Hybrid

Revue des arts et médiations humaines

6 | 2019
L'écoute

Listening to Comics: When Digital Technology Makes the Ninth Art Audible

Philippe Paolucci

Translator: Lise Thiollier

Electronic version

URL: <https://journals.openedition.org/hybrid/540>

DOI: 10.4000/hybrid.540

ISSN: 2276-3538

This article is a translation of:

Écouter une bande dessinée : quand le numérique rend le neuvième art audible - URL : <https://journals.openedition.org/hybrid/532> [fr]

Publisher

Presses universitaires de Vincennes

Electronic reference

Philippe Paolucci, "Listening to Comics: When Digital Technology Makes the Ninth Art Audible", *Hybrid* [Online], 6 | 2019, Online since 04 November 2019, connection on 14 April 2022. URL: <http://journals.openedition.org/hybrid/540> ; DOI: <https://doi.org/10.4000/hybrid.540>

This text was automatically generated on 14 April 2022.

Revue Hybrid

Listening to Comics: When Digital Technology Makes the Ninth Art Audible

Philippe Paolucci

Translation : Lise Thiollier

- 1 Compared to audiovisual creation (cinema, digital art, etc.), which produces moving images, or even interactive ones like with digital narrations, comics appear as a technologically rudimentary medium, whose sole means of expression are text and image. Indeed, the image in comics is necessarily fixed (i.e., not moving) and mute, insofar as the words and noises that populate the diegetic universe are reproduced in a purely visual and graphic mode. Of course, the impossibility of dubbing a story is closely linked to the materiality of the paper medium. Intrinsically noiseless, paper prohibits *a priori* the use of audible content. Hence the stabilization of a set of iconotextual conventions (bubbles, onomatopoeia, etc.) to account for sounds and thus compensate for the absence of audio clips. As one would expect, the appearance of “digital” comics, first on CD-ROM in the late 1990s, then on the web in the 2000s,¹ changed this purely graphic approach to sound. Digital technology allows the use of sound effects, music and even prerecorded voices (narrator intervention, dialogue pronunciation, etc.), so that the semantic content is not only conveyed by the text and the image, but also by sound elements. The digital comic therefore invites readers to keep their ears open, while its paper predecessor depended exclusively on the visual channel. Listening is added to seeing, as Thierry Groensteen rightly notes:
- 2 [...] Paper comics were polysemiotic, since they usually associate text and image, but they are monosensory, soliciting sight exclusively. Creative digital comics can make use of a wider range of semiotic possibilities; they are plurisensory as soon as sound is introduced.²

- 3 This article proposes to examine the introduction of this “plurisensoriality” into the reading experience of comics. Our aim will follow three stages:
1. The first part shows that the use of sound profoundly modifies the medium’s semiotic and narrative functioning, hitherto based solely on the association of text and image.
 2. The second part deals with the different types of sounds used by authors and the consequences they have on reading. We analyze two digital comics to show that the use of audio clips can strengthen the fictional immersion and contribute to the construction of a complex enunciative apparatus, with the risk, however, of imposing a duration of reception to match the duration of the sound segment (unlike the paper medium which, as everyone knows, leaves the reader to read at his own rhythm). The notions of heterochrony and homochrony, borrowed from the narratologist Philippe Marion,³ will better help us understand these effects of temporal impositions.
 3. Lastly, in the conclusion we attempt to situate these sound experimentations within the history of the ninth art, which will allow us to indicate certain points of reflection about the digital future of comics.

Comics and the Graphic Representation of Sound

- 4 As mentioned above, paper comics use a whole series of graphic means to evoke sound. While in most cases the demonstrative qualities of a drawing are sufficient to deduce the presence of a sound (for example, it is unnecessary to append an onomatopoeia to a scene involving a car accident; by its very content, the scene implies a ghastly bang that the reader can easily deduce), the question of sound has undeniably given rise to visual/graphic solutions that are deeply rooted in the history of the ninth art. Bubbles are thus the receptacle of the voice, onomatopoeia reproduces the hubbub of the world, shaky contours (of letters or bubbles) can intensify a howl. For some theorists, one of the specificities of the medium lies in this visual translation of the sound component. The semiologist Pierre Fresnault-Deruelle points out that

[...] the comic book owes much of its specificity to the fact that it works to produce a whole theater of clues on a massive scale: sound and movement, which are obviously the unrepresentable of any still image, are for comics the lack that gave rise to an apparatus of original substitution.⁴

- 5 In our opinion, Fresnault-Deruelle’s attribution of “unrepresentability” to sound and movement merits discussion. Neither sound nor movement is in itself “unrepresentable.” At most, they test the expressive potential of the medium and its capacity to make referential illusion. This means that comics, like any other medium, comes with constraints (area of the page, mute images, etc.) to which authors must adapt to give substance to their fictional project. All of these constraints have recently been reinterpreted in an interesting way by the researcher Pascal Robert. The latter sees comics as a medium inhabited by paradox. In his introductory book on the sciences of communication, Daniel Bougnoux defines paradox as the result of a cleavage between a statement (E) and its conditions of enunciation (CE).⁵ In other words, there is a paradox when there is an imbalance between the content of the message and the modalities of its enunciation. Pascal Robert takes up this definition of paradox to argue that the representation of sound and movement in comics is based on a tension between the conditions of enunciation (CE) and the statement (E), insofar as
1. Authors must reproduce sound (E) through mute images (CE);
 2. Likewise, they must represent movement (E) through still images (CE).⁶
- 6 As early as 1989, Fresnault-Deruelle saw in comic strips a “rustle of voiceless signs” and “a swarm of the motionless,” which the reader apprehends by developing a “visual ear.”⁷ Such formulations emphasize the deeply paradoxical nature of the medium.

Because of their material characteristics, paper comics expose the author to a series of cleavages between statement and enunciation. But what about digital media? Are the aforementioned paradoxes still active in a technological space that uses audiovisual content?

- 7 As one might expect, the introduction of sounds and/or animation solves the paradoxes of the materiality of comics. In other words, digital technology makes it possible to efface the discrepancy between statement and the conditions of enunciation, since sound and movement (E) can be directly supported by sound images and animated images (CE). Hybridization with the audiovisual occurs to varying degrees, depending on the work. While some authors choose to animate and add sound to the entire story, bringing the reading experience closer to that of cartoons, others make a more parsimonious use of sound and kinetic dimensions, remaining closer to the reading conventions of paper comics. Everything here is a question of proportion and boundary: an excessive use of sound and animation would inevitably lead the author towards other forms of media (cartoons, animated film, etc.).
- 8 On the reception side of things, the miscegenation with the audiovisual obviously raises the question of the rhythm of reading. Reading a printed work does not prescribe the time of reception. With all the graphic units (text and images) lying on the inert surface of the paper, the reader is free to browse at his own pace. Free to fly over a particular board, to skip thumbnails, or to contemplate a full-page picture for several seconds. By emphasizing the need to translate into graphic language the movements and sounds that make up the diegetic universe, the paradoxes presented above are left to the reader's freedom. But the digital transition of comics calls the outcome of this freedom into question, because the audiovisual aspects are likely to subject the reader to a temporal flow (or to a time of listening, in the case of comics that only making use of sound). The insertion of sound clips invites authors to combine two modalities of apprehension of content: the first, inherited from print culture, has no injunction of duration inscribed on paper; the second, related to the audiovisual (and therefore to sound), implies a temporally prescribed reception.
- 9 These observations directly echo the binary theorized by Philippe Marion between *heterochrony* and *homochrony*:

In a *heterochronous* context, the reception time is not programmed by the medium, it is not part of its enunciative strategy. The "book," the written press, the advertising poster, the photograph and the comic book are all places where the time of consumption of the message is not integrated in the medium, it is not part of the broadcast time [...]. A *homochronous* media is characterized by the fact that it incorporates the time of the reception into the enunciation of its messages. These are designed to be consumed in an intrinsically programmed time. If he wants to receive these messages (contractually), the recipient must adjust his reception time to that of the medium's enunciation.⁸
- 10 In other words, homochrony occurs when the user follows a predefined time sequence (watching a movie, listening to a piece of music, etc.). On the other hand, heterochrony allows the reader to browse inscriptions (texts, images, etc.) at his own pace, outside of any temporal dictates (ex. when reading a novel, a comic book, etc.). That said, it should be noted that for some authors of comics, the use of sounds can only lead to a homochronous reception and is therefore hardly reconcilable with the reading mode of comics. On this subject, we subscribe to Olivier Jouvray's⁹ declaration that

[...] when we read a comic strip, we ourselves decide on the rhythm of reading. We can linger on one box, fly over another, reread the text, stop, go back. If we add music or animation, which are imposed rhythms, there is confrontation, not accompaniment.¹⁰

- 11 Our position will be more nuanced. While the addition of sound clips can effectively divest the reader of the privilege of choosing his reading rhythm — and thus come into conflict with a certain representation of reading — there are many examples where the sound fits in perfectly with the narrative. Moreover, it is important to emphasize that the use of sound material does not necessarily lead to a temporal dictate. It all depends on the type of sound used by the author. With regards to digital comics, we must first make a distinction between intradiegetic and extradiegetic sounds. The first are produced at the level of diegesis and are constitutive of the fictional universe. The second, on the other hand, are external to diegetic events and have reality only for the reader (for example the music of a film credits). Added to this is the need to distinguish between durative sounds (lasting for several seconds) and momentary sounds (not meant to stretch out over time). We thus obtain four categories of sounds, which are listed and explained in the following table:¹¹

Sound Type	Explanation
Durational intradiegetic sounds	This category includes ambient sounds that are supposed to create a general atmosphere (the whistle of the wind, the noise of a crowd, etc.). We also include the various vocal manifestations involved in the story (dialogues, voiceovers, etc.).
Momentary intradiegetic sounds	This category groups together sounds emitted from within the diegesis and whose temporality is sudden and immediate (a detonation, for example).
Durational extradiegetic sounds	This category encompasses sound segments lasting several seconds and whose source is outside the chronotope of characters (musical accompaniment, commentary by author, etc.).
Momentary extradiegetic sounds	This category includes brief sounds whose source is outside the diegetic universe (namely, momentary sound effects that accompany an unexpected change of image, sometimes with the aim of surprising the reader).

- 12 Obviously, the propensity of a sound to install a homochronous situation can vary, depending on the category considered. For example, due to their exogenous nature, extradiegetic sounds — whether momentary or durational — are less likely to impose a reception time than sounds inscribed at the heart of the diegesis, especially when they are deployed over a long period.
- 13 Of course, of the four types of sounds referenced above, intradiegetic sounds come closest to homochrony. In this case the author has two possibilities: either to remain in the heterochrony by creating a general sound environment that envelops the reading without constraining it (urban noises, bird songs, etc.), or he makes dialogues audible, forcing the reader to follow a homochronous flow of speech. The rest of this article aims to analyze these two cases. To do this, it seems necessary to link the use of sounds

with the other two sensory modalities called upon when reading a digital creation, namely sight and touch (through an interactive interface). Our first analysis, which focuses on Stefan Živadinović's *Hobo Lobo of Hamelin*,¹² will show that the maintenance of heterochrony makes it possible to reinforce the reader's immersion in the fictional space by establishing a semantically relevant intersensoriality between the eye, hand and ear. As for homochrony, its introduction into the narrative marks the loss of any gestural/interactive control over the work. Since digital technology is essentially a manipulable medium, the programming of a homochronous sequence implies a temporary suspension of any interactive participation. Stéphane Oiry's comic *Vide-Ordures*¹³ will allow us to analyze the evacuation of the reader's gesture by the sound component — an evacuation which, as we shall see, opens up interesting possibilities at the enunciative level.

From Heterochrony to Homochrony

Intradiegetic Durational Sounds and Heterochrony: Intersensoriality in the Service of Immersion

- ¹⁴ Stefan Živadinović's *Hobo Lobo of Hamelin*, a free adaptation of the Grimm brothers' tale *The Pied Piper of Hamelin*, is an unusual creation in more ways than one. The work's originality is due not only to its sound environment, which will be discussed below, but also to its parallax effects. Indeed, during the reading the user is invited to use the web browser to scroll horizontally through a long strip composed of three superimposed layers. But as researcher Anthony Rageul says, these "are offset from each other, moving at different speeds." Thus the elements in the foreground scroll before our eyes faster than the elements of the layer behind it, and so on until the furthest background layer, the slowest of all. This involves a parallax effect that simulates the respective movements of objects toward and away from each other when the viewer is looking at them while moving."¹⁴ Figure 1 attempts to illustrate the process put in place by the author. It shows an image divided into three layers: the foreground shows a character and a sign bearing the inscription "Hamelin" (on the right side of the image); the second layer shows the little village below; lastly, the third layer is mountains visible in the background. Each of these layers refers to a stratum programmed to scroll at a pre-defined speed.

Figure 1.

Stefan Živadinović, *Hobo Lobo of Hamelin*, 2011 (© Živadinović)

- 15 Involving minimal interactivity (that of the simple scrolling of the horizontal elevator), Stefan Živadinović's strata are set in motion by the reader and, due to the variability of their scrolling speed, generate a striking effect of perspective and depth. This leads to a powerful feeling of immersion, as if the reader sank into the fictional space and entered the strange city of Hamelin. And yet sound is used precisely to reinforce this "dive" into the diegetic space.¹⁵ To this end, the author has developed a sound environment composed of various sound effects: harmonica music, the muddled murmur of villagers, etc. As mentioned above, such sound effects are heterochronous by nature: their primary purpose is not to prescribe the rhythm of reading, but to accentuate the immersive experience that results from the parallax effect. The reading of *Hobo Lobo of Hamelin* thus relies on a subtle interaction between optics (the perception of parallax), haptics (the parallax mechanism is activated by the reader's gest) and the auditory (the sound accompanying the eye and the hand). Sight, touch and hearing act in concert to give rise to an intersensory experience that is difficult to conceive of in paper form.
- 16 Thus in Živadinović's work the use of sound is not intended to make the protagonists' actions audible as much as to establish a general atmosphere capable of capturing the reader's attention. The question of its source (Where did this or that sound come from? Who produced it?) is ultimately of little importance. What counts is setting up a background of sound that accompanies its reading without constraining it. Let us add that this rejection of homochrony, which in this case is in perfect agreement with the narrative project of the author, probably finds its origin in programming difficulties. Indeed, unless ambient sounds are superimposed on the reading experience in an open, non-prescriptive way (like in *Hobo Lobo of Hamelin*), the activation of an intradiegetic sound directly linked to the actions of the protagonists (knocking on a door, initiating a dialogue, etc.) necessitates a perfect synchronization between the triggering of the audio sequence and the scrolling space. A particular sound specially designed to play at such a time must be heard when the reader reaches this or that passage. In a recent article devoted to *Phallaina*, another digital comics conceived exclusively for scrolling, its creators Benjamin Hoguet and Manon Chauvin clearly account for the difficulties in synchronizing the act of scrolling and the activation of a sound:

In *Phallaina*, the continuous progression of the story with a simple swipe of the finger makes the synchronization of the sound [...] complex. In the audiovisual field or in animation, the triggering of a sound is based on a timecode, e.g. it starts at the

third minute. But as far as we are concerned, the time of reading is unique to everyone. To get to the scene where Audrey free-dives for the first time — and where you hear her breathing and the sound of a body submerging in the water — some will take five minutes while others will stay in contemplation for fifteen... The sounds must be activated at a certain level of progression of the story and not after a certain time of reading.¹⁶

- 17 As Edmond Couchot and Norbert Hillaire point out,¹⁷ the programming of a digital work presupposes a dialogue between an “upstream author” (the creator of the work) and a “downstream author” (the receiver). The first programs and anticipates the doing of the second. However, the scroll speed of a scrollbar is potentially variable depending on the individual, so it can be difficult to get a perfect coordination between the gesture of the reader and the activation of the sound. A radical way to overcome this pitfall is to divest the reader of any control of the scrollbar. The latter is then handed over to the computer, advancing automatically for a more or less long period of time during which a sound fragment is heard. Of course, the direct consequence of such a process is to turn the reading into homochrony, since the reader literally loses his grip on the sequence of narrative units.¹⁸ It appears that interactive mechanisms — in this case the use of scrolling — lead authors to favor certain types of sounds (for example, ambient sounds in Zivadinović’s case) and to abandon others. The analysis of a second comic strip, whose reading is based not on scrolling but on clicking, will allow us to further develop this interrelation between interactivity and the sound dimension.

Durational Intradiegetic Sounds and Homochrony: The Dictate of Reading and the Complexification of the Enunciative Apparatus

- 18 In certain works, the presence of intradiegetic sounds sometimes leads to a homochronous temporality. This is the case, for example, when the author chooses to make dialogues or monologues audible. The protagonists’ lines of dialogue are therefore no longer the purview of bubbles, but rather that of sound clips. On the reader’s side, the assertion of a vocalized utterance *ipso facto* signals the triumph of homochrony over heterochrony. Since Saussure we know that “auditory signals have available to them only the linearity of time. The elements of such signals are presented one after another: they form a chain. This feature appears immediately when they are represented in writing, and a spatial line of graphic signs is substituted for a succession of sounds in time.”¹⁹ By giving the characters a voice that is *listened to* (and no longer *read*), the digital medium reintroduces the linearity of the oral signifier in the reading experience. The spatialization of bubbles on the page’s surface is substituted for a phonic flow that the reader is invited to follow, without the possibility of escaping it (except by deliberately skipping over the passage in question, with the risk of missing important diegetic information).
- 19 Like we mentioned above, the verbalization of dialogues is difficult to implement when reading is based on scrolling (since individuals’ varying scrolling speeds makes it difficult to synchronize the gesture with the beginning of the sound sequence). On the other hand, the task is less arduous when the author gives up scrolling in favor of another interactive modality, namely the click. The reading process is as follows: each time the reader clicks (or touches the touch-screen) a new narrative unit (a bubble, an image, etc.) appears on the screen. Obviously, the exclusive use of the click facilitates the insertion of sound contents. The latter works in effect like a trigger, sounds are

programmed to launch when the reader, arrived at a specific point of the story, activates an input device (a mouse for example). The clicks are thus similar to terminals, between which it is easy to insert an audio segment.

- 20 A significant example of this fruitful encounter between sound and click is provided in Stéphane Oiry's comic work, *Vide-ordures*. This work, published in the online journal *Professor Cyclope*²⁰ in September 2015, has the peculiarity of being punctuated by many of the author's own lines of dialogue. The story opens with a strange confession of the main character, who declares aloud, "I have a strange relationship with garbage chutes." This short sentence, not even three seconds long, introduces a homochronous listening time. The sound clip imposes its linearity and divests the reader of any interactive control over the course of diegetic actions. It should also be noted that the use of the first person, together with the indexical relationship that unites the speaking subject (Oiry himself) with his own voice, gives this story an autobiographical aura. Yet the retrospective character is constantly challenged by the display of heterochronous textual intertitles. Like subtitles in silent films, they intervene between passages with sound, commenting on them with a tone tinged with humor. Take for example the third caption, interposed between two pre-recorded lines:

In the first sound clip, the narrator utters the following sentence: "The garbage chute is a chasm, a spatio-temporal doorway that would plunge me back into childhood."

Once this passage is over, a simple click shows a box bearing the inscription: "No, I'm not telling this right, it's not fun. Let's try again." (Figure 2)

Lastly, the next click triggers a new voice sequence, during which the narrator declares, "Get ready to enter a new dimension. The garbage chute door opens onto a land whose only boundary is your imagination."

Figure 2.

Stéphane Oiry, *Vide-Ordures*, 2015 (© Professeur Cyclope/Oiry)

- 21 Intertitles introduce polyphony here. In fact, two enunciative instances coexist within the samenarrative: on the one hand, a sound enunciation that attempts to tell us a story, and on the other hand a textual enunciation with a reflexive dimension (since it is a question of commenting on oral interventions in an ironic tone). Obviously, the reader quickly understands that these two enunciative foci refer to the same narrator (as evidenced by the use of the "I" in the headings and extracts read aloud). The narrator's double game — narrating certain parts of the story while simultaneously

ironizing what is narrated via textual intertitles — casts doubt on the autobiographical value of the lines of dialogue expressed aloud, which are constantly being counteracted with ironic intertitles. It is therefore a question of providing a counterpoint to sound statements by imitating a technique of enunciation preceding sound film. Thus, by means of an enunciative strategy that interlaces sound expression and a reference to silent film, Oiry orchestrates a relation, instituted by digital technology, between the heterochrony associated with written statements (the intertitles do not prescribe the reading) and the homochrony induced by sound fragments.

Conclusion: The Digital Future of Comics, between Rupture and Continuity

- 22 We can now ask for ourselves the question raised by Philippe Marion and André Gaudreault: “Do comics lose their ‘epiphanic soul’ when digital possibilities allow them to open up [...] to homochrony?”²¹ We understand “epiphanic soul” to refer to the enunciative and semiotic characteristics of the medium as they are constituted on paper. As we have seen, the narrative of comics is based on a series of paradoxes, that is to say, cleavages between the *conditions of enunciation* imposed by the materiality of the page (the impossibility of resorting to the sound channel) and imperatives related to the construction of the statement (for example, to account for sounds emitted in the diegesis). This paradoxical situation has two consequences: on the one hand, it leads the author to construct a narrative on the basis of an exclusively graphic statement (bubbles, onomatopoeia, etc.), while on the other hand the graphic nature of the medium leads to a heterochronous type of reception, with the reader himself adjusting his reading rhythm. By authorizing the perception of sounds, digital technology evidently breaks with this paradoxical logic and consequently upsets the material, enunciative and reading properties of the medium.
- 23 While this invitation to be listened to, and not only to be seen, has provoked some reticence in academic literature,²² it is clear that it opens up interesting possibilities in terms of immersion and reflexivity. Thus, in *Hobo Lobo of Hamelin*, the sound elements are part of an intersensorial apparatus that aims to plunge the reader (through sight, gest, and hearing) into the diegetic space — all the while, let us note, retaining a heterochronous reception. That said, it should be remembered that this projection into the fictional world is already at work in the paper medium. On this point Pascal Robert emphasizes that paper comics have “this ability to really project through the page itself [...] a 3D space to which the page gives access through the boxes and which the reader participates in exploring and rebuilding.”²³ The sound environment developed by Živadinović, when thought together with the parallax effect, only increases the sense of immersion already present with printed sheets. Similarly, the polyphonic narrative observable in Stéphane Oiry’s *Vide-ordures*, which is based on a fruitful dialogue between sound and text, is part of what Jacques Dürrenmatt calls “complex enunciation techniques,” which were asserted “in the field of comics at the end of the 70s”²⁴ (among these techniques, we can mention the intermingling of voices, the variations of points of view, etc.). While Oiry’s creation stands out from paper works, especially because of its use of homochronous sounds, it is also an extension of enunciative experiments that are well established in the history of the ninth art. Thus a dialectic is made, in the work of both Živadinović and Oiry, between rupture (use of sounds, resolution of paradoxes)

and continuity (reinforcement of immersive feeling, enunciative complexity, etc.). The digital fate of the comics — of its “epiphanic soul,” as Marion and Gaudreault would say — undoubtedly resides in this articulation between continuity and rupture, between heritage and novelty; an articulation certainly difficult to manage for authors, but which proves to be most stimulating on the artistic and narrative levels.

BIBLIOGRAPHY

- BAUDRY Julien, « Généalogie de la bande dessinée numérique », in Robert, Pascal (dir.), *Bande dessinée et numérique*, Paris, CNRS Éditions, 2016.
- BOUGNOUX Daniel, *Introduction aux sciences de la communication*, Paris, La Découverte, 1998.
- CHAUVIN Manon and HOGUET Benjamin, *Interactivité et transmédia : les secrets de fabrication*, Châteaudun, Dixit, 2016.
- CHION Michel, *Le son*, Paris, Nathan, 1998.
- COUCHOT Edmond and Hillaire Norbert, *L'art numérique : comment la technologie vient au monde de l'art*, Paris, Flammarion, 2003.
- DÜRRENMATT Jacques, *Bande dessinée et littérature*, Paris, Classiques Garnier, 2013.
- FRESNAULT-DERUELLE Pierre, « Le Fantasma de la parole », *Europe*, n° 720, 1989.
- GAUDREULT André et MARION Philippe, *La fin du cinéma ? Un média en crise à l'ère du numérique*, Paris, Armand Colin, 2013.
- GROENSTEEN Thierry, *Bande dessinée et narration*, Paris, PUF, 2011.
- MARION Philippe, « Narratologie médiatique et médiagénie des récits », *Recherches en Communication*, n° 7, 1997. [En ligne] <http://sites-test.uclouvain.be/rec/index.php/rec/article/view/1441> [consulted on october 16, 2018].
- RAGEUL Anthony, « Le corps et le récit », *Les carnets de la bande dessinée*, 2012. [En ligne] <https://carnetsbd.hypotheses.org/1508> [consulted on october 16, 2018].
- ROBERT Pascal, « La bande dessinée, entre paradoxes et subversion sémiotique », in Eric DACHEUX (dir.), *Bande dessinée et lien social*, Paris, CNRS Éditions, 2014, p. 167-186.
- ROBERT Pascal (dir.), *Bande dessinée et numérique*, Paris, CNRS Éditions, 2016.
- ROBERT Pascal, *La bande dessinée : une intelligence subversive*, Villeurbanne, Presses de l'ENSSIB, 2018.
- SAUSSURE Ferdinand (de), *Course in General Linguistics*, trans. Roy Harris, New York, Bloomsbury, 2013, p. 81.

NOTES

1. For an account of the evolution of digital comics from the 1990s to today, see Julien Baudry, "Généalogie de la bande dessinée numérique," in Pascal Robert (dir.), *Bande dessinée et numérique*, Paris, CNRS Éditions, 2016, p. 31-54.
2. Thierry Groensteen, *Bande dessinée et narration*, Paris, PUF, 2011, p. 74.
3. See, *inter alia*, Philippe, Marion, "Narratologie médiatique et médiagénie des récits," *Recherches en Communication*, n° 7, 1997. [Online] <http://sites-test.uclouvain.be/rec/index.php/rec/article/view/1441> [consulted on October 16, 2018].
4. Pierre Fresnault-Deruelle, « Le Fantasma de la parole », *Europe*, n° 720, 1989, p. 54-64.
5. Daniel Bounoux, *Introduction aux sciences de la communication*, Paris, La Découverte, 1998.
6. Pascal Robert, "La bande dessinée, entre paradoxes et subversion sémiotique," in Eric Dacheux (dir.), *Bande dessinée et lien social*, Paris, CNRS Éditions, 2014, p. 167-186.
7. Pierre Fresnault-Deruelle, « Le Fantasma de la parole », *Europe*, n° 720, 1989, p. 54-64.
8. Philippe Marion, « Narratologie médiatique et médiagénie des récits », *Recherches en Communication*, n° 7, 1997. [Online] <http://sites-test.uclouvain.be/rec/index.php/rec/article/view/1441> [consulted on October 16, 2018].
9. Olivier Jouvray is a comics scripwriter and cofounder of *Revue Dessinée*, which specialises in reports in comics form.
10. For the complete interview, cf. Pascal, Robert (dir.), *Bande dessinée et numérique*, Paris, CNRS Éditions, 2016, p. 173-194.
11. Needless to say, these categories correspond to Michel Chion's work on sound in cinema. For example, intradiegetic sounds refer to what Chion calls "internal sounds." Chion also classifies extradiegetic sounds as "ambient sounds." Cf. Michel, Chion, *Le son*, Paris, Nathan, 1998.
12. [Online] <http://hobolobo.net/> [consulted on October 16, 2018].
13. [Online] http://professeurcyclope.arte.tv/revues/22/chapter/vid_eordures.html [consulted on October 16, 2018].
14. Anthony Rageul, « Le corps et le récit », *Les carnets de la bande dessinée*, 2012. [online] <https://carnetsbd.hypotheses.org/1508> [consulted on October 16, 2018].
15. We borrow the metaphor of the dive from Pascal Robert (cf. Pascal, Robert, *La bande dessinée : une intelligence subversive*, Villeurbanne, Presses de l'ENSSIB, 2018).
16. Manon Chauvin et Benjamin Hoguet, *Interactivité et transmédia : les secrets de fabrication*, Châteaudun, Dixit, 2016, p. 329.
17. Edmond Couchot and Norbert Hillaire, *L'art numérique : comment la technologie vient au monde de l'art*, Paris, Flammarion, 2003.
18. To our knowledge, only few comics based on a scrolling reading integrate an automatized progression of images. One example of automatic scrolling, however, is found in the comic BongCheon-Dong Ghost, created by the Korean author Horang; [online] https://www.webtoons.com/en/thriller/chiller/bongcheon-dong-ghost-horang/viewer?title_no=536&episode_no=22&webtoon-platform-redirect=true [consulted on October 16, 2018].
19. Ferdinand (de) Saussure, *Course in General Linguistics*, trans. Roy Harris, New York, Bloomsbury, 2013, p. 81.
20. [Online] <http://professeurcyclope.arte.tv/> [consulted on October 16, 2018].
21. André Gaudreault and Philippe Marion, *La fin du cinéma ? Un média en crise à l'ère du numérique*, Paris, Armand Colin, 2013, p. 115.
22. On this subject, see Thierry Groensteen, *Bande dessinée et narration*, Paris, PUF, p.75.
23. Pascal, Robert (dir.), *Bande dessinée et numérique*, Paris, CNRS Éditions, 2016, p.17.
24. Jacques, Dürrenmatt, *Bande dessinée et littérature*, Paris, Classiques Garnier, 2013, p. 141.

ABSTRACTS

This article focuses on the digital transition of comics. While historically it has been linked to the print medium, throughout its history the ninth art has developed a set of graphic means to represent sound (onomatopoeia, speech bubbles, etc.). Generally speaking, paper comics make nothing audible, instead making everything visible. But the possibility of using audio sequences with digital formats challenges the primacy of visual image. Basing our analysis on two “digital comics” (i.e. all comics published on the web), we will see that the extension to the world of sound has two possible consequences: it reinforces the immersion experience in a fictional world, especially when the author establishes a semantically clear intersensoriality between sight, interactive gesture and the soundscape, and secondly it can contribute to the emergence of polyphonic enunciation, combining written contents and oral lines of dialogue, at the risk, however, of prescribing a reception time that corresponds to the duration of the sound emission (unlike print which allows the reader to manage his own reading rhythm).

INDEX

Keywords: Sound, comics, digital, homochrony, heterochrony, immersion, enunciation

AUTHORS

PHILIPPE PAOLUCCI

He has a PhD in information and communication sciences. His work falls within a socio-semiotic perspective and focuses on the economic, editorial and aesthetic / formal consequences related to the digital transition of media forms, and more specifically of comics.