





La ética en el periodismo audiovisual 360° y las (no)percepciones del público

Ethics in 360° audiovisual journalism and the (non) perceptions of the public

Luciellen Souza Lima  
Universidade Federal da Bahia - Brasil

DOI: 10.26807/rp.v29i123.2234

Fecha de envío: 15/03/2025 | Fecha de aceptación: 06/08/2025 | Fecha de publicación: 30/08/2025

Resumen

El desarrollo tecnológico implica dilemas éticos para el periodismo, pues cada nueva forma de presentar contenidos trae peculiaridades que confrontan los lineamientos éticos establecidos. Creemos que el periodismo audiovisual 360° es una de las nuevas posibilidades narrativas que utilizan las tecnologías emergentes. Este estudio reflexiona sobre las narrativas periodísticas audiovisuales producidas en vídeo 360°, buscando identificar conflictos éticos y determinar cuáles de ellos son percibidos por los usuarios participantes de la investigación. Metodológicamente, desarrollamos investigación bibliográfica y documental, análisis de productos, así como investigación experimental con usuarios. Identificamos varios conflictos éticos, pero los participantes demostraron que no eran conscientes de qué prácticas entran en conflicto con la ética periodística.

Palabras clave: Ética, periodismo, audiovisual, 360°, percepciones.

Abstract

Technological development implies ethical dilemmas for journalism, as each new way of presenting content brings peculiarities that confront established ethical guidelines. We believe that 360° audiovisual journalism is one of the new narrative possibilities that use emerging technologies. This study reflects on audiovisual journalistic narratives produced in 360° video seeking to identify ethical conflicts and ascertain which of them are perceived by the users participating in the research. Methodologically we developed bibliographic and documentary research, product analysis, and experimental research with users. We identified several ethical conflicts, but the participants demonstrated that they were not aware of which practices conflict with journalistic ethics.

Keywords: Ethics, journalism, audiovisual, 360°, perceptions.

1.- Introduction

Journalistic ethics is linked to the responsible use of the freedom to publish (Christofletti, 2018). Codes of ethics are formulated to point out the normative limits and guidelines that lead to a responsible journalistic practice, based on harm minimization and linked to journalistic values (Nakagawa, 2017). However, ethical dilemmas are renewed with technological development. Each new medium and new way of presenting content poses challenges to ethics.

In this sense, among the new narrative possibilities that use emerging technologies, we consider 360° audiovisual journalism, which refers to audiovisual-based products for

journalistic purposes that provide the user with the ability to choose the angle of view, in a 360° offer of moving images (Lima, 2022). It explores mainly, but not only, 360° video as a resource linked to virtual reality (VR) that aims to provide experiences mediated by sensory stimulation devices that favor immersion and interaction, seeking to promote a sense of presence in virtual environments of which the user has a spherical view.

These narratives are examples of new practices that cause reflections on established ethical standards (Aitamurto, 2019). Therefore, they need to be problematized so that ethical guidelines are not left unconsidered, but also that they do not make innovations unfeasible (Jones, 2017). Thus, the objective of this article is to reflect on the ethical implications in audiovisual journalistic narratives produced in 360° video. The study points to two paths that intersect in the results: 1) to identify ethical conflicts in these narratives and 2) to ascertain which of these ethical conflicts are perceived by the users participating in the research.

This article presents part of the results of a doctoral research (Lima, 2022) that investigates several elements, from the perspective of users, in 360° audiovisual journalism, including ethics. Methodologically, we develop bibliographic and documentary research, product analysis, as well as experimental research with users.

2.- Ethical dilemmas in 360° audiovisual journalism

This research focuses on 360° audiovisual journalistic content that uses virtual reality tools, which are immersive and experiential narratives for which there are still no specific rules regarding the application of ethics (Nakagawa, 2017). A study by Laws and Utne (2019) noted that journalistic organizations' codes of ethics avoid focusing on specific technologies, opting instead to present more general guidelines in an attempt to make them work for any format of news presentation. Thus, the ethical basis applied for immersive narratives that use VR comes, above all, from the guidelines for photography and images in general. However, several practices of audiovisual journalism in 360° contradict what these codes advocate (Laws & Utne, 2019).

In the researches, there is an understanding that, in order to take advantage of the differential characteristics of VR formats, such as the search for the enhancement of immersion and the development of the sense of presence, in the construction of a narrative grammar of its own, there is inevitably a break with some of the journalistic guidelines or, at least, with the way they are traditionally interpreted (Nakagawa, 2017). However, it is understood that there should not be a categorical break with fundamental values, but create new acceptable understandings.

Several potentialities of VR cause ethical concerns (Kool, 2016; Laws & Utne, 2019; Pérez-Seijo & López-García, 2019a). However, given the breadth of issues, in this study we do not delve into aspects related to deep immersive journalism (De La Peña et al., 2010), which raises ethical concerns linked to the illusion of embodiment (Laws & Utne, 2019; Madary & Metzinger, 2016). Nor do we delve into dilemmas already discussed in other formats for which there are no new implications in immersive 360° journalistic narratives.

Therefore, we focus specifically on the new ethical responsibilities related to 360° audiovisual journalism. Using mainly 360° video, this type of piece was predominant in the wave of productions of immersive and experiential journalistic content with VR tools that took place around the world, especially between 2014 and 2018. Currently, with the development of the metaverse, the continuity of advances in virtual reality and other technologies such as augmented reality and artificial intelligence, there are a number of possibilities for the development of new immersive and experiential productions in 360°, more vivid and with updated devices, within the vision of industry 4.0, involving the logic of the internet of things (Barbosa, Silva & Lima, 2024).

In 360° audiovisual journalism, the user can choose the angle of view. When using the VR

glasses, he is placed in the middle of the scene, seeing only the virtual world. The pieces can also be consumed using a cell phone or a computer. Thus, in the sequence we list the main ethical dilemmas pointed out by researchers in narratives of this type.

2.1.- Manipulation

Manipulation is pointed out as one of the main ethical problems in immersive journalistic narratives, especially for pieces built with CGIs (Internet Steering Committee in Brazil), in which all the images seen are the result of manipulation and in some cases are so realistic that they lead the user not to realize that it is not a direct recording of an environment (Aitamurto, 2019). In the 360° video, when some manipulation is done by removing, adding or altering elements of the image, the main intention is to gain precision and realism, favoring the feeling of presence (Aitamurto, 2019; Kool, 2016).

There is an express prohibition in several codes of ethics regarding digital publishing, including alterations to recorded or photographed images (Pérez-Seijo & López-García, 2019b). In theory, these standards are also valid for 360° images. However, there are discordant practices among the different journalistic organizations. Some, for example, digitally remove the 360° camera's tripod and/or its shadow. Others choose to blur this part or replace it with a black circle or a logo. There are also practices that do not remove, but add elements. Pérez-Seijo and López-García (2019a) cite examples in which they used holograms to add people or elements to the scenes that were not present at the time of recording.

2.2.- Omission of the journalist and the production team

In order for the user to develop a sense of presence and increase the impression of living a situation, in many pieces there is the deliberate omission of the reporter and the team (Pérez-Seijo & López-García, 2019b), enhancing the impression of non-mediation of the events. This disguises the fact that there is a journalist orchestrating the production of the material and the editing (Kool, 2016).

There are several ways to prevent the journalist and the team from appearing in the scenes, from leaving the camera recording alone and hiding, to disguising themselves as random people in the scene or being manually removed at the time of editing. The idea is to capture the most authentic and accurate image possible. In this context there is a clear contradictory situation: the absence of the reporter and the team would mean more precision and objectivity, but it is derived from a staging or manipulation. Therefore, authenticity is put in doubt (Aitamurto, 2019).

2.3.- Simulation or staging

This omission triggers another ethical issue: the simulation or staging of situations (Pérez-Seijo & López-García, 2019a; 2019b). This is not a new discussion in journalism, but in 360° audiovisual narratives, the stagings have proven to be very commonplace (Aitamurto, 2019). Therefore, if the team hides while the camera records, it is necessary that the sources and characters know how to proceed on their own, before starting the recording. Pérez-Seijo and López-García (2019a) explain that in some cases there is also a simulation of a face-to-face with the public. The characters speak directly to the camera as if they were talking to the user. It is evidently combined with the characters various movements, such as when to start walking, where to look, what gestures to make, etc. This confronts ethical guidelines that advocate that the journalist should not interfere in situations, avoiding staging.

For journalists and researchers, the way out of manipulations and stagings is in transparency (Aitamurto, 2019; De La Peña, 2019; Kool, 2016; Nakagawa, 2017), making explicit which techniques are being used, the choices that were made and the reasons. Even so, it is necessary to think critically about how and to what extent these artifices should really be used, so as not to have an exacerbated use and without criteria (Aitamurto, 2019).

In this context, there is also a concern about disinformation, because by accepting manipulations, recreation of scenarios and staging, one may be increasing the risk of misrepresentation of the facts and creating a favorable scenario for disinformation (Sangra, 2019).

2.4.- Emotional appeal

Overall, 360° video exudes more realism, accuracy, and closeness than conventional 2D video (Aitamurto, 2019), increasing the emotional appeal. The feeling of presence also has emotional consequences. Thus, Lin and Hsu (2019) warn that it is important to reflect on the situations in which the audience may have the feeling of participating. Kool (2016) believes that in view of the involvement that the pieces with VR technology can cause, the user becomes emotionally vulnerable.

In view of this, there is concern about sensitive content. Pérez-Seijo and López-García (2019a) point out that this is a common debate in photography and television. But they argue that the sense of presence and emotional involvement in 360° narratives can cause more damage than a 2D photo or video that addresses sensitive content such as wars, tragedies and violent crimes.

Still in the realm of emotions, another dilemma is the excessive focus on empathy. Virtual reality has become known as the empathy machine, but not everyone agrees that it is used by journalism with this intention, as it can make journalistic content more persuasive and impactful, and less informative (Kool, 2016).

2.5.- Show only one side of the story

Showing only one side of the story is a common practice of 360° audiovisual journalism, in which the intention of making users feel “in the shoes of” a character reduces explanations about the context, showing only a bias of the issue, which journalistically is not considered ethical conduct (Sangra, 2019).

3.- Journalistic ethics from the perspective of the public

In the literature review, we noticed that, among the studies that addressed ethical issues in journalistic narratives that use VR, the focus on the responsibility of journalists and producers guided the research. Some have evaluated journalistic organizations' codes of ethics and addressed examples of the practice (Laws & Utne, 2019; Pérez-Seijo & López-García, 2019a; 2019b); others interviewed journalists and producers (Aitamurto, 2019; Lin & Hsu, 2019); and one carried out case studies (Sangra, 2019).

This research, therefore, investigates what we call ethical aspects perceived by users, which refer to the perceptions of users related to issues involving journalistic ethics. But why investigate ethics from the perspective of users? First, because users are the most affected side in the case of journalistic content produced without ethical criteria. Second, because they also make decisions, especially whether or not to consume certain content. In addition, in 360° audiovisual narratives, they can decide where they will look. Third, because they can make complaints and demand that ethical principles be complied with. Fourth, because they are responsible for children and young people, having the obligation to protect them from possible harm.

We agree with the view of Laws and Utne (2019) who consider it important to attribute some level of ethical responsibility to users. Measures to regulate entertainment content, such as ratings, for example, have shared responsibilities. According to Steibel (2014), the indicative classification has come to be considered both a democratic and pedagogical instrument, giving the citizen the final decision to consume the content or not. This classification tells you which age group a specific product (TV, games, movies, etc.) is suitable for. It is an instrument of joint responsibility of the Union, individuals and content

producers. Currently, journalism is free from using the indicative classification.

In Lima and Ramalho (2022) we captured some indications of users that can be included in this debate on ethics. A total of 115 undergraduate students participated in the study. Based on a 360° audiovisual report, we tested and confirmed hypotheses related to the third-person effect model, among them: participants will judge that negative journalistic content in 360° video can negatively influence other people more than themselves, and, based on this, participants will support the application of indicative classification for journalistic content in 360° video. In addition to the majority of participants pointing out that they really fear negative effects of journalistic videos in 360°, there was a strong tendency to support the indicative rating for this type of content.

Therefore, the idea is not to reduce the responsibilities of journalists, producers, and news organizations, but to influence so that the public has more space within the discussions, has their feedback more valued, and builds a more critical awareness of what they decide to consume and share.

4.- Methodology

4.1.- General characterization of the study

This text presents the results of a doctoral study, developed as a study of reception in which the receptors are understood as active subjects who act as producers of meaning, “[...] who negotiate, reinterpret and re-elaborate media messages” (Winques & Longhi, 2020, p. 4). Doctoral research brings a vast investigation into the following elements: sense of presence, immersion, understanding, credibility and ethics. In this article, we condense some results related to ethics, which intersect with part of the discussions about the sense of presence.

The methodology developed encompassed bibliographic and documentary research, product analysis and user experiment. The latter, according to Santaella (2001, p. 141), “[...] it is the deliberate manipulation within an aspect of reality, within previously defined conditions, in order to observe whether certain effects are produced.” According to her, in general, the experiment is carried out in the laboratory, but it can be done outside, taking steps to exert control over the observed variables.

The experimental phase of the doctoral research was authorized by the Research Ethics Committee of the Faculty of Pharmacy of the Federal University of Bahia. In December 2021 and January 2022, we conducted the tests in the places where participants used to consume news, which are their homes and workplaces. All tests took place in the state of Paraíba, in the Northeast region of Brazil.

The research as a whole is of a qualitative-quantitative nature. However, in this article, which specifically covers reflections on ethical aspects, the study is qualitative, based on the results of the product analyses and the interviews.

4.2.- Stimulus Materials

As stimulus materials we used two 360° audiovisual reports published in 2016: Bento Rodrigues – *The village that ceased to exist*¹ and *Patrol in Aleppo with the Syrian White Helmets*². The first is a report by VejaPontocom that shows the district of Bento Rodrigues, municipality of Mariana, in Minas Gerais, a year after the collapse of the Samarco mining company's dam. The second is a Portuguese version of a report published by El País. It shows the work of a volunteer rescue group in Syria's Aleppo province in search of bombing survivors. In the analysis, we observed what ethical implications were found in these pieces.

1 Available in: <https://www.youtube.com/watch?v=fVrWFzdVKyI&t=1s> accessed on: oct. 05. 2024.

2 Available in: <https://www.youtube.com/watch?v=B4KfPv5zb84> Accessed on: oct. 05. 2024.

4.3.- Sampling

The total sample of the doctoral study was composed of 80 participants, between 18 and 65 years old (M=37.23), from different occupations. We do not use probabilistic selection methods, and are therefore not a representative sample. Thus, the selection was by convenience (Hayes, 2005), that is, the people included in the study were conveniently available. Concomitantly, the *snowball* method was used, which predicts that from one unit, there are other units “[...] that were cited or indicated by the former” (Sampaio & Lycarião, 2021, p. 75). The individuals agreed to participate in the research voluntarily and without gains of any kind.

We divided the participants into four groups of 20 people. Each group experienced one of the two contents in one of the two forms of consumption: VR glasses or laptop. All participants answered a questionnaire and six from each group were interviewed. Thus, the 24 people interviewed are the sample corresponding to the study of ethical aspects exposed in this text.

4.4.- Interview

Each question formulated sought to apprehend data from specific elements within the general study. However, in the analysis of ethical aspects, we do not focus on specific issues, as we find important subsidies in several answers. Chart 1 shows the questions that served as the basis for the semi-structured interviews.

Chart 1. Questions of the Interview

Questions

- 1) What is your age and profession or main occupation?
- 2) Tell me a little about what you felt while consuming the report, both feelings and sensations.
- 3) Regarding the experience of contact with this format, which allows you to look around and choose the angle of view, what are the positive points that you could consider compared to conventional video? If you think it has positives.
- 4) And what are the negative points that you could consider compared to conventional video? If you think you have negative points.
- 5) Did you feel any difficulty in following what the audio said and at the same time exploring the images, looking around? Or did you have no problem with that? How was this issue for you?
- 6) How did you feel about the environments presented in the report?
- 7) If this report had been shown on television, in conventional video format, do you think you would have understood the subject in the same way? Does this ability to look around bring something different for the better or for the worse in terms of understanding? If so, what exactly?
- 8) Do you think this is a good tool for journalism? Why?
- 9) Has anything caused any discomfort or concern related to ethical or credibility issues in this journalistic material you have consumed?
- 10) How do you think this type of content would fit into your news consumption routine? Would it really fit?
- 11) How are you consuming news these days?

Source: prepared by the researcher

For the study of ethical aspects, the analysis of the interviews was done qualitatively, based on Duarte (2006) and Goldenberg (2004). Thus, we do not seek recurrences, but richness within diversity. We assessed whether, what and how the ethical implications found in

360° reporting appeared in the responses.

In the text of the analysis presented below, we quote several excerpts from the interviews to support and exemplify the reflections. We highlight the lines in italics. To identify them, we created a code to indicate the content experienced and the device used in consumption: C1 (content 1 – *Bento Rodrigues*), C2 (content 2 – *Patrol in Aleppo*), OC (VR glasses), LP (*laptop*). We also indicate age and occupation, as they are elements that place the reports in generational and social contexts. This form of identification is in accordance with the guidelines of the Research Ethics Committee to ensure the anonymity of participants.

5.- Results

In this topic, we address the ethical implications directly related to the stimulus materials that are part of this study, in addition to the points addressed in the participants' reports, even if they have not recognized them as ethical issues.

When asked if anything caused any discomfort or concern related to ethical or credibility issues in the material experienced, the participants answered negatively, including the journalists who participated in the research. However, one of the journalists highlighted that it is necessary to think about specific ethical rules for the format. “[...] *create a prescriptive code before we have problems in this regard. Because it's a new reality, right?*” (Journalist, 30 years old, C2OC).

Among the ethical implications found in the pieces that were part of this study, the participants did not refer, not even the journalists, to the fact that neither of the two reports included several points of view on the subject addressed. In *Bento Rodrigues – the village that ceased to exist*, only the view of some residents about the disaster caused by the dam collapse is shown. There is no information related, for example, to the mining company Samarco that had its dam broken, nor the position of public agencies that would be responsible for inspecting, applying sanctions and providing assistance to residents. On the *YouTube* page where the play is hosted, there is also no such information.

In *Patrol in Aleppo with the Syrian White Helmets* there is a centrality in the work of the White Helmets, showing the positive side of the group's performance. On the *YouTube* page where the production is available there is also no information of the type. However, on the *El País* ³page where the video was presented and is currently no longer available, there is other information about the White Helmets, including the opinion of those who contest their work. If the piece is on this page, the text would complement the information that is missing in the audiovisual material, helping the user to form a critical view of the subject.

Another factor to highlight is manipulation. In the pieces analyzed, the manipulations made in the images and audio, in general, are simpler effects and commonly used in television journalism, such as slightly slow motion, pause in the image, use of a soundtrack and inclusion of some discrete graphic resources on the screen.

Regarding the manipulation for the omission of the team, we observed that it happens in the *Bento Rodrigues* report. However, there is no way to be sure if images of the people on the team were removed in the edit. But in some scenes it is possible to see some team members hiding behind the vegetation. The problem becomes ethically evident when this omission gives the impression that the characters are speaking spontaneously, without direction. This impression happened to some participants. “*And people were freer to talk about what they experienced right there, what they were seeing and passed on their feelings. Not something made up by the interviewer or conducted by the interviewer*” (Dentist, 37 years old, C1LP).

In the same play there is evidence of staging, as the characters behave according to a

³ Available in: https://elpais.com/internacional/2016/07/14/actualidad/1468492144_022014.html accessed on: oct. 05. 2024.

pattern: they introduce themselves, say the name of the street where they lived and point to the places explaining what the environments of their homes were like before the invasion of the mud. At times the characters look at the camera, causing the user to feel that they are looking directly at him, simulating a face-to-face.

For issues related to manipulations, researchers point out that one of the solutions is transparency. However, in neither of the two plays is there any mention and/or explanation of any artifice used, whether image and audio manipulation, or of situations through the omission of the team and staging.

Another ethical implication to highlight is the emotional stimulation of the narratives. We observed that simpler manipulations related to image effects and soundtrack were used in the analyzed pieces to increase the emotional charge. In the *Bento Rodrigues* report, even before any scene appears, the soundtrack already begins giving a tone of tension while the image is totally black. The first scenes of the village destroyed by the mud are accompanied by voices recorded on the day of the disaster. You can hear phrases like: "Samarco dam, it just burst. It's invading, like a tsunami"; "How do you warn? I'm not going to pass the bridge. Bento's people have to leave." Although it is a disaster and the stories portrayed are sad, we assess that there is no exaggerated emotional appeal in the production. Some survey participants also perceived a certain caution related to this. *"Although they are there telling what happened and what they lost in material goods and the traumatic emotional impact they had, but anyway it is a calmer, more moderate content"* (Doctor, 63 years old, C1LP).

In the report *Patrol in Aleppo*, at the beginning and at the end there are images in light slow motion of children playing in a park. These scenes are accompanied by a slow and sad soundtrack. We realized that the fact of showing children in a place where there is war contributed to the emotional charge, so much so that the images with children were the most spontaneously mentioned by the participants. *"The children, the little animals [poor things], before playing... in a little while everything will be destroyed"* (Receptionist, 44 years old, C2LP); *"I was even a little shocked by the content, right? So, because it shows such great devastation, then it shows a scene with the children, so it's very difficult"* (Software engineer, 35 years old, C2OC).

In the same play, images that show a rush are accompanied by a fast-paced soundtrack that expresses tension. The rush is caused by the threat of a second bombing in the same place where the White Helmets were already helping victims of a first bombing. There is no footage of the bombing, but of people running, including the person from the team holding the camera. In these images, the slow-motion effect is used again and then a brief pause in the scene is given, while the narration continues. Pérez-Seijo and López-García (2019a) make an ethical analysis of this scene and question the risks to the physical integrity of the team, placed in places where there is a clear risk of death. No survey participants questioned the risk to the team.

In general, the emotional charge of the experience lived with the reports was emphasized by several participants. *"I was very impacted, with the scenes, with everything [...] on the other hand it is also kind of disturbing"* (Journalist, 28 years old, C1OC). However, we know that any medium can be an emotion-provoking person. Therefore, emotion itself is not something exclusive to VR. So, we questioned: were the emotions really perceived by the participants as more intense?

The reports lead us to believe that the emotional potential is in fact greater in the experience with 360° audiovisual reports. This has been reported in various forms. For example, as something that shocks more: *"[...] it shocks you more because you have a broader view"* (Hospital receptionist, 35 years old, C1LP). As something more intense: *"[...] This information of the intensity of the thing is stronger when you look around. So, things get more intense for you"* (Doctor, 63 years old, C1LP). More real: *"So, I think it becomes more real, right? We can feel more, even the issue of emotions too"* (Nutritionist, 19 years old, C1OC). That brings

you closer to the feelings of being in the place: *"It gives you something more physical, you can feel that there, get closer to the feeling of being there"* (General services assistant, 31 years old, C2LP). That inserts the user into the scene: *"You feel inserted in the scene. So, really, it's a positive point. But it also brings a lot of anguish, a lot of emotion"* (Doctor, 65 years old, C2OC).

Among the reports associated with emotional issues of the experience, some indicated the development of empathy. *"I felt, like, really understanding their side. Putting myself in my place, what would it be like for me to lose the place of reference as my home"* (Dentist, 37 years old, C1LP); *"[...] We end up feeling a little bit and putting ourselves a little bit in our place. How would you react, how would you feel"* (Hospital receptionist, 35 years old, C1LP); *"[...] I felt a lot of empathy and also a little bit of pain"* (Mechanical Engineering student, 19 years old, C2OC).

Research points to a close relationship between a sense of presence and greater emotional involvement in immersive narratives (Baños et al., 2004; Diemer et al., 2015; Hardee & McMahan, 2017). This relationship was expressed very clearly in the reports of the study participants. *"Because it's like you're there and you want to see those people and you can't help, right?"* (Housewife, 57 years old, C2OC); *"And then you feel in that place too, feeling what the person is saying, what the two girls there and the boy said"* (Engineering teacher, 41 years old, C1LP).

In some reports, the feeling of presence and emotion served as a comparison between the experience lived through VR and the experience with news broadcast on television. *"Because on a TV that's far from me I can't do it like that... feel very [...]. But when you see, that feels there, there it looks a little more captivating. Emotionally, this emotional information. I capture more"* (Telemarketing attendant, 21 years old, C1LP); *"Nowadays you're so used to television scenes that you don't pay much attention. [...] That is, you are outside, you do not feel inside. The emotional part is missing. So, the difference is big. Everything there goes to the emotional"* (Doctor, 65 years old, C2OC).

6.- Discussion

We direct the discussion based on the objectives outlined for this article. The first: to identify ethical conflicts in the immersive narratives studied. In the analysis of the two reports that are part of this research, we identified dilemmas that problematize the ethics of the decisions made by producers. However, we emphasize that by evidencing these tensions, we did not intend to indicate the right and wrong decisions, we only sought to show the main dilemmas involved based on what other researchers problematize.

Thus, in the report *Bento Rodrigues – the village that ceased to exist*, we highlight: only one side of the fact is shown; manipulations were carried out in the situations during the recordings, involving omission of the journalistic team and staging of the characters, directing how they should act and simulating a face to face, as if the characters looked and spoke directly to the user; and there was a failure in transparency by not informing decisions that confront ethics and justifying them. Already in *Patrol in Aleppo with the Syrian White Helmets* we point out: only one side of the fact is shown; it involves sensitive content and video and audio manipulation strategies are also used to increase the affective load; images of children are used in two moments of the report, enhancing the emotional impact; the integrity of the journalistic team is put at risk; and there was a lack of transparency in not informing that there are images with greater emotional impact. Too much focus on empathy may also be involved.

After diagnosing the ethical dilemmas involved in the analyzed reports, we can discuss the second objective: to ascertain which of these ethical conflicts are perceived by the users participating in the research. When asked specifically about the ethics and credibility of the reports, none of the participants acknowledged any issues as an ethical issue. It was clear that practically no such concerns were part of the experience they had.

Among the possible explanations for this, we can mention the probable low literacy for journalistic ethics (Christofoletti; 2018), which results in little public knowledge about what journalistic ethics is. But, given that not even the journalists participating in the research pointed out any more forceful aspect, there is an explanation related to cognitive load, as this report seems to show: *“You have more resources visually to look at. But it also leaves you confused because it’s a lot. In this scenario there was a lot for you to see. There is too much information too”* (Journalist, 37 years old, C2LP). The argument is that the mental processing of the experience, which would be overloaded by the development of the sense of presence and the large volume of image and audio information to apprehend, may exceed the user’s cognitive capacity. With this, the brain selects the activities that should be done, giving priority to some, to the detriment of others (Vettehen et al., 2019). Therefore, the assumption is that there is no allocation of mental capacity to think critically or question aspects related to ethics, so that nothing about this is reflected during the experience.

We observed that the sense of presence has an important influence on discussions about the non-perception of ethical aspects in 360° video narratives. First, the mental processing of the sense of presence contributes to a cognitive overload of the user, making it difficult to develop critical analyses and perceive ethical issues. Another implication of the feeling of presence in the non-perception of ethical aspects is related to manipulation. In this sense, the realization of manipulations that confront ethics in order to privilege the sensation of presence, paradoxically, can result in perceptions that reality has been portrayed in a more reliable way, without manipulation and in a transparent, therefore more ethical, way. A third link lies in the more emotional potential of storytelling for VR. This greater affective load is closely related to the feeling of presence and both are related to a greater persuasive capacity of this type of content (Grigorovici, 2003). Therefore, this can also reduce the likelihood that the user will notice ethics issues in immersive storytelling.

We also showed that emotional stimuli alone also cause ethical concern, as the participants showed that the experience with journalistic content for VR is actually accompanied by greater emotional appeal compared to other media, even when a device with less sensory stimulation, such as a laptop, is used. The trend of developing empathy in the experience with the two devices was also evident, being more noticeable in those who used the VR glasses.

So, we can say that 360° audiovisual journalism tensions journalistic ethical principles present in codes of ethics in force in newsrooms around the world. Thus, this study also reinforces the argument that journalistic ethics needs to be debated and restructured, requiring “[...] a profound conceptual reform, willing to sacrifice some ideas that today no longer stand and capable of absorbing more oxygenated notions of emerging professional practices” (Christofoletti, 2018, p. 145).

We also point to the need for greater public participation in discussions and responsibilities about ethics in journalism, as the ethics agenda currently depends on mutual collaboration (Christofoletti, 2018). The fact is that today the public actively participates in the circulation, signification and resignification of journalistic messages. The participation of the public in the informational process is even greater in 360° audiovisual journalistic narratives, to the extent that the user himself chooses what he wants to see, from the spherical images offered.

7.- Conclusion

In this article we aim to reflect on the ethical implications in immersive journalistic narratives produced in 360° video. First, based on the literature review, we list the main ethical dilemmas related to 360° audiovisual journalism. Then, we identified which of them were present in the reports that were part of the study. Next, we analyzed the reports of 24 participants to find out if and which ethical aspects were perceived. Participants experienced 360° audiovisual journalistic content before being interviewed.

We observed that no ethical dilemma was perceived as such. One of the justifications we pointed out was the possible low literacy for journalistic ethics, so that users do not know what criteria it refers to and what the role of the public is in this issue. However, not even the journalists who participated in the study pointed out ethical dilemmas. Thus, we sought other possible justifications that make a relationship between the feeling of presence and the lack of perception of problematic ethical aspects in the narratives studied. One of them addresses the issue of cognitive load. The assumption is that mental processing is overloaded in the development of the sense of presence, and there is not enough mental resources allocated to make critical analyses of ethics. A second point is related to manipulation, pointing out that, in order to privilege the sensation of presence, manipulations are carried out that confront ethics, resulting, paradoxically, in perceptions that reality has been portrayed in a less manipulated and more transparent, therefore more ethical, way. A third point is the connection between the sense of presence and the emotional charge of 360° audiovisual narratives. Researchers indicate that there is an association between a sense of presence, emotional content and greater persuasive capacity, leading to a facilitation of persuasion, thus making it difficult to question both ethics.

Concluding the discussions, we show that the socio-media reality confronts the way in which principles and practices related to journalistic ethics are understood. Thus, we show that 360° audiovisual journalism is one of the formats made possible by emerging technologies that tension these discussions and the public is not always aware of which practices confront ethics, becoming more vulnerable to manipulation and possible damage. At the same time, we understand that ethical responsibilities related to news should not be a duty of journalists alone. In a context in which the user has more and more participation and power of choice (including the angle of vision within the narrative), it is necessary to include him in this debate, discussing the literacy of users and even of journalists themselves in this sense.

We emphasize that the results of this study cannot be generalized since they have limitations and are directly related to the selected sample, the specificities of the devices used by the participants, the stimulus materials and all other research conditions. In addition, in this discussion on ethics, although we used pieces in Portuguese, we did not analyze Brazilian codes of ethics, nor did we find studies that had done so. We only found and included studies that analyzed codes of ethics from other countries, and there may be some divergence in relation to Brazilians. However, we know that journalism is a practice done all over the world, following very similar principles.

We highlight the importance of future research to address journalistic ethics from the perspective of users involving immersive media contexts based on new possibilities that arise from technological development, such as the metaverse, artificial intelligence, and more advanced virtual reality devices.

References

- Aitamurto, T. (2019). Normative paradoxes in 360° journalism: Contested accuracy and objectivity. *New Media & Society*, 21(1), 3-19. DOI: <https://doi.org/10.1177/1461444818785153>
- Baños, R., Botella, C., Alcañiz, M., Liaño, V., Guerrero, B. & Rey, B. (2004). Immersion and emotion: their impact on the sense of presence. *Cyberpsychology and Behavior*, 7(6). DOI: <https://doi.org/10.1089/cpb.2004.7.734>
- Barbosa, S., Silva, F. & Lima, L. (2024). The Internet of Things and Its Impact on the Platformization of Journalism. In: J. Sixto-García, A. Quian, A. Rodríguez-Vázquez, A. Silva-Rodríguez & X. Soengas-Pérez (Eds). *Journalism, Digital Media and the Fourth Industrial Revolution*. Palgrave Macmillan. DOI: https://doi.org/10.1007/978-3-031-63153-5_9
- Christofoletti, R. (2018). Uma proposta de reforma para a ética jornalística. *Estudos em jornalismo e mídia*, 15(2), 145-148. DOI: <https://doi.org/10.5007/1984-6924.2018v15n2p145>

- De La Peña, N. (2019) *Inventing Immersive Journalism: Embodiment, Realism and Presence in Nonfiction*. [PhD thesis, University of Southern California]. <http://bit.ly/4bT6XfM>
- De Le Peña, N., Weil, P., Llobera, J., Giannopoulos, E., Pomés, A., Spanlang, B., Friedman, D., Sanchez-Vives, M. V. & Slater, M. (2010). Immersive Journalism: Immersive Virtual Reality for the First Person Experience of News. *Presence: Teleoperators and Virtual Environments*, 19(4), 291-301. DOI: https://doi.org/10.1162/pres_a_00005
- Diemer, J., Alpers, G., Peperkorn, H., Shiban, Y. & Mühlberger, A. (2015). The impact of perception and presence on emotional reactions: a review of research in virtual reality. *Frontiers in psychology*, 6. DOI: <https://doi.org/10.3389/fpsyg.2015.00026>
- Duarte, J. (2006). Entrevista em profundidade. In: J. Duarte & Antonio Barros (Orgs.). *Métodos e técnicas de pesquisa em comunicação* (pp. 65-83). São Paulo: Atlas.
- Goldenberg, M. (2004). *A arte de pesquisar*. Como fazer pesquisa qualitativa em Ciências Sociais. Rio de Janeiro: Record.
- Green, D. P., Rose, M., Bevan, C., Farmer, H., Cater, K. & Fraser, D. S. (2021). 'You wouldn't get that from watching TV!': Exploring audience responses to virtual reality non-fiction in the home. *Convergence: The International Journal of Research into New Media Technologies*, 27(3), 805-829. DOI: <https://doi.org/10.1177/1354856520979966>
- Grigorovici, D. (2003). Persuasive Effects of Presence in Immersive Virtual Environments. In: G. Riva, F. Davide & W. A. Ijsselstein (Eds.). *Being There: Concepts, effects and measurement of user presence in synthetic environments* (pp. 191-107). Amsterdam: los Press.
- Hardee, G. & McMahan, R. (2017). FIJI: A Framework for the Immersion-Journalism Intersection. *Frontiers in ICT*, 4.
- Hayes, A. (2005). *Statistical methods for communication Science*. Mahwah, New Jersey, London: LEA. DOI: <https://doi.org/10.3389/fict.2017.00021>
- Jones, S. (2017). Disrupting the narrative: immersive journalism in virtual reality. *Journal of Media Practice*, 18, 171-185. DOI: <https://doi.org/10.1080/14682753.2017.1374677>
- Kool, H. (2016). The Ethics of Immersive Journalism: A rhetorical analysis of news storytelling with virtual reality technology. *Intersect*, 9(3).
- Laws, A. L. & Utne, T. (2019). Ethics Guidelines for Immersive Journalism. *Frontiers in Robotics and AI*, 6(28). DOI: <https://doi.org/10.3389/frobt.2019.00028>
- Lima, L. (2022). *A experiência do usuário com conteúdos de jornalismo audiovisual em 360° e a centralidade da sensação de presença*. [PhD thesis, Universidade Federal da Bahia].
- Lima, L. & Ramalho, R. (2022). Reportagem em vídeo 360°: um estudo do efeito percebido em terceiros. *Significação: Revista de Cultura Audiovisual*, 49(58), 1-20. DOI: <https://doi.org/10.11606/issn.2316-7114.sig.2022.185159>
- Lin, C. C. & Hsu, Y. C. (2019). *Convergence of Virtual Reality and Real Virtuality: The New Ethical Thinking on Immersive Journalism*. ATINER Conference Paper Series, Athens Institute for Education and Research ATINER.
- Madary, M. & Metzinger, T. (2016). Real virtuality: A Code of ethical Conduct. Recommendations for Good Scientific Practice and the Consumers of vR-Technology. *Frontiers in Robotics and AI*, 3(3), 1-23. DOI: <https://doi.org/10.3389/frobt.2016.00003>
- Nakagawa, T. (2017). *Examining the Ethical Implications of Virtual Reality in Journalism* [Master's thesis, University of Missouri].
- Pérez-Seijo, S. & López-García, X. (2019a). La ética del Periodismo Inmersivo a debate. *Hipertext.net*, 18, 1-13. DOI: <https://doi.org/10.31009/hipertext.net.2019.i18.01>
- Pérez-Seijo, Sara; López-García, Xosé. (2019b). Five Ethical Challenges of Immersive Journalism: A Proposal of Good Practices' Indicators. In: A. Rocha, C. Ferrás & M. Paredes (Eds.). *Information Technology and Systems*. Springer, Cham. DOI: https://doi.org/10.1007/978-3-030-11890-7_89
- Sampaio, R. & Lycarião, D. (2021). *Análise de conteúdo categorial: manual de aplicação*. Brasília: Enap.
- Sangra, S. (2019). Scope and Ethical Implications of Immersive Storytelling and Journalism. *Global Media Journal (Arabian Edition)*. <https://bit.ly/4ksZiJ3>
- Santaella, L. (2001). *Comunicação e pesquisa: projetos para mestrado e doutorado*. São Paulo: Hacker

Editores.

- Steibel, F. (2014). Classificação Indicativa: uma análise do estado da arte da pesquisa sobre o tema no Brasil. *In: A. Macedo, D. Pires & F. Anjos (Orgs.). A experiência da classificação indicativa no Brasil* (pp. 27-49). Brasília: Ministério da Justiça. Secretaria Nacional de Justiça.
- Vettehen, P. H., Wiltink, D., Huiskamp, Ma., Schaap, G. & Ketelaar, P. (2019). Taking the full view: How viewers respond to 360-degree video News. *Computers in Human Behavior, 91*, 24–32. DOI: <https://doi.org/10.1016/j.chb.2018.09.018>
- Winques, K. & Longhi, R. R. (2020). Mediação, recepção e consumo frente à explosão dos algoritmos. *In: Anais do 29º ENCONTRO ANUAL DA COMPÓS*, Associação Nacional dos Programas de Pós-Graduação em Comunicação.

