

# SOUND- SCAPES AS DOCU- MENTARY

Warrant In  
Animated Film

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## ABSTRACT

In animated documentary films, realism is often achieved with the use of real audio interviews. While many theorists argue that these recordings validate the genre, this research examines how the overall soundtrack reinforces the documentary classification of animated films. Can an animated documentary establish a sense of reality through sound? This study addresses the gap between theoretical frameworks by R. Murray Schafer, Barry Truax, Michel Chion, and Randolph Jordan, and their application to animated documentary film. Using the animated film *Percebes* as a case study, this article explores how soundscapes contribute to the pursuit for realism and an emotional experience. This study explores how the environmental sounds construct a narrative that reflects the changing acoustic identity of the Algarve region. Does sound serve as a bridge between animation and reality? Is this connection essential to animated documentary?

**Keywords:** Soundscape; Animated documentary; Sound design; Acoustic ecology; Audiovisual ecology.

## 1. INTRODUCTION

In the world of animated film, the documentary genre frequently relies on real people's audio interviews to be the object that provides a sense of realism (Ehrlich, 2021). Although many theorists state that those sound recordings are what gives an animated documentary film a true sense of realism and authenticity, this research explores how the soundtrack helps and reinforces the documentary classification for this genre of animation films. Can an animated documentary achieve a sense of reality through the sole use of sound?

This research sprang from the need to demonstrating an evidence gap between theoretical frameworks developed by R. Murray Schafer, Barry Truax, Michel Chion, and Randolph Jordan, and the animated documentary film. How do concepts of *acoustic ecology*, *soundscapes*, *added value*, and *audiovisual ecology* shape the sound design of this genre in question and help the perception of realism? This article explores these questions by evaluating the different frameworks, using the sound design of the animated documentary

*Percebes* as a case study and demonstrating how it achieves the role of establishing reality and evoking an emotional experience.

The directors of this film used audio interviews of local workers and residents as a starting point for the filmmaking process (Caetano, 2025), allowing the sound to create a narrative that conveyed a sense of cultural displacement, a tourism-driven economy, and the transforming acoustic identity of the region. Fundamental to this analysis is the question of how soundscapes in *Percebes* reflect the experiences of locals in the Algarve region in response to the growth of tourism throughout the past decades and its implications on the area.

In the context of soundscape research and animated documentary theory, this article attempts to establish an understanding of sound design methodologies in future animated documentaries. Ultimately, this research studies the role of sound as a connection between animation and reality. Frameworks by R. Murray Schafer, Barry Truax, and Randolph Jordan help demonstrate that sound elements, beyond just audio interviews, can be used as powerful creative tools for documentary storytelling, thus serving as a connection to the reality. However, one key question is whether this connection is essential and if documentary cinema actively seeks it.

## 2. ACOUSTIC ECOLOGY

R. Murray Schafer and his colleagues founded the World Soundscape Project (WSP) at Simon Fraser University in Vancouver in the early 1970s. It was a research initiative focused on the study of acoustic environments and it emerged from a concern about noise pollution and the transformation of the sonic landscape of Vancouver. This initiative resulted in a rich analogue tape collection and book publications on the subject (WSP, n.d.).

This research led to the concept of *Acoustic Ecology*, which Schafer describes as the study of how the acoustic environment, or soundscape, influences the physical and behavioural responses of living beings (Schafer, 1994). Truax emphasises the crucial role of sound in collective perceptions of space and belonging in a community, with the habitual sounds people experience daily establishing a sense of physical space. This awareness of their habitual acoustic environments leads to the recognition of both familiar sounds that define a place and disruptive sounds that could be perceived as “sound pollution”. The WSP defines sound pollution as sounds that feel intrusive or disruptive to the acoustic character of a place and categorises the

act of listening itself as part of the acoustic experience (Truax *et al.*, 2017). This framework seeks to identify imbalances in the soundscape that may have negative consequences.

When first popularised in the 1970s, the concept of Soundscape by Schafer was introduced as an understanding of the acoustic environment as a field of study. The term refers to the environments themselves, abstract musical compositions, tape montages, or even radio programmes (Schafer, 1994). This definition allows for the analysis of multiple acoustic events such as urban landscapes and artistic creations. However, Schafer states that framing an exact impression of a soundscape is more difficult than that of a landscape (Schafer, 1994). As Ian Thompson notes, soundscape research seeks to analyse the relationship between acoustic communities and sonic environments (Ian Thompson *et al.*, 2022). Barry Truax, one of the founders of the World Soundscape Project alongside R. Murray Schafer, uses the term soundscape to define an environment perceived by the people living in it and how each listener is constantly engaged in a dynamic system of shared information (Truax *et al.*, 2017). Further meaning comes from the International Organization for Standardization, or ISO, stating that for each soundscape there is a cognitive process of perception, leading to an interpretation of what we consciously or unconsciously hear as individuals (Acoustics - Soundscape - Part 1: Definition and Conceptual Framework, 2014). This perspective aligns with Paul Rodaway's observation that soundscapes are not static objects but dynamic processes of engagement that unfold as individuals move through and interact with their environments (Rodaway, 2002). Additionally, Ari Y. Kelman recalls the multiple appropriations of the term throughout the years. "Soundscape" has taken meanings of natural/urban environments, musical composition, or sound art installations (Kelman, 2010). Although we acknowledge the fluidity of the term, in this study we will use the term according to Schafer and Truax's definition. For a deeper and significant study of soundscapes, we need to better understand additional related concepts.

### 3. SOUNDSCAPES

Soundscapes are the opposite of stationary and, unlike a photograph, difficult to register in a single moment (Schafer, 1994). At the basis of Schafer's framework and of that introduced by the World Soundscape Project, analysis of a soundscape proposes the identification of its most significant features (Schafer,

1994). The concepts are *keynote sounds*, *sound signals*, and *soundmarks*. They collectively shape the acoustic character of any environment and, in sound design, this nomenclature helps to organise sounds into categories regarding their purpose in a composed soundscape (Ian Thompson *et al.*, 2022).

The term *keynote sounds* forms a tonal anchor against which other sounds are perceived and could take the form of road traffic, wind in the trees, or a distant ocean. They shape the overall perception of a place by those who live in it (Schafer, 1994).

*Sound signals*, in contrast, are any sounds that draw attention to themselves. They serve as key elements within a soundscape, against the constant *keynote sounds*, and could be the sound of car horns, sirens, or an ice-cream van chime (Schafer, 1994).

Deriving from the concept landmark, *soundmarks* are distinctive sounds valued for their unique or culturally qualities in a community. These sounds, such as a passing train or a church bell, contribute to the acoustic identity of a place and hold a special meaning for the people who experience them regularly (Schafer, 1994).

Gokce Kinayoglu expands on this framework, highlighting that this classification of sounds, whether as *keynote sounds*, *signals*, or *soundmarks*, can shift depending on the context and listener experiences. For instance, the horn of a ship could serve as navigational *sound signal* for a captain but function as a *soundmark* that has cultural and sentimental value for others (Kinayoglu, 2009).

In an attempt at categorising different soundscapes, Schafer proposed a distinction between what would be a *hi-fi* (high fidelity) and *lo-fi* (low fidelity) soundscape. The former has a high signal-to-noise ratio, as discrete sounds are clearly heard due to a low ambient noise and do not overlap each other. These soundscapes, often found in rural places or at night, allow for a greater hearing in the distance as they make the distinction between close and far sounds easier – Schafer compares it to long-range viewing (Schafer, 1994). The latter, in contrast, has a low signal-to-noise ratio and emerges from densely populated cities. An excessive sum of sounds masks individual ones which, in turn, reduce the acoustic clarity and perspective. This distinction highlights the impact of environmental noise. As Schafer states, the historical transition from *hi-fi* to *lo-fi* soundscapes reflects a change in the society as the transition from rurality to industrialisation expanded (Schafer, 1994).

While Paul Rodaway acknowledges that this characterisation is useful for an auditory geography and provides a good foundation for investigation,

it lacks precision, insofar as our auditory senses are more ambiguous. He questions how individuals discern between a signal and noise, as this is ultimately subjective, comparing the process to the sense of smell (Rodaway, 2002). This ambiguity stresses the cultural and contextual dimensions of a hearing experience, which makes defining or categorising soundscapes in absolute terms more difficult. He further develops the discussion by recalling the importance of appreciating the unique acoustic qualities in a soundscape, particularly in an urban environment. In these contexts, the amplified sounds dominate other natural ones, which in turn, result in a soundscape characterised by juxtaposition rather than relationship (Rodaway, 2002) – this could take shape as a car engine revving against the sound of birds chirp.

In his book *Acoustic Communication*, Barry Truax complements these ideas by emphasising their ecological dimensions. Truax argues that soundscapes should be analysed as interconnected systems of which the listener a forms part, rather than being merely a passive listener. This approach, based in *acoustic ecology*, views natural soundscapes as dynamic environments where human artifacts may or may not be integrated, challenging the idea of a “pristine” soundscape. His work recognises the implications of separating humans from nature, suggesting that this mindset leads to the unbalance of the nature itself. Therefore, *acoustic ecology* examines natural soundscapes as fundamental to human soundscapes and they serve as valuable models for study (Truax, 2001).

Another term central to the present discussion that emerged from the WSP research is *acoustic community*. Truax defines it as any environment where sound plays an extensive role in the lives of its inhabitants, comparable to an enclosed space like a small room or a large building. For those within the community, these sounds provide important information about individual and collective life which reinforces an identity link and sense of place (Truax, 2001). The study of soundscapes and acoustic ecology reveals the significant relationship between sound, environment, and human perception.

Although this framework, developed by Schafer and Truax, has been the subject of many studies and research, it does have its limitations, as theorists like Rodaway and Kinayoglu have more recently argued. Nonetheless, these theories remain important in the study of sound and, as we will confirm in the next segments, the distinction between *hi-fi* and *lo-fi* provides a useful tool for analysing the soundscape in any film (Jordan, 2010).

The following sections seek to understand the role of soundscapes and their categorisation in animated documentary, as well as the implications of

this on the process of sound designing. This understanding leads to a more organised framework for future films of the same style. The importance of these concepts relies on the description of the sounds intended by directors and how those sounds correlate with each other. This insight provides a helpful framework for the initial development of a film's soundtrack, especially one that relies heavily on sound to portray reality – as is the case of *Percebes*.

#### 4. AUDIOVISUAL ECOLOGY

Michel Chion is well-known for his theories of film sound. One of these is the concept of added value, where sound enriches an image, giving the impression that any information or expression comes directly from the image. Added value challenges the notion that sound simply illustrates an image, when in reality it expands it. He also argues that sound in film is inherently *voco- and verbocentric*, meaning human voices dictate our attention as human beings, as they naturally occur in our habitat (Chion, 1994).

In his book, *Audiovision: Sound on screen*, Chion highlights the ambiguity of sonic verisimilitude, establishing a difference between sound that appears true for the spectator and sound that is actually true. Its truthfulness, or lack thereof, is largely constructed by conventions in cinema, rather than our lived experience. When hearing a “realistic sound”, we are unable to compare it directly with the real sound, therefore can only compare it with our memory – largely influenced by films we watch. Chion gathers these insights to argue that the pursuit of realism in film sound has its weaknesses and limitations (Chion, 1994).

The writings of Thomas Görne go further in this sense, mentioning that the key to realism of an acoustic setting is not being dependent on the real sounds and a high amount of detail. To guide the audience's focus, it is best to choose sounds that are convincing and persuasive (Görne, 2019). This perceptual realism of highlighted sound objects is common amongst sound designers. Likewise, Görne speaks of an approach that relies on distinctive and powerful sounds that stand out from the background. This is important in soundscapes study because it offers a framework for creating soundscapes themselves when illustrating the reality of a documentary. It emphasises choosing the right sound to convey meaning, instead of relying on only real sounds (Görne, 2019). J.F.W. Aalbers extends the idea that for sound to feel real, its representation needs to resemble the original or, at least, align with the

audience's expectation regarding it (Aalbers, 2013), thus confirming Chion's belief.

A useful parallel can be drawn from the art of radio documentary. Dmae Roberts, in the book *Reality Radio*, argues that, in some cases, the real moments are found in the audio recordings' imperfections. Roberts calls them glimpses of the backstage and are accidental and mundane fragments of sound – such as a person's cough in the background of an ambience recording (Roberts et al., 2017). These imperfections can also help soundscapes achieve a sense of reality, regardless of the medium.

Proposed by Randolph Jordan, *audiovisual ecology* highlights the separation between sound and image as a fundamental strength in cinema, rather than a weakness. This concept incorporates ideas from R. Murray Schafer and Michel Chion regarding the study of sound and film (Jordan, 2010).

Let us, just as Jordan does, recall Chion's idea of the dual nature of film, mentioning that the voice and the body exist in conflict in the film sound (Chion, 2001). Chion argues that thinking of image and sound as separate entities does not help understanding their relationship (Chion, 1994). Thus, as Jordan presents, for any given film, to discuss only the soundtrack is to assume that sound remains separate from the image (Jordan, 2010), denying the discussion of a reality of sound in film.

In his proposal, Jordan reflects on the idea of audiovisual synchronisation – the separation of sound and image, as well as their union – when arguing that the term ecology is well adapted for his description of film sound as a medium both divided and whole. By claiming the term *audiovisual ecology*, one of his goals was to understand and assume the presence of mediation between sound and image in a film as a pivoting point to the cinematic experience, rather than searching for simulated reality (Jordan, 2010). The study of *acoustic ecology* is thus fundamental to the analysis of space in any given film - deprived of the image, how can one perceive to which level the sound builds upon? Does the sound in a particular scene take us away from the world the characters live in or make us feel further enveloped by it? Jordan invites us to accept cinema as a medium with gaps that hold it together (Jordan, 2010). This will be especially relevant in the discussion of sound in animated documentaries further ahead.

Linking Jordan's and Chion's concepts explained above, we can suppose that achieving reality in a film is neither ideal nor recommended. With these frameworks and ideas, we strive to understand the relationship between sound and image and how we can, while acknowledging its characteristics, convey the film's reality as intended by many directors.

## 5. ANIMATED DOCUMENTARY

The ability of animation in documentary filmmaking to portray reality has been widely debated. As Bona Bones notes, one of the main arguments against animated documentaries is their perceived inability to capture “reality”, which some argue disqualifies them from being considered accurate representations. This conception assumes that documentary filmmaking is capable of true objectivity, which is a notion that is increasingly recognised as flawed (Bones, 2015). For Bones, all documentaries, animated or non-animated, are inherently subjective, for the filmmaker is not a machine replicating reality but rather a lens through which the spectator views the world. Total objectivity is inaccessible, and this perspective supports the postmodern understanding of documentary filmmaking (Bones, 2015). Bill Nichols, although referring to live-action documentary, states that this genre is more than evidence of our world, as it offers a perspective which leads to an interpretation of the world (Nichols, 2010).

A key concept in this discussion is the notion of “documentary guarantee” proposed by Tess Takahashi. Documentary guarantee refers to the methods used to establish a connection to truth in a film (Takahashi, 2011). In animated documentaries, this guarantee often depends more on the relationship between sound and image rather than on visual realism. Bones argues that to establish a claim to truth, non-mimetic documentaries can deviate from real images, which conventionally serve as the documentary guarantee in film. This approach allows filmmakers to expand the traditional visual and audio techniques in the creation of a documentary guarantee. The relationship between sound and image enables factual and fictional elements to coexist in the same space while still being perceived as truth – a duality that allows animated documentaries to present, simultaneously, both a reality and a critical commentary of it. As visuals may derive from a “factual image” – drawings or other representations of a place – sound stands as the documentary guarantee, therefore establishing a sense of reality. What serves as an anchor to the truth claim is sound elements such as narration, dialogue, or even interviews (Bones, 2015). In this context, although Bones does not define the term *factual*, the *Merriam-Webster’s Dictionary* describes it as relating to or based on facts (Merriam-Webster, n.d.). Hence, for this study, we may refer to factual sound or image as elements recognised as representing reality.

Bones developed a model that has proved useful for describing the delicate balance between factual and fictional elements. This relationship

functions like a “pendulum”, where a film falling on the first point (Point A) would leave room for images to deviate from the truth as needed, as the sound remains. In the opposing side (Point C), a film may minimise the role of sound to support the truth claim, since the images are factual. Finally, in the middle, we can observe the Point B - a fusion between the two ideas. In this case, the film can no longer be categorised as documentary since the audience cannot identify or establish any anchor for a documentary guarantee. This balance allows such films to serve as a representation of reality and a critical commentary on it (Bones, 2015).

Annabelle Honess Roe expands the term by defining an *evocative animated documentary* as a film that, using animation, conveys a subjective state of mind. These types of film, aware of the inherent limitations in representing sensations and moods in live-action, benefit from the medium and its capacity to portray a feeling or mental state. What Roe argues is that they enable spectators to understand an unfamiliar experience by appealing to our imagination (Honess Roe, 2021). Roe recalls Bill Nichols’ view on documentary - they address the world we live, rather than a world (Nichols, 2010).

Nea Ehrlich furthers this discussion by asserting that we must not think of animation as a genre or medium, but rather an approach or an aesthetic – Ehrlich views animation as means of conveying meaning (Ehrlich, 2021). She expands on the topic claiming that audio interviews are more common in animated documentaries, as they establish the presence of protagonists, whose physical forms may not appear visually. These audio interviews serve as a “warranting device” – a term coined by Steven Lipkin to help identify elements in a documentary that anchor to the reality, thus increasing a sense of truth (Ehrlich, 2021).

As Bones further developed, this characteristic allows for more fluid and interpretative visual illustrations. This dynamic enables the visuals to deviate from conventional realism while retaining a strong sense of connection to the world through sound. The soundtrack plays a central role in maintaining the documentary’s truth claims, which highlight the physical existence of the subjects and reinforces the film’s truthfulness (Bones, 2015).

As Roe, Bones, and Takahashi argue, the plasticity of animated documentaries enables them to explore unique modes of storytelling and push the boundaries of traditional documentary filmmaking. This union also encourages audiences to perceive the world from a different perspective. However, as Paul Ward states in relation to an inherent scepticism in animated documentaries, their animated images contrast with the indexicality of real-

world sounds, particularly when using audio interviews. This contrast results in an ambivalent viewing experience as audiences are aware that real people and events are being reinterpreted through an artificial reconstruction. The artificiality of animation emphasises its very nature and thus makes viewers question the authenticity of what they see (Ward, 2011).

This scepticism correlates with the concept of *audiovisual ecology* by Randolph Jordan, as it emphasises the role of sound in portraying the “real world”. Jordan’s proposal recognises the separation of sound and image as an inherent characteristic of film, rather than a flaw (Jordan, 2010). This perspective supports the way animated documentaries establish their “documentary guarantee” through sound and not a real image. In this context, audio interviews of real people and even other audio elements help to anchor the documentary’s truth claims – they serve as an example of *audiovisual ecology*’s relationship between image and sound. It results in a fusion that accentuates how both ideas reject the pursuit of a realistic film in favour of an interpretative portrayal of the reality, while accepting cinema as a medium with gaps that hold it together, especially animated documentary.

## 6. *PERCEBES*

Directed by Alexandra Ramires and Laura Gonçalves, *Percebes* is a Portuguese animated documentary short film produced by BAP – Animation Studios. Its title translates to goose barnacles. *Percebes* portrays the journey of the shellfish since its harvest to its consumption. As a backdrop, it explores the correlation between the shellfish’s traditional harvesting and the growth of tourism industry in the Algarve region (BAP, 2024).

An interview with CNN Portugal highlights how the film uses animation to explore the environmental and cultural impacts of tourism on local communities. With the integration of real people’s audio interviews, the directors pursued the experiences and challenges faced by the Algarve’s inhabitants – sound drives the narrative (Caetano, 2025). The audio interviews serve, as mentioned before, as a connection to reality.

Both directors define their film as a documentary, as it portrays a concrete reality by using real voices and testimonies. Nonetheless, there is a process of interpretation of the reality throughout the film, remembering that one of the advantages of animation is the ability to approach other themes and tell stories that live-action cinema cannot do it as easily. Animation allows Ramires and

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Gonçalves to explore metaphors and visual poetry. They pursue a connection to the audience with the use of symbolic images (Caetano, 2025). This idea directly aligns with Honess Roe's concept of evocative animated documentary. This type of film seeks to convey familiar experiences by appealing to the viewer's imagination (Honess Roe, 2021).



**Fig. 1** - *Percebes* - Vitrine.  
©Alexandra Ramires and  
Laura Gonçalves.

In *Percebes*, this can be exemplified in a scene where the sound recording of an interviewed person is visually represented by a fish in a vitrine. This scene mimics the feeling Algarvians have towards tourism, where they feel trapped in their own space.

The idea behind the film came from the Directors' own experiences, having lived in the most touristic cities in Portugal. With this first-hand experience in dealing with exponential tourism growth and, therefore, of the transformation of Porto and Lisbon, Alexandra and Laura question what lies in the future of similar places. More importantly, how do people feel these changes, especially in the Algarve region. (Caetano, 2025).

## 7. CASE STUDY AND DISCUSSION

How does this study help to reach an understanding or a workflow to develop the soundtrack of an animated documentary film?

This section will discuss the role of sound in *Percebes* and analyse some of the soundscapes present in the film, acknowledging the concepts mentioned so far - keynote sounds, sound signals, and soundmarks help us understand how sound communicates the region's environmental and culture changes. Theories of acoustic ecology and acoustic community will then be used to reflect on the Algarve's inhabitants' perception of the tourism impact. These concepts help sound construct a sense of realism and enhance the audience's connection to the film, in accordance with the directors' intent.

One of the main objectives for both directors was to portray their experiences growing up in touristic places. Alongside the interviews of locals that served as a basis for the illustration and film's narrative, Alexandra and Laura sought, with the use of sound, to allow audiences to experience how people from Algarve live throughout the whole year.

Throughout its twelve minutes run time, *Percebes* presents a variety of scenes and shots of the region and the people interviewed there. In this section we focus on a selected few that best illustrate this research's theme. This methodology consists of categorising the sounds heard in those moments, as well as understand their relationship with each other and the intention behind the sound design choices.

From the starting point of audio interviews, one can recall Roberts' sense of realism in the imperfections of sound recordings (Roberts *et al.*, 2017). If real-people audio interviews are a connection to reality, then the sound of children playing in the background of a person speaking enhances the perceived realism of it. Such was the case in *Percebes*, throughout many scenes in the film. Although these imperfections diminish the perceptibility of the dialogue, they add to the perceived reality of the spoken word, thus giving the film a documentary assurance.

One of the primary dichotomies present in *Percebes* is a sense of the touristic high and low-season. While the first is represented across most of the film's scenes, for this analysis we focus on the one below (see Figure 2). This scene is illustrated with soundscapes dominated by foreign language and the constant presence of urban traffic and buildings constructions. An analysis of this soundscape, through the lens of Schafer, allows us to categorise the different sounds we hear in these scenes that represent the peak of summer. Serving as an underscore, the sounds of car traffic and city hum fit into the concept of *keynote sounds*, insofar as they may be unnoticed but define the sonic atmosphere. *Sound signals* as the sound of construction workers, jackhammers, children playing, and seagulls – a constant presence across the

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high-season. Finally, *soundmarks* can be exemplified by the clatter of white storks, which symbolise the arrival of good weather and therefore the arrival of tourists. These examples communicate on behalf of what Schafer calls a *lo-fi* soundscape – although it is possible to hear the different sounds, they often mask one another, voiding a sense of acoustic clarity and perspective, especially the construction sounds that overlap the others.



**Fig. 2 - Percebes – High Season.** © Alexandra Ramires and Laura Gonçalves.

**Fig. 3 - Percebes – Low Season.** © Alexandra Ramires and Laura Gonçalves.



During the low-season, *hi-fi* soundscapes come into place. In this scene towards the end of the film (see Figure 3), the sound of the ocean replaces the broadband noise of traffic as a *keynote sound*, and the sound of a single dog barking at the beach substitutes the constant one of hundreds of foreigners enjoying the weather. It is at the end of the film, when tourists leave Algarve, that the locals can finally enjoy their beaches and the sea, therefore switching from a *lo-fi* to a *hi-fi* soundscape, where the sounds can be heard distinctively from one another. Echoing Schafer, the historical transition from *hi-fi* to *lo-fi* soundscapes reflects a change in the society as the transition from rurality to industrialisation expanded (Schafer, 1994). In *Percebes*, this transition is reflected throughout the whole film.

The concept of the *acoustic ecology* suggests that the sounds people live with shape their identity and relationship with their environment. This is especially true in *Percebes*, as we can hear interviews of Algarvians and their perspectives on the matter. Their testimonies reflect the role of habitual sounds in an *acoustic community* and, as per its definition, people identify familiar sounds and disruptive ones that flood the region, as the tourist season begins, as *sound pollution*. Algarvians sense the transition from hearing Portuguese on the streets to the increase of foreign languages around them, creating a sense of cultural displacement. This resonates with Sebastian Bernat's notion that sound is an integral part of landscape and the identity of a place, and can therefore be threatened by external influences like tourism (Bernat, 2014). Esref Ay confirms this statement, adding that *sound pollution* is one of the issues caused by tourism, affecting locals and even tourists themselves (Ay & Gunay Aktas, 2019).

As Mitchell Akiyama argues, the process of recording is the first step in soundscape composition (Akiyama, 2010) and it was no different for *Percebes*. The creation of soundscapes started from original stereo recordings of the places portrayed in the film, made by the Directors during their time researching and interviewing people in the region. These serve as an essential basis to which the rest of the soundscape was built upon.



**Fig. 4 -** *Percebes* – Restaurant. © Alexandra Ramires and Laura Gonçalves.

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In the “restaurant scene” we listen to the interviews of local workers and their impressions towards their seasonal jobs and tourism. An actual recording of a restaurant crowded with foreigners is used in the film, alongside several sound elements that illustrate the scene, such as the sound of cutlery hitting plates, mallets breaking lobster shells, and French children playing across the restaurant tables. The sound of dozens of people chatting shape a keynote sound that underscores the rest of the soundscape (see Figure 4). A ringing bell represents a soundmark to the restaurant’s workers as it signifies that the food is ready to be served. One way to incorporate Schafer’s frameworks in film sound is by adjusting the sound levels of different elements in the final mix. A keynote sound may not be as prevalent as a soundmark, as the latter can carry greater significance. All while recognising that this soundscape may be initially classified as *lo-fi*, where sounds overlap, thus reducing acoustic clarity and perspective. This practice was used throughout the soundtrack.

The process of recording sound by world-renowned George Vlad begins by asking, “What does the location sound like?”, instead of listing the sounds present in each place. This approach shifts the focus from an objective documentation of sound to a more personal and interpretative experience. Vlad recalls that each listener perceives sound in different ways (Vlad et al., 2024). This practice is reinforced by world-famous sound designer Mark Mangini, as he regularly speaks on the construction of soundscapes. For him, one of the best methods is to start with a good recording that serves as a foundation and to afterwards incorporate mono sound elements to give life and improve its geography (Mangini, 2022).

Similarly, the directors, using their research and experience, selected sounds and emotions that best illustrated the Algarve region and the acoustic community. Their goal was to trigger the audience’s memory, helping them recognise these sounds and feel a sense of a real place. Their list of selected sounds included the clatter of white storks, ocean waves, foreign languages,

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and many more – sounds that the audience can easily identify and relate to. As Honess Roe suggests, this approach allows the film to create familiar experiences by evoking the viewer’s imagination alongside the animated visuals (Honess Roe, 2021).

As Chion argues, the pursuit of realism in film has its weaknesses and limitations (Chion, 1994). The film serves as an example of this trait. The exact sound of a place cannot always be perfectly captured or compared to reality – what stands out is the feeling it creates. *Percebes* seeks to convey the sensation of being surrounded by foreigners, instead of simply replicating the actual sounds of the location. This is also true for Randolph Jordan’s concept of audiovisual ecology, if we remember his question of how sound, deprived of image, can depict a given space in film (Jordan, 2010). One does not have to imagine a moment in the film with only one’s ears – the audience has the image to complement sound and, therefore, is able to feel the setting. This confirms Jordan’s claim that cinema is a medium with gaps that hold it together, and that neither of its elements (sound and image) can be examined without acknowledging the influence one has on the other. As Jordan claims, the sound of a film requires attention to the image to better understand its acoustic ecology (Jordan, 2010). This resonates, naturally, with Chion’s idea of added value (Chion, 1994).



**Fig. 5** - *Percebes* – Calm Ocean. © Alexandra Ramires and Laura Gonçalves.

Ultimately, the methodology proposed in this study is comprised of several key elements that can be applied to animated documentary. The first is the intent behind the soundtrack proposed by the directors – how do soundscapes of different scenes sound and how does one feel when listening to a scene? These questions enable a deeper exploration of meaning in scenes and, with the use of Schafer’s categorisation, establish a framework for determining the relative sound levels at which different sounds are played together. The methodology recalls the ISO definition, stating that for each soundscape there is a cognitive process of perception (Acoustics - Soundscape - Part 1: Definition and Conceptual Framework, 2014). This perception is key to sound design. Soundscape theory helps film directors and sound designers define a strategy for constructing the soundtrack of animated documentaries, as this framework suggests, while recalling that the attention to the image is paramount to understand sound design.

## 8. CONCLUSION

This research highlights the crucial role of sound in animated documentaries. It demonstrates that beyond recorded interviews, soundscapes serve as powerful creative tools for storytelling. *Percebes* offers a compelling case study in applying acoustic ecology and soundscape theory to this genre of animation as it shows how evocative sound design can shape the narrative and emotional experience of a film.

The analysis of a selected few moments in *Percebes* demonstrates how sound is designed to guide the audience emotional journey through the film’s runtime. As shown, *Percebes* comprises several key scenes that match the editing of the audio interviews. According to the directors, these instants reflect real moments and emotions that best represent the film’s central theme. Their accompanying soundscapes were designed to achieve a sense of reality of the world as perceived by the interviewed people. In contrast, the transitions between these selected scenes allowed for greater creative freedom in sound design, without the same emphasis on perceived realism.

Naturally, this research expands these ideas at a more theoretical level. However, for them to be effectively applied in film sound design, they must be shaped with intention and clarity, and this requires technical precision to bring them to life.

Audiovisual ecology allows us to study the relationship between sound

and image in animated documentary, while also paying special attention to Schafer's and Truax's concepts of soundscapes, acoustic ecology, and acoustic community within. A rich soundtrack based on these concepts, in conjunction with animated visuals, establishes a documentary truth with various elements of documentary guarantee and warranting devices. This marriage allows the audience to better understand the narrative while also providing grounds for a sublayer of meaning across the film – what Honess Roe defines as *evocative animated documentary* (Honess Roe, 2021).

Despite being a documentary, *Percebes* aims to capture a feeling of truth, rather than the truth. However, it is this feeling that makes a connection to the real world portrayed by Alexandra Ramires and Laura Gonçalves, thus reaching its truthfulness after all.

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