rules of the game, but they definitely broke the (unwritten) one, which says that the aim of the game is to score more and more goals, primarily more than the opposition. The English word “goal” is not used for nothing to describe what is behind scoring. Williamson mentions it that way:

Consider a game with the internal aim of scoring more goals than the opposition and the external aim of exercising players or entertaining spectators. Breaking the rules can serve both internal and external aims. Conversely, lazy play can give away goals to the opposition, bore spectators, and fail to exercise players, without breaking the rules” (Williamson, 1996, p. 492).

What he says here is that in such a case the players would not break any of the written laws of the game from the book, but they would fail to live up to the nature of the game and therefore break one of the unwritten rules of that sport. Such a behaviour causes damage to the game and the participants in the medium and long runs. The external aims, as Williamson calls them, would be neglected and the interest of the spectators or even the players themselves would diminish over time. In other words, if they don’t follow the rules, they will perish sooner or later for various reasons. Elias puts it that way that there are several interests in these figurations and that the balance between them would be a problem. The polarities between individual and group interests (or aims) suffer when one is taking over priority over the other. The exemplary list of polarities is given by Elias the following way (cf. Elias, 2007, p. 359 and p. 368):

- A) the polarity between the external controls of the players through various layers (by managers, team captains, teammates, referees, spectators, etc.) and the flexible control, which the players execute over themselves.
- B) the polarity between friendly identification and hostile rivalry with the opponents
- C) the polarity between the excitement of aggression of the individual player and the restrictions, which the game constellation implies on this excitement
- D) the polarity between the elasticity and the fixture of the rules

Those polarities demonstrate that there are more interests in the game than someone would be aware of when only viewing it as a sporting event just from the outside. They show the complexities of the game as such, and they also show that there exists a mixture between internal and external aims. Those aims sometimes intermingle and it is difficult to differentiate which aim is emphasised at a very specific moment during the match or the season. The goals aren't always clear and therefore the mixture can create some kind of hostile atmosphere surrounding certain matches.

Going back to the unwritten rules of the game, Arsenal still suffer from their efficient, successful, but boring years under George Graham, even more than 30 years later, as their reputation of playing a non-attractive football and not living up to the club's name prevailed even during the, also quite successful and less boring footballing, years under manager Arsene Wenger. Another example for the would be the Italian way of playing the game. When the Argentinian manager Helenio Herrera perfected in the 1960s with Internazionale Milan what the Austrian Karl Rappan had invented 30 years before, that playing system that is known as "The Bolt" until today (or "catenaccio" in Italian), Italian football in general took a huge turn. The entire league started to play this ultra-defensive system, which was focussed on ruthless efficiency in defence and destruction of the opponents' tries of play. So Italian football lost its attractiveness for offensive oriented players. For the next 40 years, Herrera's tactics would dominate the game, which would cause a drop in spectator interest (resulting in lower attendance figures in the stadiums) and a pandemic sleep wave in front of the TV screens once an Italian side would be televised. The external aim of playing attractive football to entertain the spectators was definitely neglected. What was never neglected though, and this is also an external aim, was to make money and profit with the game.

2. THE RULING INSTITUTION: THE BOARD, THE REFEREE AND THE VAR

In an international popular game or sport, like football is, a governing body exists in order to keep a closer look at how the game is run and how a standardised set of rules and laws is applied on the field. Here the economic aspects and intention of this organisation are left aside, as this is not part of this work.

As a matter of fact, this governing body has a department which sets up the worldwide rules for the organised form of this sport. They meet in regular sessions, discuss changes of the rules and they also develop international guidelines of how the existing laws should be interpreted. National suborganisations receive all those decisions and add their own, nationally tailored guidelines to their members, who then have to implement what they have received from the governing bodies. So, one could say that there is a process of various stages until those given guidelines, rules and laws are applied by the referee on the pitch, who is the ultimate instance of this process and has no word in how the rules are made. He is simply the executor of them.

The referee is the final responsible person who has to observe the upkeeping of the laws of the game and makes the final decision if there is some infringement of the laws or not. In football, as to stick to the sport already mentioned in chapter 1 here, the competences and powers of the referee (and his assistant referees, who are running the line) are declared by Law 5 and 6. The referee's authority is not to be questioned, says the law. The referee is the final decision maker and his word and call stand, says the law. The referee shall apply all the laws on the pitch, says the law. The referee controls the match in cooperation with all other match officials, says the law (cf. IFAB, 2021).

The referee is the person who decides what is still allowed and what is not and the law of the game gives him special powers to enforce the compliance of the law on the pitch, but those powers do not turn him into a superhero. Until the year 2012, the perception of the referee (and the assistants) was the only decisive institution about breaking the laws or cheating on them. Then came the big change. After a series of horrendous mistakes on national and international level (cf. Witte, 2010, Süddeutsche, 2012, Kistner, 2013) a technical supporting system was allowed to be installed. Having long been strongly defended against even by the chairman of the governing body (cf. BBC, 2009), first a technology from other sports like tennis or ice hockey was tried out and weighed – but found too light. Then in 2016 the great hour of the images arrived: the video assistant referee was installed in football. First it was in the big

footballing nation, the USA, with a few reserve sides matches. The premiere on national first team level was in the Netherlands and on international level it happened in the Confederations Cup in 2017 (cf. Farrell, 2019). Since then, the power of the images has had quite an impact on the game. As every referee call divides the match following public, the videoreferee, also known as VAR, and its installation and practises have divided the supporters and adversaries of it likewise. As this article is not supposed to be a football article, even though it deals with the matter somehow, the various positions concerning the pros and cons of the VAR won't be discussed in detail here.

According to the official laws of football, the VAR is an assistant to the referee, who remains the final instance to decide about a call. The VAR has the function to support the referee and may intervene

only in the event of a 'clear and obvious error' or 'serious missed incident' in relation to: goal/no goal, penalty/no penalty, direct red card (not second caution), mistaken identity when the referee cautions or sends off the wrong player of the offending team (IFAB, 2021).

The text continues saying that

The assistance from the video assistant referee (VAR) will relate to using of replay(s) of the incident. The referee will make the final decision which may be based solely on the information from the VAR and/or the referee reviewing the replay footage directly (IFAB, 2021).

Having read the official text, it is a very clear regulation where and how this external force to the game may interfere in what is going on on the pitch.

But what has all of this got to do with epistemological thoughts? The answer shall be found in the following chapters - hopefully.

3. THE REFEREE: JUSTICE AND INJUSTICE

As it has been mentioned above, there is an ultimate institution on the field which decides whether a written law is broken or not and this institution is called referee. According to the laws, he has absolute power over the players and team officials, but in reality, hardly any referee executes all of these powers. That is one of the reasons why there is such a high level of discipline lack on and off the pitch and once a referee really gets to use the law book against misconduct, he gets abused by various internal and external parties. Those abuses go from verbal aggression to suffering from physical assaults. The vast majority of referees has suffered

from verbal abuse, while a smaller percentage already had to face physical attacks as well (cf. Devis, Dura, Molina, 2021). The strategies of how to deal with that situation vary culturally as well, as Devis et al. show in their study and especially considering the various ways of perception of breaking the laws of the game concerning misconduct on the pitch impact the officiating (cf. Devis, Dura, Molina, 2021). That is probably one of the reasons why it is impossible to find a worldwide standard interpretation of the laws of the game. Therefore, it is not just that the usual complaints and abuse from various sides affect the performance on a local to national level, on an international level it gets even worse, as there are more interests involved in the game. So, the, especially psychological, pressure on the referee is even higher the higher the match is ranked in importance and the more professional the surroundings and environments become. Errors are not allowed and the highly competitive level among the referees (and their backing organisations in the background) contributes to this toxic field. It is not just the sport itself that is involved in the refereeing business, also political matters are muddled in refereeing, as the man in the middle has a powerful role, and power is always linked to politics. It is not only the individual skills and abilities that decide about who officiates which game. The mechanisms behind the referee assignments are not part of this presentation, but the reader should be aware that all referees are equal, but some are more equal than others – as to speak with George Orwell.

But coming back to the original role of the referee it has to be said that the referee is the institution which is supposed to enforce justice on the pitch. So, the referee is supposed to be the neutral element of the game. As there are two opposing sides, which try to compete to see who is the better one, the neutral element is supposed to regulate the way how this is done – by predetermined laws, which set up a framework of rules that have to be followed. The figurative character of this has already been mentioned in this paper.

Considering the neutral role of the referee the question remains if he is really unbiased. Dobson et al. showed in 2007 that there seems to be a slight bias against the visiting team when it comes to applying disciplinary measures on the pitch (cf. Dobson, Dawson, Goodard, Wilson, 2007). This inconsistency in trying to keep up the myth of the unbiased referee is very appalling. As a human being, a referee is also prone to mistakes and the decision of what is worth a call and what is not an infringement of the laws, is not easily done. Leaving the possibility of a bias outside of these considerations, then the referee can only act, when he is convinced that (especially) Law 12 is broken and therefore a call needs to be made. A call needs to be covered by the laws and cannot be done at will, otherwise the referee himself, the gatekeeper of the law

interpretation and provider of justice on the pitch, would break the laws himself and an appeal of the affected team or club with the result authentication commission of the football association would result in a re-match at a probably neutral ground. That way the referee himself is under pressure not to break any (written) laws of the game in order to avoid such a procedure, which could eventually lead to a career harming or even ending consequence afterwards. The element of conviction when making a call is really the strongest element in officiating a match and not the subjective perception of likewise biased players, supporters, managers, journalists or any other element involved in the game. That their view does not necessarily correspond with the referee's is comprehensible, especially as the referee is usually having the better view of the situation as he is in a dynamic process and situation, while the people in the stands are in some kind of fixed place from where the perspective and perception is more restricted. That, combined with some other subjective facts like wanting their team to win or simply the lack of knowledge of the laws (but having an excessive overestimation of oneself to think to know all the laws and latest guidelines) leads to the (also subjective) feeling of suffering from injustice by the acts the referee sets on the pitch. But the referee is only the reactive part of the game, the players are the active one and the reactions of the referee, as shown above, can only come to pass when they are covered by the laws, imposed by the governing body.

4. THE REFEREE: PERCEPTION AND REALITY

Having shown in the previous chapter that all the referee needs to be convinced about breaking Law 12 of the rule book is essential, but another aspect needs to be taken into consideration as well: perspective and its reality.

The governing body of football requires from the referee to run on the field a so called "flexible diagonal". That means that in principle he has to cover an area which stretches in a diagonal across the field from one corner flag to the other and that way his active radius is in the area where his assistants are not present. They are supposed to interfere and signal foul and other law infringing plays in front of them, where the referee is not present. At the same time the referee is supposed to be close to the game action, in the zones where the game action happens, to be closer to be able to make the correct calls. That is why the attribute "flexible" is added to the word "diagonal". If a referee does not follow this directive, he will receive points deducted from his observation report, which decides about his career and future as the

performances on the field are also evaluated through a standardised evaluation form by a member of the refereeing organisation, trained in referee observances.

Anyway, the basic idea of this flexible diagonal (with the support of his assistants) is to give the referee a better perspective of the game, a perspective from the side and also keep an eye on his assistants in case they get to see something that the man in the middle does not. So, the question of perspective needs to be discussed, because it is essential for the understanding of the approach on the epistemological side of refereeing and VAR.

Heinz von Foerster states that there are questions which are decidable and undecidable. A question like if the number 13 228 134 291 is dividable by 2 is decidable, but a question about the how the big bang really happened is undecidable. Von Foerster states that: “Only questions that are undecidable, we can decide about” (von Foerster, 1989, p. 30). What does he want to say by that? Decidable questions follow a certain scheme and pattern and therefore can be decided easily when following them, while undecidable ones do not follow any beaten path and therefore cause further inquiries, bring liberty, but also responsibility of decision (cf. von Foerster, 1989, p. 31). The formation of a response to an undecidable question is based on depiction, relation and perception.

The first term, “depiction” is borrowed from the physics of optics. Literally speaking, a picture of something is branded into someone’s imagination or even knowledge. In consists out of two spaces, the space of the object and the space of the image. The depicting process is described the following way:

How the object space is projected onto the image space, the same way reality (untouched by the process of depicting) is projected on the screen (cornea, cerebral cortex, etc.) of consciousness of the recognising subject” (von Foerster, 1989, p. 32).

So to speak, recognising an ongoing process requires a process of depicting via the human senses in order to have any reaction or non-reaction as a follow up. The question remains though, if all subjects are able to recognise and depict the same kind of process in case.

The second term, “relation” has a different relationship to perception. According to von Foerster, it is movements which cause a change in perception, which can be perceived (cf. von Foerster, 1989, p. 36). Sensomotorial competences lead to a construction of reality (cf. Piaget, 2013, von Foerster, 1989). Therefore, it is the movements and the change of position of the objects that follows them, the relation, which cause the change in perception and lead to an eventual (re)cognition of a situation.

When we go back to the example of the referee, which follows us through the whole article, then the process of cognition of an infringement of Law 12 should be based on the perception of the change of a movement. Usually, physical contact is involved in foul play, may it be pushing, obstruction, shirt pulling etc. Through experience it is possible to have an idea of how a player moves when he is anticipating the ball, controlling it, trying to start a play or does whatever else in the game. The bodily movements are pretty much determined by the way the game is played. When there is an unusual change in such a movement, for example, when the player wants to stop the ball with his chest in order to control it with the legs afterwards and the opponent pushes him into the back with the intention to interfere in that intended manoeuvre, then a disturbance in the regular anticipation movement should be noticed. Usually, the fouled player makes an unusual step forward, which is enough to prevent him from ball control – and here the referee's perception and positioning is important. If it is obvious and the referee gets to see the push, then the referee definitely will make the call and award the law-foreseen continuation of a free kick as a consequence. That is usually the case when the referee is positioned close to the spot of where it happened. It gets trickier when the referee is in a distant or remote spot. Then the referee has to depend and count on his experience of how body movements indicate a foul play. He is prone to fake fouls, because not all players are honest (but as shown above, the laws of the game have designed the ideal of a sporting athlete, who would never go against them intentionally. Encroachment is not part of the original nature of sports). The referee also depends on his assistants' perception in case he is on the opposite side of the pitch. So, the reality that is constructed here and which influences the cognition of foul play and the following sanctions set by the referee are based on how the referee's sensorial organs (auditive and visual) perceive the situation in order to recognise it.

When going back to Heinz von Foerster's ideas, then cognition is the computation of a reality (von Foerster, 2007, p. 44). The undefined article "a" is intentionally chosen, because there is more than one reality and the recognition of it is an individual act, especially from a constructivist point of view. Through acts of recognition things like watches or galaxies cannot be computed, in best case the result of such acts are descriptions of those objects. When taking this argument, then cognition is the computation of a description of a reality. Here the previously mentioned argument of depiction will jump in and neurophysiologists will explain that it all will be computed on a higher level where motoric activities will lead to a final description (cf. von Foerster, 2007, p. 45). So the argument has to be rewritten to the version that cognition is the computation of (infinite) descriptions. The descriptions will go on endlessly

and the unknown parameter, reality, is dissolved that way. But the process of giving evidence about cognition does not finish here. When going deeper into the matter, it proves that an infinite process of describing is nothing more than a computing process in itself. Following the process that has been described here, then cognition is nothing but an endless process of recursive computation.

In their famous paper, Lettvin et. al. show that the frog's eye tells the frog's brain how the world is perceived. Joining together various impulses coming from light, diverse contrasts and movements the frog computes and produces information which guarantees its survival. That way the world is depicted for the frog by the brain and it knows what to do and when to do it. For example, what is small and moves across the visual gaze is interpreted as potential nutrition and attacked by the frog as a reaction to it (cf. Lettvin, Maturana, McCulloch, Pitts, 1959). For the frog it is not important that the world is not depicted as a whole, it is irrelevant. What counts is the survival of it – and this is something that the species of the frogs has been doing successfully for millions of years.

The human behaves the same way. Although the human being would like to have the whole world depicted in the brain by the sensorial organs, this is biologically impossible. Already the eyes have a limited visual capacity of degrees that they can see and spot. All other sensorial organs suffer from limitations as well. So it is the brain which has to put it all together to a picture of the world and that is why the human constructs its world and therefore its reality by perceiving what is going on around it at this very moment and what has been going on provided by similar leads in the past. The human constructs models when perceiving the world and acquiring knowledge; some models are useful, others not so much, but they all intend to depict the world and a perceived reality. The world is not mirrored that way, but constructed by the individual. An identical replication of reality is impossible, but compatibility is a solution, as it avoids collisions with obstacles by tacking between them. It should “fit”, but “fitting”, as a form of perception, is primarily a negative connotation here, as in a referential framework, in which an adaption needs to be done, no point, which is defined by another element, is seized by another element. “Concordance” is a better term here, as two elements in the reference framework share the same points (cf. von Glasersfeld, p. 88). Therefore, concordance is much better to be used when it comes to talk about reality and the perception of the world than saying that something would fit the belief of an individual and that way the world would fit into one's own scheme of perception.

Returning to the referee's position within this framework, then the perception of reality as a whole by the referee is not the essential point in making a call. It is the compatibility of various inputs which he is perceiving from the environment, which need to be in concordance to with what is written in the laws. That leads to the conclusion that a call has to be made or not. This also brings us to an aesthetical imperative: if you want to recognise or know something, learn how to act, and the ethical imperative tells that one should act that way that new possibilities occur (cf. von Foerster, 2007, p. 60). Taking this into consideration, when some foul play is committed, then the referee has to make a call (aesthetical imperative, based on the laws of the game given by the International Board) and by that new possibilities of plays occur (ethical imperative) as a consequence for the team that benefits from the call.

5. THE VAR AND PERCEPTION

With the introduction of the VAR, it is not only the perception of the trio in charge of officiating on the pitch anymore, which decides about all the occurring situations on it. The new and additional component has started to take an influence on it. Despite all the yearlong resistance against it, TV and the power of the images have got a foothold in the beautiful game as well.

If refereeing was accepted, despite all of its flaws, as the sole and final institution of decisions, its stronghold has been eroded with the arrival of TV and especially slow-motion replays (cf. Collins, 2017, 2019). Suddenly the public had a better possibility of viewing of what was going on on the pitch, while the person who had to decide about an eventual law infringement did not have the possibility to have it and at least the TV public had a huge advantage over the match officials. The original idea of the VAR introduction was not to dismount the referee's personality, but to bring on something that could fix obvious errors and injustice. A referee's performance cannot be reduced to pure mathematical figures, as it is not an exact science. Although the governing body tries to standardise various parameters of the game in order to take out some national (and maybe also folkloristic) particularities and therefore create a global product which can be changed easily, just like a product of the culture industry in the sense of Adorno (cf. Adorno, Horkheimer, 2010, see especially the chapter about mass deception), the human aspect, the proneness to errors and misinterpretations is neglected or ignored. Accuracy of refereeing is important, but inaccuracy would happen though, because of those qualities that make the human a human, as it will be shown below.

While until the early 1980s television was not really sure about how to treat football with live matches, after the foundation of the Premier League in England in the early 1990ies, TV money and club budgets exploded. They soared into hights that have never been reached before (and by the time of writing this text they still go up like if there was no tomorrow). The supporters, until then an essential part of the game, became just a folkloric backdrop, a scene from the past which would provide some atmosphere to the ground. That way moving images found their way into football on a regular basis. There have been film footages of matches as early as the late 1800s and the first televised match was shown in 1937, when Arsenal's first team took on the club's own reserves in an especially arranged match for this occasion (BBC, 2002). But it was only with the creation of the Premier League in the 1992/93 season that the big money – and the television influence - started flocking in, putting additional pressure on the clubs, players and match officials, as all kinds of errors could be documented much easier now, with a slow motion right after a questionable situation on the pitch.

For this documentation, the presence of various cameras positioned around the pitch is necessary. They film or broadcast live from various kinds of angles the action on the field and sometimes also what is going on off the field as well. But what is important for this article is the action on the field with all the protagonists involved. So to say, the TV cameras substitute the eyes of the spectators, who either cannot go to the stadium or simply do not want to go there. Throughout the history of involvement of TV in football, one of the arguments against live broadcasts was that they would keep people away from going to the stadiums. The full effect of this has not really set in, but it has definitely had an impact on the crowd figures and all seater stadiums, under the pretence of safety matters, are a result of slowly vanishing crowd figures in most topflight leagues, in order to give an impression of full stadiums on TV. The latest trick to pretend such a situation is to put differently coloured seats in the stands, so that on TV they give the impression that they were actually filled. As it was to be seen at the 2021 Summer Olympics in Tokyo, or the 2022 Winter Olympics in Beijing, where the venues were never to be filled because of the CoV-19 pandemic restrictions, but on TV the background images gave the viewers the idea that there were actually people sitting in the stands behind the athletes, but in reality, there were just empty seats painted with different colours.

TV's images are perceived by a public and they also are an act of visual perception. Visual perception can be defined by those four components, which Searle defines as following:

- 1) There are first the objects and states of affairs I'm seeing

- 2) Light reflected off these objects and states of affairs strike the photoreceptor cells and cause a sequence of events that eventually results in a conscious visual experience
- 3) The casual relation between the object and the visual experience has to be of a certain type. If I am seeing the object on a movie screen even though there is a causal relation between the object and the visual experience it is not of the right type, I am not directly seeing the object but only seeing a movie of the object.
- 4) A fourth feature of the situation is that the visual experience has intrinsic intentionality (Searle, 2018, p. 67).

The first three points mentioned give visual effects to the perceiver, as they cause relations between the object and the perceiving subject. The fourth point causes a certain level of satisfaction within the perceiver, which is the perceptual experience itself. Searle states it that way: “If I am to be satisfied (veridical) I must be caused by the very object of which I seem to be seeing” (Searle, 2018, p. 67). He further states that perception differs from beliefs and desires, because the latter are representations, while perception would be a presentation and there would be differences between those two, as a presentation could “not be separated from its conditions of satisfaction in a way representations can” (cf. Searle, 2018, p. 67). Thinking about that, then he argues that when thinking about rain the believing thought of it can be separated from the fact whether it is raining or not, but when seeing a tree then the visual experience cannot be separated from the presence of a tree (cf. Searle, 2018, p. 68). In this Direct Realism objects and affairs are perceived directly and not by anything else first, placed between the receiver and the perceiving object. This is different when a screen or a camera are put between and the perception of the object/affair/situation could be distorted exactly by that, as it will be shown below.

Of course, there is this argument of hallucination or illusion, which is held against this direct perception. In that case, something is seen, but not seen. It is imagined, but the visual experience could be the same: imagination and reality of an object can take on the same experience. The hallucinatory case is a seeming to see and not a seeing itself. This one is reserved for the veridical case, because there is an independently existing object causing the experience (cf. Searle, 2018, p. 70).

Going back to the referee example, the VAR functions just as a presentation of a situation, which is shown from various angles to the referee. It does not represent the situation, just present it again and the perception, the depicting of it, is supposed to trigger off a process

of cognition of either Law 12 was broken or not. The result of this process of recognition would mean that a decision is made. Even if the referee keeps up his original decision after studying the moving images, then this is still a decision: the decision not to make a decision. But here lies the problem: why bring in an additional component? The original laws already lay all the power of decision into the hands of the match officials and as shown above, the VAR is supposed to be a visual aid to arrive at the right and correct decisions. The perception of a situation is essential for this, but what when even the visual aid cannot give any help on that? Quite often even the various camera angles cannot give clear evidence of what has really happened in that very moment and the referee still has to make some decision.

Searle argues that perception is hierarchically structured, just like action is (cf. Searle, 2018, p. 72). There is a strict sequence of what comes after what to trigger off the process of perception and action although they are sometimes directed in opposite directions. Searle puts it the following way:

Perception has the mind-to-world direction of fit and the world-to-mind direction of causation. That is just the fancy way of saying that the perception is satisfied or unsatisfied depending on how the world is in fact independently of the perception (mind-to-world direction of fit), but the world being that way has to cause the perception to be that way (world-to-mind direction of causation). In the case of action, you have the world-to-mind direction of fit, that is, the intentional content of the intention is satisfied only if the world changes so as to match the content of the mind. That is what is meant by world-to-mind direction of fit, but that is because, in the case of intentional action, the contents of the mind cause the world to be the way that it is, and that is what is meant by saying there is mind-to-world direction of causation (Searle, 2018, p. 72).

When we go back to the referee's case, then the intention of making a call has to correspond with the perception of the world around him and the decision and conviction that Law 12 (or another one, but Law 12 is the central one in that case) was broken and therefore action needs to be taken. Of course, this action can only be based on the written laws of the game.

HAS THE VAR CHANGED THE GAME? FINAL CONSIDERATIONS

After all those remarks the question if the VAR has changed the game still has not been answered yet completely. So far, the conclusion has been arrived at that, caused by the figurative nature of football, the referee needs a detailed knowledge of the official laws of the game and a good perspective on the pitch caused by positioning to be able to assess and judge

the various situations of the game in order to make the right decisions. The depiction of the individual situation in the referee's perception of reality plays a key role, because without this, no decision as a consequence of an evaluation of a match situation can be made. As mentioned above, it is not important that the whole world is perceived in this specific moment, but the individual gameplay and an eventual infringement of the (written) laws can be perceived.

All those components a match official can acquire by learning through experience and of course, by studying the official book, which is issued by the governing institution annually, especially as the laws of the game change in details every year. Lacking knowledge of that is the worst that can happen to a referee. It is like if somebody would try to start a car without an engine in it. A most essential part is simply missing.

But has the VAR brought new cognition to the game, especially the way of refereeing and interpretation of the laws? Immanuel Kant states that:

That all our knowledge begins with experience there can be no doubt. For how is it possible that the faculty of cognition should be awakened into exercise otherwise than by means of objects which affect our senses, and partly of themselves produce representations, partly rouse our powers of understanding into activity, to compare to connect, or to separate these, and so to convert the raw material of our sensuous impressions into a knowledge of objects, which is called experience? In respect of time, therefore, no knowledge of ours is antecedent to experience, but begins with it" (Kant, KrV, B1).

He also states further that:

But, though all our knowledge begins with experience, it by no means follows that all arises out of experience. For, on the contrary, it is quite possible that our empirical knowledge is a compound of that which we receive through impressions, and that which the faculty of cognition supplies from itself (sensuous impressions giving merely the occasion), an addition which we cannot distinguish from the original element given by sense, till long practice has made us attentive to, and skilful in separating it. It is, therefore, a question which requires close investigation, and not to be answered at first sight, whether there exists a knowledge altogether independent of experience, and even of all sensuous impressions? Knowledge of this kind is called *a priori*, in contradistinction to empirical knowledge, which has its sources *a posteriori*, that is, in experience (Kant, KrV, B1, B2).

So the question is if experience is the sole principle of cognition (or knowledge, as Kant calls it).

This Kantian question has been discussed for a long time in epistemology. In practise, the quality of the individual referee, grows the more experience he has collected throughout the years on the pitch. The more experience he collects on the pitch, the easier it is for him to

recognise an infringement of Law 12. That seems to be easy to be answered, but what happens in a situation which cannot be evaluated clearly and all the experience does not really help to make a decision which definitely corresponds with reality? To get some help in such a tangled case, the VAR has been introduced, but its interfering powers have been limited. In the always controversial decisions about Law 11, the offside rule, the VAR must not interfere. In theory the law is clear: a player is offside when he is, at the moment the ball is passed forward to him from his teammate, located in the opponents' half, between the last and pre-last defender or closer to the goal line than those two, and gets involved actively in the play (cf. IFAB, 2021), but in practise it is the perspective of the referee that judges if an offside position is to be called or not – and that perspective has to be trained over and over again, so that the referee has enough experience to make the (still subjective) right call in the decisive moment. The recognition of this situation depends a lot on the experience, especially when the decision maker is far away from the spot of the presupposed offside position. Here someone could think that Locke's idea of cognition about the ideas, where he also differentiates between external experience, the sensation, and internal experience, the reflection, has come into life. Perception is the origin and source of all kinds of cognition (cf. Locke, 1998).

The argument that referees would not reflect about their decisions after the match is simply wrong. The learning process of positioning, situation perception, decision making and everything else that has been discussed in this article already is based exactly on the perception and the resulting cognition of how the match was officiated. This usually goes without the previously mentioned observers, but going back to the question if the VAR has changed the game, after all these epistemological approaches, the answer should be a yes, because the game received an additional component, which did not exist before its introduction. The laws of the game remained the same, the internal aims as well, the external aims changed a lot with the introduction of TV in the higher leagues. The images that flickered across the diffusing screens and now across the flat screens of the home viewers, have now been introduced on the pitch's sidelines and have partly withdrawn the referee's absolute authority on the field. Perception alone is not enough anymore, now the angle of an electronic device broadcasting previously recorded moving images interferes in the cognition and decision process of the match officials. The number of errors made by them has changed, experience is still a very important factor in the decisive and recognising process though. The huge difference is: in the lower leagues, where no VAR is available, may it be for technical reasons or others, football is played as well – and it follows the same laws that the governing body is implementing. What the match officials

there do not have is the electronic help and therefore are left completely alone with their decisions and processes of cognition concerning the following of the rules. In principle it can be said that although the laws of the game are the same, there are two different games that are played after them: the one with the VAR, the one without the VAR. An incident like the above mentioned Klinsmann one in the World Cup 1990 is not possible in the VAR game anymore, while the same incident in the Non-VAR game will happen over and over again, simply for the reason that there is no VAR infrastructure to be found, which could prevent such a situation. The problem is that the principles of justice and continuity, which were always there in the pre-VAR-times, despite the refereeing mistakes, have been violated big time by the introduction of an additional component, which is only accessible after the game has reached a certain predefined level. If the introduction of the VAR has changed the game for the better or worse rests with the opinion of the individual, what it definitely has is that it has widened the gap between the glamour world of Champions League and Copa Libertadores kinds and the Sunday Leagues of football, while the processes of cognition of an essential part of the game, the match officials, remained the same.

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