



Essay

The pixel fever

A febre do pixel

La fiebre del pixel

La fièvre des pixels

Ingrid Rodrigues Gonçalves¹ e Valéria Cazetta²

¹ Bachelor's degree in Public Policy Management from the School of Arts, Sciences and Humanities and Master's degree in Education from the Postgraduate Program in Education and researcher of Miragem - Interdisciplinary Research Group on Visual Cultures - of the University of São Paulo, São Paulo, SP, Brazil. She is currently a teacher at the Centro de Estudos e Pesquisas de Administração Municipal do Centro Estadual de Educação Tecnológica Paula Souza, São Paulo, SP, Brazil.

E-mail: ingridgoncalves85@gmail.com

² Geographer, Master and PhD from the Universidade Estadual Paulista "Júlio de Mesquita Filho", Rio Claro, SP, Brazil. She is currently a professor in the Licenciatura em Ciências da Natureza, in the Programa de Pós-Graduação em Mudança Social e Participação Política and leader of the Interdisciplinary Research Group on Visual Cultures - Miragem - of the School of Arts, Sciences and Humanities of the University of São Paulo, São Paulo, SP, Brazil.

E-mail: vcazetta@usp.br

Abstract

In the cinematographic industry, the standard media formats changed from film to digital formats, but these changes are not located only in art territories. Nowadays, digitalization processes are increasingly part of our daily practices. We constantly need to deal with a large range of commonplace situations that demands us to be connected with softwares applications, implying that we produce and share a considerable amount of sounds and images. For some of us, especially the younger ones, born in the 2000s, used to dealing with gadgets since the early age, mechanical and analog processes may seem to be part of a very different world. The purpose of this essay is to discuss what we are calling “*the pixel fever*”, this contemporary movement of our lives that merges our organic life with our digital trajectories, considering that to produce and discard digital data is already part of the routine of many of us. This essay is divided into three parts. Firstly, we aim to highlight some aspects of this entrance of digital gadgets in our lives. To do this, we start talking about the digitalization processes in the film industry focusing on the Brazilian public policy *Cinema Near You*, that supported this transition in movie theaters. Secondly, we move on to highlight some broader problems of this “pixel fever”: the aesthetical risk, the digitalization of jobs, and the energy consumption derived from the handling of digital materials. Finally, we conclude thinking about some parallels between these problems emphasized and our contemporary lives. With these interdisciplinary ponderations, starting by some examples from audiovisual practices, we aim to contribute to the discussions about the contemporary social changes related to digitalization processes spread in several research areas.

Keywords: Public Policy. Digital transformation. Audiovisual. Social Change. Interdisciplinarity.

Resumo

O suporte padrão utilizado pela indústria cinematográfica foi alterado da película para os formatos digitais, mas essas mudanças não estão localizadas apenas em territórios artísticos. Nos dias atuais, os processos de digitalização integram, cada vez mais, nossas práticas cotidianas ao lidarmos com inúmeras situações que demandam a utilização de aplicativos. Assim, produzimos e compartilhamos a todo instante quantidades consideráveis de sons e imagens. Para alguns de nós, especialmente os mais jovens, nascidos a partir dos anos 2000 e acostumados a lidar com *gadgets* desde a infância, os processos mecânicos e analógicos constituem, provavelmente, um meio bem diferente. O objetivo desse ensaio é, portanto, ponderar acerca do que estamos chamando de “*a febre do pixel*”,

movimento contemporâneo no qual amalgama-se vida orgânica e trajetórias digitais, considerando que produzir e descartar dados digitais já faz parte das rotinas de muitos de nós. Dividimos esse ensaio em três partes. Na primeira abordamos alguns aspectos da entrada dos *gadgets* digitais em nossas vidas, tratando dos processos de digitalização na indústria cinematográfica, especialmente a política pública brasileira *Cinema Perto de Você*, que auxiliou no processo de transição do analógico para o digital nas salas de cinema do Brasil. Na segunda parte, ressaltamos problemas mais amplos da *febre do pixel*, quais sejam, riscos estéticos, a digitalização dos empregos e o consumo de energia derivado do manuseio de materiais digitais. Finalmente, na terceira parte, traçamos paralelos entre os problemas decorrentes da *febre do pixel* e a vida na atualidade. Objetivamos com essas ponderações interdisciplinares, construídas a partir de práticas audiovisuais, contribuir com as discussões sobre as mudanças sociais contemporâneas relacionadas aos processos de digitalização propagados em diferentes áreas de pesquisa.

Palavras-chave: Políticas Públicas. Transformação digital. Audiovisual. Mudança Social. Interdisciplinaridade.

Resumen

El soporte estándar utilizado por la industria cinematográfica ha cambiado del formato cinematográfico al formato digital. Sin embargo, estos cambios no se circunscriben exclusivamente a los territorios artísticos. En la actualidad, los procesos de digitalización integran cada vez más nuestras prácticas cotidianas ante las numerosas situaciones que requieren el uso de aplicaciones. Por lo tanto, producimos y compartimos cantidades considerables de sonidos e imágenes constantemente. Para algunos de nosotros, especialmente los más jóvenes, nacidos a partir de la primera década del siglo XX y acostumbrados a tratar con dispositivos desde la infancia, los procesos mecánicos y analógicos constituyen probablemente un medio muy diferente. El propósito de este ensayo es, por lo tanto, pensar sobre lo que llamamos “la fiebre del pixel”, movimiento contemporáneo en el que la vida orgánica y las trayectorias digitales se amalgaman. En efecto, producir y descartar datos digitales ya forma parte de las rutinas de muchos de nosotros. Dividimos este ensayo en tres partes. En la primera, nos acercamos a algunos aspectos relativos a la entrada de los dispositivos digitales en nuestras vidas, abordando los procesos de digitalización en la industria cinematográfica, especialmente la política pública brasileña *Cinema Perto de Você*, que ayudó a la transición de lo analógico a lo digital en los cines de todo el país. En la segunda parte, destacamos los problemas más amplios de la fiebre del pixel, a saber, los riesgos estéticos, la digitalización de puestos de trabajo y el consumo energético derivado del

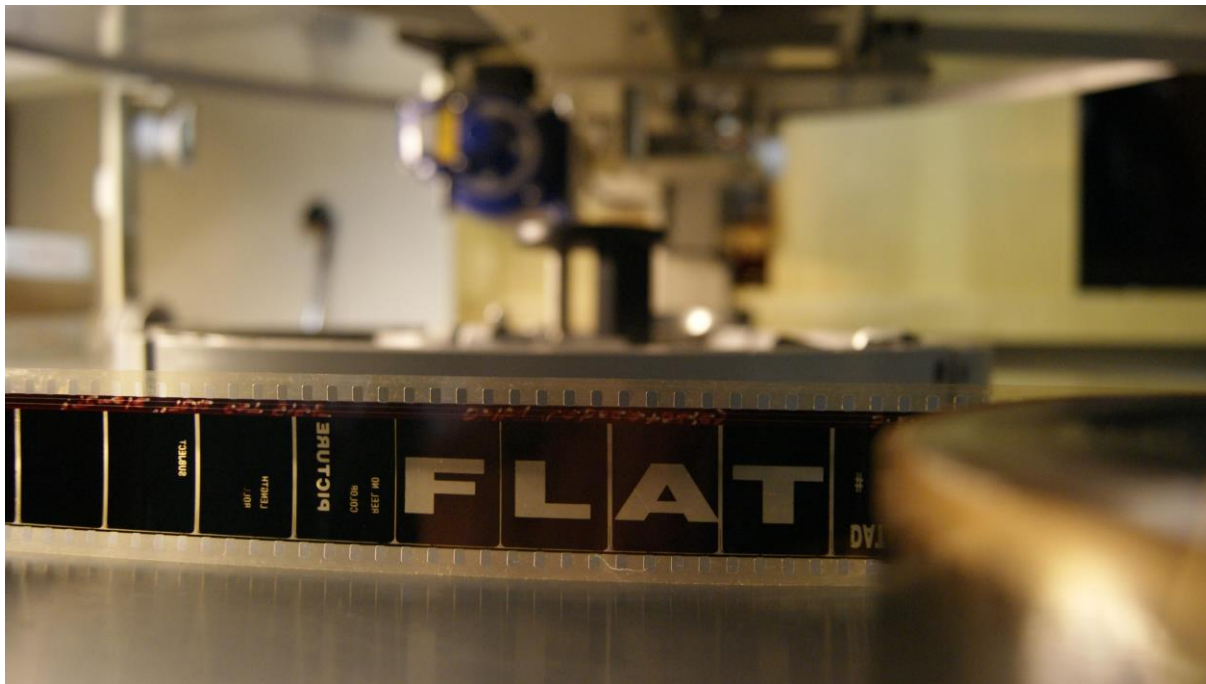
manejo de materiales digitales. Finalmente, en la tercera parte, trazamos paralelismos entre los problemas derivados de la fiebre del pixel y la vida actual. Procuramos contribuir con estas consideraciones interdisciplinarias, construidas a partir de prácticas audiovisuales, a las discusiones sobre los cambios sociales contemporáneos relacionados con los procesos de digitalización propagados en diferentes áreas de investigación.

Palabras clave: Políticas públicas. Transformación digital. Audiovisual. Cambio social. Interdisciplinariedad.

Résumé

Le support standard utilisé par l'industrie cinématographique a été modifié du format film au format numérique, mais ces changements ne se situent pas seulement dans les territoires artistiques. De nos jours, les processus de digitalisation intègrent de plus en plus nos pratiques quotidiennes face à d'innombrables situations nécessitant l'utilisation d'applis. Ainsi, nous produisons et partageons à tout moment des quantités considérables de sons et d'images. Pour certains d'entre nous, en particulier les plus jeunes, nés dans les années 2000 et habitués aux gadgets depuis l'enfance, les processus mécaniques et analogiques constituent probablement un médium très différent. L'objectif de cet essai est donc de pondérer ce que nous appelons «la fièvre des pixels», un mouvement contemporain dans lequel la vie organique et les trajectoires numériques sont fusionnées, en considérant que la production et l'élimination des données numériques font déjà partie des routines de beaucoup d'entre nous. Nous avons divisé cet essai en trois parties. Dans la première, nous avons abordé certains aspects de l'entrée des gadgets numériques dans nos vies, traitant des processus de numérisation dans l'industrie cinématographique, en particulier la politique publique brésilienne *Cinema Perto de Você*, qui a contribué au processus de transition de l'analogique au numérique dans les salles de cinéma au Brésil. À la deuxième partie, nous mettons en évidence les problèmes plus larges de la fièvre des pixels, à savoir les risques esthétiques, la numérisation des emplois et la consommation d'énergie dérivée de la manipulation de matériels numériques. Enfin, dans la troisième partie, nous établissons des parallèles entre les problèmes posés par la fièvre des pixels et la vie actuelle. Nous visons avec ces considérations interdisciplinaires, construites à partir des pratiques audiovisuelles, à contribuer aux discussions sur les changements sociaux contemporains liés aux processus de numérisation propagés dans différents domaines de recherche.

Mots-clés: Politiques publiques. Transformation numérique. Audiovisuel. Changement social. Interdisciplinarité.



Picture 01: The light of fireflies 05. (Gonçalves, 2015).

Nowadays, asking young people if at some point in their lives they ever had used photochemical films, the answer will probably be a sonorous “no”, and, perhaps, it will come with the question: what are photochemical films? This question would probably be made because the standard photographic and cinema formats had changed from film (touchable surfaces) to digital (computing surfaces) (Fossati, 2009; Gonçalves, 2018a).

These changes are not located only in art territories. Otherwise, these transformations, from touchable to computing surfaces, are spread in the society, occupying several aspects of our contemporary daily lives with constant demands for us to connect to multifunctional gadgets. This is especially true in urban contexts, but not only, because in many rural areas people also make use of information and communication technologies in their daily tasks (Zaparolli, 2020). And if we also consider the advances of digital platforms, the decrease of analogical formats in social practices could be considered as unavoidable. Then, in spite of using audiovisual formats only to keep and share our personal and special moments, today we deal with it also to solve countless daily problems, including our relations with State and companies.

A proof of this is the frantic use that many of us need to do of application softwares (app), which makes us to handle a great amount of audiovisual files everyday. The use of smartphones, for example, covers a wide range of our daily activities, such as scanning documents, accessing public and private services, buying products, paying bills, communicating real-time activities status, finding places on maps, planning itineraries, sharing special moments with our friends and family networks, among other things. It is true that the most part of these actions are done today through image and sound files, and not only through written texts. Thus, we could

consider that, somehow, in present times, we are all potential audiovisual makers and also archive managers of our own audiovisual files.



Picture 02: The light of fireflies 02. (Gonçalves, 2015).

In this contemporary movement of our lives, which we propose to call here of *pixel fever*, it seems that we are living at least two modes of life. One of them, in our organic bodies; the other, a digital mode of life, where somehow a kind of “digital body” allow us to travel through the data and information that we daily provide and access (Gonçalves, 2020). Informatics and computers allow us to immerse ourselves in a kaleidoscope of multiple patterns, elements, writings and narratives, impacting the ways in which we interact as individuals and citizens. (Murray, 1997).

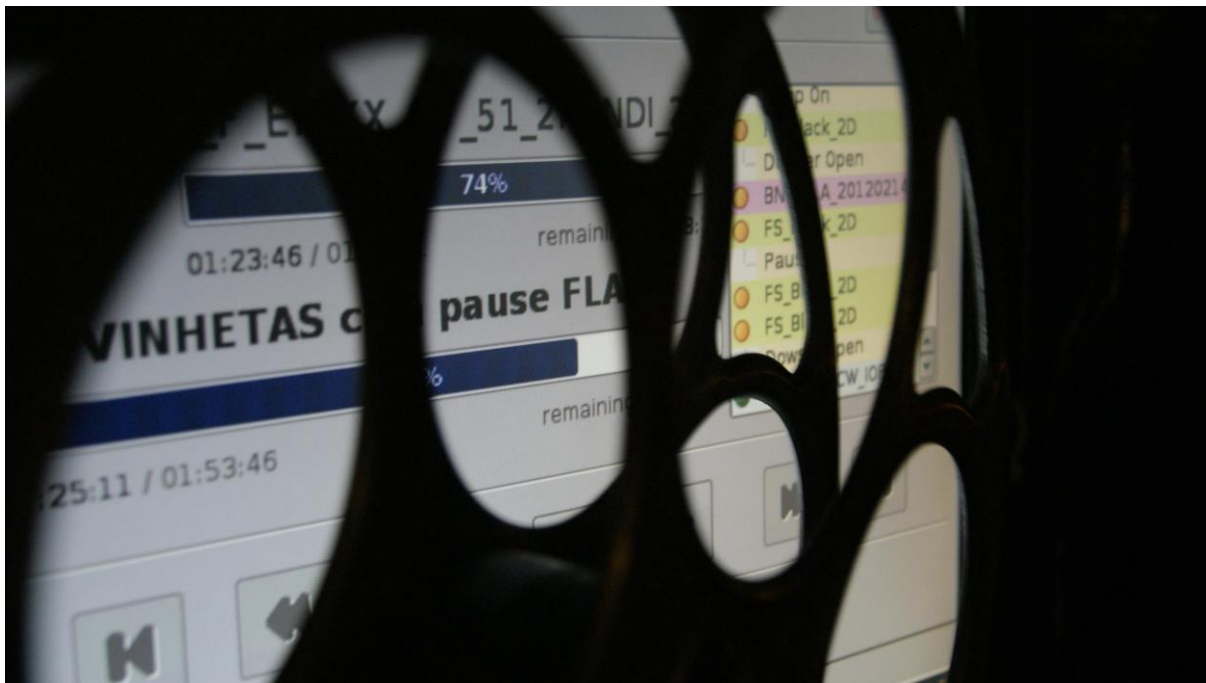
In these flows, one question we almost never ask, but that is very relevant: how long will last all the data we create and manage? What is the life expectancy of all our “digital life trajectories”, considering the vertiginous digital obsolescence and the great energy consumption that continuously increases with the constant expansion of communication and information technologies around the world? (Ampas, 2009; Edmondson, 2017; Hodgson, 2015).

Nowadays, *digitalization processes*¹ are associated to good practices both in government and in private enterprises, environmental care, and, even the possibility of extending life,

¹ A term widely used is “digital transformation”. We chose to use the term “digitalization processes” to emphasize the amplitude, the processual movement of these transformations and its relations with contemporary social changes.

considering that there are initiatives that aim to extend and even propose to make human life immortal through digital technologies².

During our everyday walks, we constantly need to deal with a large range of commonplace situations that demands us to be connected with softwares applications, implying us to produce and share a considerable amount of sounds and images. For these reasons, talk about roll films and digital preservation in this world, where huge efforts are made everyday to digitalize things and flows, may seem strange.



Picture 03: The light of fireflies 01. (Gonçalves, 2015).

For instance, analog photographs, as we emphasized it in the beginning of this text, may sound out of date these days. There are notorious differences between analog and digital processes, as the quantity of pictures usually made, the speed of this “manufactory”, and also how the energy is used during the capture and exhibition processes. In this situation, by using roll films, it is necessary to be quite shure before press the camera shutter button. The number of poses available in every photographic reel limits the amount of pictures made, usually to 12, 24 or 36 poses per roll. Equally important, to take more pictures it is necessary to recharge the

² Some mentions to the use of digital as good practices, both in government and private enterprises, articulating public management demands and environmental justifications, among other issues related to development and social changes: OECD; Cunha and cols, 2016. To exemplify these initiatives that aim to achieve immortality through technology, we can mention the projects financed by Russian entrepreneur Dmitry Itskov (Couts, 2013).

camera. And then, after capturing, the negatives pass through a photochemical process, which can take a few hours. Otherwise, to make a digital picture, the limit of poses depends of the internal storage of the gadget used. The lights are converted through eletric signal to digital data, to be stored in our devices or at the clouds hosting services.

For some of us, especially the younger ones, born in the 2000s, used to dealing with gadgets since the early age, mechanical and analog processes may seem to be part of a very different world. In several aspects, when this was the pattern format to make images, yes, it was different. In the world we live today, digital formats are increasingly spread and needful. But, we should not bury other aesthetical experiences³.

For film industry, digital formats can expand access to movies, including to small cities, because it facilitates the logistics distribution and makes production processes faster than those with the analogue technology. In Brazil, as an example, it has been treated as a public problem⁴. The cinema digitalization arrived first in the work of filmmakers, but a major initiative was needed to support the digitalization of distribution and exhibition, allowing the public access for movies to rise, especially to national productions. The Brazilian Film Agency (ANCINE) promoted a public policy called “Cinema Near You”⁵, aiming to expand the internal market by supporting a technological update transition to digital formats of exhibition. It was established by Law 12.599/2012⁶ and also through provided investments and tax reliefs for the purchase of new equipments and structures. This policy is directly related to the increase of digitalized movie theaters around the country noticed in the last decade.

But, in spite of the expansion of access and the acceleration that digital cinema provides to several industry processes, there are some risks in this technological change that we should consider. Drawing attention to the first problem, the aesthetical risk, it is notorious that productive processes and artistic textures of analogical films are completely different than those with pixels. And this issue goes beyond art, since many of our contemporary everyday tasks are connected to digital technologies. Otherwise, it would be relevant to consider that different materials produce different types of experiences. If so, why not keep alive the importance and support for photochemical film experiences, even on a low scale?

³ In Brazil, Cinemateca Brasileira is an important public institution devoted to the preservation of the national audiovisual heritage. It has a large and important collection of films and other audiovisual materials. (Coelho, 2009; Souza, 2009). For some years it has been facing political crises and sequential interruptions of budget allocations, interrupting its functioning as well as the work contracts of its specialized staff (Fiaf; Feltrin, 2020).

⁴ To read more about public problems in public policy: Gonçalves (2019).

⁵ The original name of this public policy is “Cinema Perto de Você”, we translated here to “Cinema Near You”. To know more: Ancine, 2013; Carvalho, 2015. On public policy epistemologies see the synthesis of references made by Godoy-Flores (2019), Gonçalves, (2019) and Silva (2012, 2018ab).

⁶ Available at: <http://www.planalto.gov.br/ccivil_03/_ato2011-2014/2012/lei/l12599.htm#:~:text=%C2%A7%201%C2%BA%20Compete%20%C3%A0%20Secretaria,concess%C3%A3o%20de%20incentivos%20do%20AFRMM.>. Accessed: May 15, 2020.

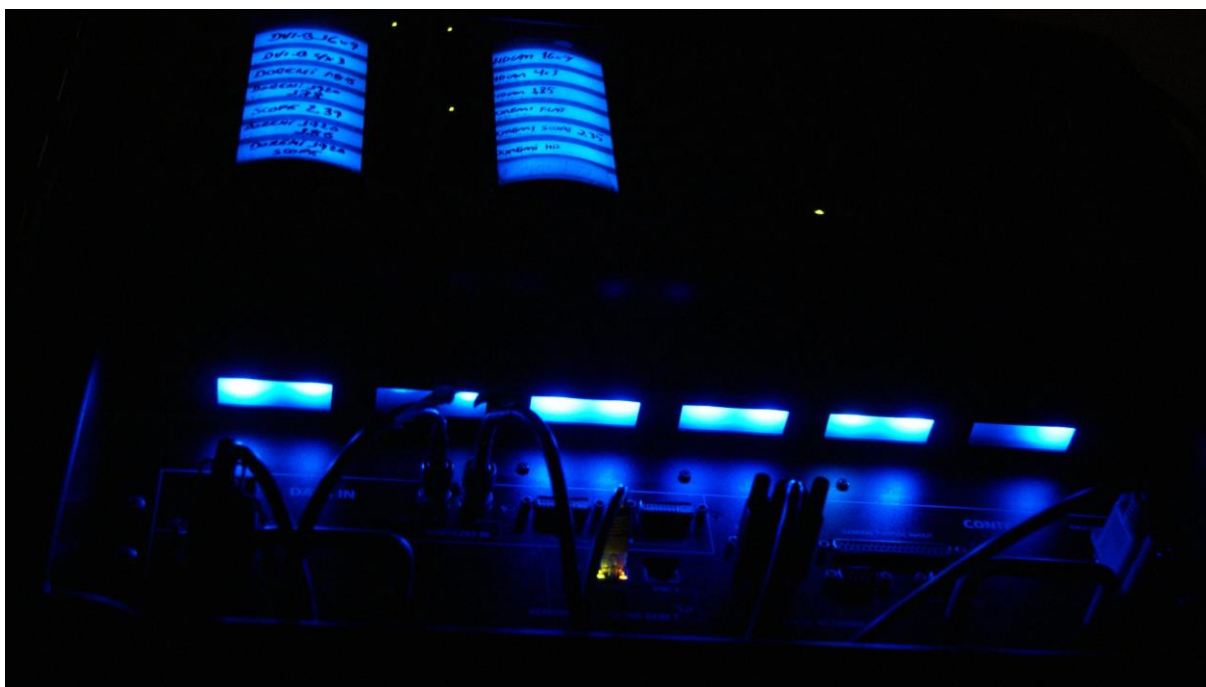


Picture 04: The light of fireflies 25. (Gonçalves, 2015).

Second, there are some audiovisual professionals who are simply being replaced by softwares and hardwares. An example is the case of projectionists, professionals specialized in cinema screening technologies (in particular the analogue technology of exhibition), that now are staying out of the main cinema working agenda (Gonçalves, 2018b). Again, this problem goes beyond cinematographic matters, because it is a fact that consequences related to the digitalization of jobs have been largely discussed and are affecting many other workers worldwide. Indeed, the processes of digitalization in several areas are impacting the world economy by remodeling traditional careers, creating new jobs and discontinuing some occupations. And these disruptive changes are occurring both in private and in public sector (OECD, 2019).

Third, despite the use of digital technologies being considered as good practices because they reduce the use of paper, changes in the energy consumption derived from the production, visualization, sharing and archiving of these digital materials are notable and relevant. Considering the constant news and releases of gadgets and applications related to the production and sharing of images and sounds, it tends to combine increasingly greater uses of data. Therefore, the demands for more energy generation and larger storage capacity of data centers tend to increase, impacting thus, the environment. For example, a topic that is already on this agenda is the discussion about digital carbon footprints, assuming that the growing use of personal gadgets and of broadband internet connections have produced social changes in the ways that people study, work and perform countless daily tasks (Patsavellas; Salonitis, 2019). Another relevant field of discussion is the Green IT, an expression that refers to a set of research and practices aiming to promote sustainable uses and to ponder about problems such as electronic waste and the energy consumption of information and communication technologies (Jayo, 2010).

Fourth, in addition to the significant transformations already mentioned, there are unsolved questions concerning to preservation of digital formats of any kind of document. Instead of objects, now is the digital media that requests storage on the Public Archives, companies and also at our personal hard disks. The logic has been changed from the preservation of physical and handleable materials, to the maintenance of computer data – pixels, in the case of images. This is demanding great challenges to public and private Archives, because preservation of digital data is still a fragile topic (Edmondson, 2017; AMPAS, 2009). Digital media tends to become obsolete very quickly because its duration walks coupled to the rhythms of new softwares and hardwares releases. So, with a few years of use, any data can be easily lost if it is not copied and updated to current formats.



Picture 05: The light of fireflies 04. (Gonçalves, 2015).

If we consider that our contemporary lives are connected to all the digital data we produce and discard every day, it would be understandable that the problems caused by the vertiginous obsolescence of media formats may affect our life trajectories. This also means that all our personal data and the information of our lives stored in public and private institutions, built with textual, videographic and photographic files, inhabiting hard disks and various storage devices, could get lost in a blink of an eye. And, perhaps, it could also produce effects on our offline and organic lives.

Thinking this way, it seems that our human bodies are connected to these non-human structures in a kind of symbiosis that connects us to all the digital applications and systems we deal everyday with, (re)configuring our contemporary modes of life. Thus, capture and share images and sounds are not a prerogative only of media professionals anymore, because this practice has spread in the society with the expansion of using and the cheapening of

technological devices. This transition from photochemical films to pixels changed the materials and is also related to a large range of important social processes in contemporary times.

However, as we have said, digitalization of life does not only inhabit artistic lands. The digital formats are not the only modes of image and sounds capturing, and these technological disruptions are correlated to other important social issues. In any case, the gradual decrease of photochemical formats was unavoidable, since digital media spread out merging to our contemporary modes of life.

Even living this contemporary mode of life, it seems important to us to keep a distanced and analytical look from all this *pixel fever*, that makes the reels gone and the digital players come in, the silver grains gone and promotes the pixels burst, and that is related to important social changes. In a way, digital formats and many transformations that technologies allied to these formats provide are undoubtedly important to our lives today. But, to problematize it and to face that sonorous “no” we mentioned at the beginning of this text, that denies photochemical films without pondering, we ask: how can we be sure about how long these digital formats will last? Can we actually store all these data and measure its digital life expectancy? What are the environmental impacts of digitalization processes? Is this way, how we are currently experiencing this *pixel fever*, sustainable for life on Earth?

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⁷ We are grateful to Angela Corte for helping us to prepare the abstract in English. We would like to thank Fabiana de Amorim Marcello and Maria Helena Lenzi for reviewing the abstract in French.

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