



Grammars of “Onlife” Identities: Educational Re-significations

Alberto Sánchez-Rojo¹ · Ángel García del Dujo² ·
José Manuel Muñoz-Rodríguez² · Arsenio Dacosta³

Accepted: 27 October 2021 / Published online: 13 November 2021
© The Author(s) 2021

Abstract

Identity has been widely understood in Western societies as a specular construction that operates simultaneously both from within and from outside oneself. However, this process is fiercely changing in a world in which almost every human action is mediated by information and communication technologies. This paper, from a theoretical perspective, aims to discover the main educational implications of this change. For that purpose, we first consider the traditional meaning and process of forming the self in Western culture. Afterwards, we identify and describe the mechanisms for the construction of the self in our current context, highlighting the fact that technologies, in themselves and regardless of the use we make of them, hide implications. Taking this into account, we show to what extent the current development of the self presents shades, conflicts and tangible risks from an educational perspective. We finally conclude that it is essential to promote an education on technology that goes beyond the use regulation in which, up to now, it has been solely focused on.

Keywords Identity · Digital culture · Philosophy of education · Pedagogy · Knowledge Society

Introduction

Embedded in the long hall of mirrors that is the world around us, it seems that what we all are depends, firstly, on who looks at us and when and in what context they do so and, secondly, on the image of us that is captured, built and reflected by the mirrors. We are reluctant

✉ Alberto Sánchez-Rojo
asanchezrojo@ucm.es

¹ Department of Educational Studies, Complutense University of Madrid, Avenida Rector Royo Villanova, s/n, 28040 Madrid, Spain

² Department of Theory and History of Education, University of Salamanca, Paseo de Canalejas, 169, 37008 Salamanca, Spain

³ Department of Social Psychology and Anthropology, University of Salamanca, Calle Francisco Tomás y Valiente, s/n, 37007 Salamanca, Spain

from the outset to think that we are purely an information or computational entity—the first visible from outside and the second from inside.

It is true that the way in which others see us is based on the information that we and everyone else provide them with in thousands of different ways. And vice versa: what we are and, especially, what we think we are, is based, at least in part, on what we think about the way in which others see us. Thus, it would seem that in the real world, personal identity is determined by the computing/information processing terms that others generate and express about us, information that inevitably influences the way in which we each see ourselves.

That is what the problem of personal identity would be reduced to in our time. It would be something like a game in the hall of mirrors that is the world we live in, a game that is also visible in the language we use when we talk about it and that allows for and raises numerous questions that are nothing but variants of the perennial philosophical question ‘who am I?’. Today, these questions reveal from a contemporary perspective our eternal preoccupation with unity and individuality, coherence and a lasting personal identity, all questions that would point to an essentialist view of identity that seeks somehow to survive the fragmentation and separation process that the self is undergoing in the post-modern world. It is as though humans are trying not to accept that the concept of identity is currently being weakened and undermined and are instead trying to find and maintain, in an attempt to overcome the discomfort caused by their diverse self-experiences, a certain continuity of their self.

It is striking that in this game of reality and language, we often ignore the reference to the objects involved in our numerous ways of thinking, saying and doing things, that not only make it possible but also end up determining our identities, both individual and collective. That is the case of the mirrors in the metaphor above and that in the context of this article should be replaced with digital technologies, since they construct realities, ways of viewing the world and identities, both individual and collective. It is precisely these technologies that provide and explain the feature that probably best defines and captures the relational and discursive character on which the informational and computational interpretation of self is based. We are referring to the fact that the relationships established by an individual and in whose dynamic their identity or identities are configured, are now fundamentally mediated through technology. This is a phenomenon unique to our time, a time in which digital practices and spaces occupy an important and already widely integrated place in our social life (De Fina & Perrino, 2017). Consequently, the distinction that we used to make between online and offline is losing its meaning, giving way to the so-called ‘onlife’ experience that encompasses both of these areas that can and should no longer be viewed separately (Floridi, 2015a).

We therefore need to ask ourselves about the ways and mechanisms through which this technology shapes and reshapes the identity of the individual living in this onlife world—an identity that, as we shall see, cannot be reduced to a mere abstract entity generated on the basis of computer algorithms (Goriunova, 2019). Answering this question and identifying the consequences that it has for the field of education will be the main objective of this article. To do so, we will first describe the process of configuring the self according to the modern Western tradition that we somehow continue to inherit. This section will serve to provide the context for our subsequent analysis. Secondly, we will analyse the way in which digital technology reconfigures how we construct the self by focussing on three dimensions: time, space and the body. Thirdly, and finally, we will end by defending the need to

readjust pedagogical reflection in the field of education. We would argue that this field has so far been overly focussed on criticising technology designed from a neutral perspective, that can be used for good or bad. As a result, it is overlooking the different possible ways of thinking about the construction of the self in a specifically onlife world. Digital technology intrinsically exists in a way that cannot be controlled externally. It is not neutral, and this has social consequences. That is why we use the term "Grammars". We maintain, like Wittgenstein (2009: 123), that "*essence* is expressed by grammar. [...] Grammar tells what kind of object anything is". Thus, in line with this perspective, we will aim in this article to better understand, from a pedagogical point of view, the construction of the self through the grammars used in digital technologies and the onlife world they create.

The Modern Self: From the Culture of One to the Culture of Many

At the beginning of the 20th century, the Japanese writer Mori Ōgai, having had an immersive experience of Western culture, claimed not to have been able to understand just one thing that he believed Westerners found to be the most important: the self. He argued that "it is vexing to lose this thing called self without having clearly thought or learned what it is while it existed. It is regrettable. To pass one's life 'living as drunk, dying as asleep' as the Chinese scholars say, is regrettable. And as I regret it and am vexed by it, I feel acutely an emptiness in my heart. I experience an indescribable sadness" (Ōgai, 1970: 420). Westerners had invented the concept of an individual separate from the community. It was a self that could find security without having to depend entirely on how much it was connected to others. For someone like Ōgai, who was educated according to the samurai tradition, the essence and very existence of the individual depended entirely on the fulfilment of the duties given to them by their community. Failure to do so meant being condemned to non-existence, to nothingness.

It is true that this way of thinking led to strong and powerful communities, since they were based on individual responsibilities that were difficult to avoid. However, the heavy burden that this put on individuals at the same time made a vision of a world in which this pressure could be removed from one's own subjectivity enviable. The individual had self-worth and was able to find security in themselves.

Descartes (1998) and his methodical doubt, which made him doubt everything but his ability to think, introduced a new type of human existence, one that shifted the focus from public life and community to individuality. It is no coincidence that it was during the 17th century that the first private rooms began to appear, spaces where people could retreat and spend time in solitude (Sánchez-Rojo, 2019), or that the procedures for organising and controlling society began to be governed by power dynamics that were not so much concerned with the collective as with the individual (Foucault, 1995). From then on, the individuality of the self would develop in two different ways: one based on standardised public and individual behaviour patterns, compliance with which would become more and more strictly controlled, and the other on the self-construction of a personal and private identity, freer and further from this rigid constraint imposed by society.

The technical rationality of the Modern world had brought with it the decline of the public sphere in favour of the private sphere (Sennet, 2003), the only one that really mattered, the one that allowed people to develop their own personality. However, this "private life,

which is enriched by things not shared by others, which is enriched by the authentic individual, is not something that one can find easily, without having searched for it. You have to create a private life; you have to conquer it. Existing is not enough to have it” (García Morente, 2011: 38). That is why tools such as diaries were created, that tried to compensate for the incomplete descriptions that may be given of oneself in reports, be they of a medical, educational, police or any other political or social nature. During the 19th century, at the height of this way of developing the self, “teachers would assign diaries as a praiseworthy and healthy activity; adolescents spread among their friends the taste for this written restricted form of exhibitionism. And parents presented their children with blank books, often handsomely bound and decorated, to encourage youngsters in the habit of chronicling their days and their little adventures” (Gay, 1984: 447). It was important to be someone for others, but it was even more important to develop your inner self.

As the material living conditions of a large majority of the population, who had previously been barely surviving and living on a knife-edge, began to gradually improve, more and more people were to be able to enjoy a rich private life. However, the wide spread of material living conditions traditionally exclusive to the bourgeoisie and nobility did not mean an equal spread of their concerns for an inner self development. For people accustomed to struggle for survival, the main goal was not to become someone, but to live well. A new type of human being emerged as a result, someone without personality or conscience, allowing themselves to be carried along by the inertia of circumstances that improved, or at least did not alter, their material well-being (Ortega y Gasset, 1994; Arendt, 1998).

Although the modern individual had managed to dignify and value their self beyond the communities to which they belonged, these communities were still important to them because it was precisely their increased self-awareness that made them feel simultaneously highly responsible for the world they lived in. Despite this, the 20th century, especially after World War II, would bring with it the reduction of life to mere consumption and this meant that all the institutions that had once meant something from a spiritual point of view, such as family, community or society in general, became less and less relevant.

This relaxed the rules and allowed the self to be more flexible in its experimentation, both in public and private. A less reflective and clearly multiple self emerged, that was always changing and willing to experience different ways of being (Bauman, 2000). The lines were blurring, and the world seemed, in general, much freer. However, the fact that it was consumption that ended up taking precedence meant that these experiences ended up becoming a meaningless spectacle (Debord, 1994). In this respect, Gilles Lipovetsky wrote at the end of the 1980 s that “we are in a period characterised by not having an idol or taboo; it does not even have a glorious image of itself or a mobilising historical project. From now on—he concluded—, we are governed by emptiness, albeit an emptiness which is neither tragic nor apocalyptic” (Lipovetsky, 1983: 16), but simply indifferent; an indifference that multiplied experiences and relaxed the rules, but that also ended up leaving individuals feeling abandoned and lonely, to the extent that at the end of the 1990 s, it would be described as a global epidemic (Killeen, 1998). The modern self had become less and less secure (Taylor, 1992) and Ōgai’s feeling of not being able to experience this great invention of the Modern world was shared by the majority of the Western population.

In the early 2000 s, it seemed that information and communication technologies (ICT) might be able to solve the problem. The creation of cyberspace, a public, democratic and shared place to be built together from scratch could be the ideal environment in which to

recover a sense of self in your relationship with yourself and others. This virtual space appeared to be a shared place of belonging, where the self could embed and develop itself in community with others. However, in our current hyper-connected reality it has also become commonplace that, like Ōgai, "we experience widespread feelings of emptiness, of disconnection, of the unreality of self" (Turkle, 2011, 307). We might think that the reason behind this is that, given that ICT has become popular in an individualist and consumerist society, all it has done is radicalise a way of being in the world that was already widespread and popular. However, we could also start from another hypothesis that does not assume that technology is neutral, but rather that it brings certain ways of being and doing, which must be considered in terms of its specificity. If ICT and cyberspace have not solved the difficulties faced by the modern self, perhaps that is because we live in a world where this self no longer has a place. It is this second hypothesis that we want to explore here and that will also lead us to defend the need to change the way we approach our current onlife world from an educational point of view.

The Onlife Self: Construction Processes

It seems to have been sufficiently proven that the technologies behind the onlife world, that were quickly named information and communication technologies because that is pretty much what they were at the beginning, are no longer just information and communication devices. Nor are they only spaces for action and relationships—they are more than that, they define ways of seeing and thinking about reality, practices and habits that shape minds and create culture. This is the approach that we are interested in, because by detecting changes in the ways of relating to things and to others, we are able to unravel changes in the ways of perceiving and creating realities, including our own identity and the identity of other things in the world (García del Dujo et al., 2021). It is in this sense that Floridi (2015a) argues that the onlife world has brought about a re-ontologisation of reality. As has happened many times before in human history (Ong, 1982), this technology is also now bringing with it changes in the way we see and think about reality.

Bearing this in mind, it is worth asking ourselves how this technology is involved in the construction of a person's identity—that is, whether it contributes anything in particular to constructing the self in our onlife world. We will try to answer this in stages, although always based on the same assumption: this technology works by reconfiguring some of the constants that intervene, in a joint and interrelated manner, in the construction and analysis of reality, with implications in the development and perception of the self. This means that we will only identify what we might call a genuine profile of the onlife self once we have analysed in detail how the abovementioned constants are reconfigured; in other words, once we have broken down the grammars of the world in which the self develops.

The assumption that technology determines our way of being and doing gives us a technocentric view of the world, such as the one defended by the French philosopher, Bernard Stiegler (1998). Stiegler, having been clearly influenced by great minds of phenomenological tradition, such as Husserl or Heidegger, argues that these authors maintained a vision of technology that was too limited, reducing it to mere objects for use at our disposal. He believes technology goes much further—it is the very source of human evolution. He maintains that technological changes are what determine changes, not only social or cultural but

also neurological, in a human species whose brain is adapting to an environment with which it is always interacting through technology. The tools and devices we use ‘grammatise’ the world we live in and that is why it is essential to know the language they establish if we do not want to find ourselves lost in the different possibilities they present us with. According to Stiegler (2013, 32), “grammatisation describes all technical processes that enable behavioural fluxes or flows to be discrete (in mathematical sense) and hence, to be reproduced, meaning all those behavioural flows through which are expressed or imprinted the experiences of human beings (speaking, working, perceiving, interacting and so on)”. That said, and this is extremely important for him, all technology is a *pharmaka*, a classical Greek term that refers to both poison and remedy. In other words, it has the potential to be more than one thing and, if we want to be able to decide which is the most suitable, we must first know its language.

In this way, the starting and at the same time supporting point of our approach has to be recognising the informational nature of digital technology. This informational nature has major consequences in the structure of personal identity, both in its construction and conceptualisation and in its meaning. Firstly, a self created entirely on the basis of information seems to be less consistent than the highly materialised and territorialised modern self (Gay, 1984). Secondly, individuality, one of the most prized characteristics of the modern self, is more exposed and susceptible to being replicated because, despite the numerous and diverse channels used, or precisely because of that, it is only sustained and supported through information, thus favouring processes to reproduce, identify and multiply identities (Yau & Reich, 2019). By definition, regardless of the origin, every self contains something of others that enables it to construct an ‘us’. This action is greatly facilitated and amplified by the characteristics of a technology that is capable of carrying out tactical and strategic computations (algorithms of multiple and diverse interest) because there are many diverse variables that make it possible to classify and typify the human condition. This explains some of the phenomena and behaviours of our time, such as that of influencers—whether tiktokers, instagrammers or youtubers—, that Floridi generically called ‘proxy culture’ (2015b). The individuality of the modern self gives way to a multiple typification process based on the dimensions of human action rather than human being.

As a result, the onlife self is presented surrounded by an easily eroded aura. This is due, firstly, to the apparent loss of consistency or, in other words, the increased malleability offered by the informational nature of the self. Secondly, it is the result of the tendency of every self to try to please others in some way when reshaping its appearance for them (Uski & Lampinen, 2014). This undoubtedly leads to the creation of new situations and opportunities for (re)shaping and developing the self that are only possible using this technology.

Implicit in our approach is the social nature of a technology that quickly knew to change its initial design and use from a mere tool for information in its various stages (creation, storage and dissemination) and for communication in the sense of sending or transferring information and instead offer it as a way to help personal interaction as a form of action with great social repercussions. The shift from mere tools and spaces for information to spaces for action, one of the prototypical forms of which is the social relationship as an interactive-communicative practice, raises two very interesting points. Firstly, it is important to realise that the transition from one to the other is made possible and supported by essentially different technologies. What we mean by this is that in the digital world, it is technology that decides the type of activity that can be carried out. For example, an expression limited to

a specific number of characters is different to one that is not and if a site has a wall with information that automatically follows on one after the other, that is different to the user having to voluntarily search the website if they want to access this information. These kinds of adjustments, although they may seem trivial, undoubtedly condition our way of seeing and thinking about the world, as well as our way of seeing and thinking about others and ourselves. As Langdon Winner (1986) demonstrated years ago, technologies are intrinsically political. Remember the importance that literature has always given to the social self in the conception and configuration of personal identity, as well as, again, that from a historical perspective, technology has always been a catalyst for change in our ways of acting, being and thinking (Ong, 1982). Secondly, the transition from spaces for information to spaces for action and interactive and relational communicative practices, that can be explained according to the specific technology used, allows and asks the subject for, at the same time as offering them, an ad hoc cognitive/affective appropriation framework for reality that includes the possibilities of this technology that configures space, time and the body (Turkle, 2011).

The analysis of the behaviour and conceptual reconfiguration of these variables in the digital world that we are going to discuss below leads us to consider two other particularly interesting points in a section that aims to identify and describe the 'grammars' of constructing the onlife self. Firstly, the fact that for some time now we have been viewing the world, including ourselves and others, predominantly through a screen. Secondly, that the particular way in which these technologies work in situations that have this dual informational and relational character described above allows us to call them narrative technologies (De Fina & Perrino, 2017).

The fact that we, and especially the younger generations, now predominantly learn about the world through a screen has already been highlighted as an essential aspect to be taken into account by some authors in the field of education (Vlieghe, 2019). Observing the world primarily through a screen has a specific impact on all areas of life by affecting the very nature of reality. It reconfigures our experience of time, extending *ad libitum* from a presentist point of view, a certain sense of immanence and immediacy that makes us see everything that appears on screen as reality (McIntyre, 2018). If we also consider the capacity and speed of this technology to present huge amounts of information through multiple channels, we can perceive the cognitive-affective state and behaviour of the subject in these open-ended scenarios and moments. This causes an accumulation of images that jump from memory to expectation without any order or reference in time. The ahistorical and nonlinear nature (Flusser, 2007) of this onlife world sustained by a constant flow of information that is filtered according to algorithms based on personal interests, hinders a critical and comprehensive analysis of this information. This creates a pompous and egotistical self, a self that is enclosed in its own bubble with only one centre and point of reference. That is precisely the reason why we constantly see interactions confirming each other's thoughts but rarely conversations with different points of view that influence each other and are truly inspiring (Turkle, 2015).

However, this may not be because the structure of onlife reality condemns us to an eternal present without history, but because the traditional way of approaching history no longer works. Oliveiro (2019) shows us that screens can indeed make us connect with history. Cyberspace today allows us to bring original copies of the great works of humanity into the present and to get to know them, establishing links between different presents, which suits a world that makes it difficult to look back to the past, but that can be open to discovering it

if it is made relevant. In a world in which we are moved by constant interaction and flows of information, if we want to establish a relationship with history, it must be by making it appear to be something that concerns us today. This allows the subject to come out of themselves under the parameters of the world in which they are growing and developing.

The change to the virtual environments of another of the variables we mentioned earlier, space, has also strong repercussions on the processes of (re)constructing the onlife self. We know that cyberspace is spatial, in the sense that users have a sense and notion of space at all times. However, it cannot always be said to constitute a place (García del Dujo, 2009). Casey (1993: 38) wrote years ago that “in the modern era we have accepted and incorporated space and time in their objectivity and (in)difference. [...] We calculate, and move at rapid speeds, in time and space. But we do not live in these abstract parameters, instead, we are displaced in them and by them”. However much modern rational thinking may have exacerbated the measurement of human time and space and separated them from their qualitative content, when it came to living in the world, what mattered was beyond calculation and measurement. According to this author, human spaces are configured according to certain rituals and traditions, leading to the establishment of very specific relationships with the world and with each other. These relationships, in turn, give our experience of time a specific content so that, although time can be divided into hours, minutes and seconds, not all of these time periods, despite measuring the same, are experienced in the same way. Space is measured, we travel through space. Place, on the other hand, cannot be measured, we do not travel through place but live in it.

However, as Marc Augé showed in the late 1990 s, ideals of productivity and efficiency in all areas of our lives had led to the conversion of many former places into mere spaces. According to him, “if a place can be defined as relational, historical and concerned with identity, then a space which cannot be defined as relational, or historical, or concerned with identity will be a non-place” (Augé, 1995: 77). Factories, motorways, airports, hotels, etc. had been built without any connection to the context or the people spending time there. Traditionally, moving around meant changing places. For some time now, it has been possible to travel all over the globe multiple times and not experience a sense of place in any of them. This feeling basically means that “to be *here* in this room—to be «herein»—is not only not to be in the room down the hall or in a room in the next building. It is to be somewhere in particular” (Casey, 1993: 23). For some time now, although it is becoming more and more noticeable, it has been possible to occupy spaces that could be qualified as non-places—spaces that could be anywhere but end up being the definition of nowhere.

This gradual expansion of non-places can be seen in the same way in cyberspace since, although virtual, it behaves in the same manner. At the start, websites had certain quirks that made them special. Similarly, the first platforms for self-expression on the internet would make it possible for them to be inhabited in a very personal way. In other words, to be transformed into places. However, over time, the same ideals of efficiency and productivity that have gradually eradicated physical places have also made virtual places obsolete. An example of this trend is the shift from blogs to social networks as a place for self-expression. Blogs were spaces that gave users a great deal of freedom when they wanted to configure them. Users could decide how to order their entries, what length to make them, whether or not to include images, the type of font and colour other people would see, and so on. Bloggers configured the space in such a personal way that it defined a specific way of relating with the world, as well as determining a degree of temporality. There is a growing trend in

social media, however, to give users much less freedom of action. They define the format of the entries, the number of characters, the length of the videos, etc. They define everything, meaning that there is very little difference between profiles. The type of relationship with the world and the experience of time they create is identical. Even though the content of each post is different, the fact that they are all seen through the same lens gives the space an element of singularity. Blogs can be places but Twitter, Facebook or Instagram profiles are clearly not.

Thus, although the sense of space in some cyberspace environments is progressively transforming into other experiential-conceptual constructs that end up coinciding with the meaning of place or inhabited space, this is becoming less and less common. If this transformation does happen, it does so based on two variables. Firstly, the type of activity that is taking place and secondly, the technology used. It is what users do on the sites and the way in which the activity they request is carried out on them that manages not only to generate a sense of space but also to transform some spaces into places. Moreover, it is the technology itself, in its original configuration, that makes it possible to enable and/or facilitate the creation of virtual places and not just spaces.

It is now clearer why we spoke of these digital technologies earlier as narrative technologies. They create, order and provide tales, stories and narratives that slowly (re)shape the self. They are social and auto-biographical artefacts (Floridi, 2014). They define us and open the gates to platforms that allow us to be ourselves. Our behaviour in cyberspace clearly influences our behaviour outside it (Turkle, 2011; 2015), as our digital life infiltrates our entire reality to make it an onlife space. This, as we mentioned above, happens by way of a language with two clear components. Firstly, a technological component that forms the support or syntax allowing the construction of the self, while at the same time conditioning it. What makes this component interesting is not so much its architecture, in the sense of the final design technique, but the structure itself or the way in which it orders, provides and constructs reality. Secondly, there is the semantic component that is based on the emotionality of everything related to identity. This component is not so much about being as it is about feeling, which is much more profound. The onlife reality does not only concern the social and public sphere but also the more personal and private sphere. This reality defines how we interact with the world but also how we bond with it, which is even more important. That is how the onlife self is constructed and reconstructed, based on multivariate information components, often juxtaposed rather than integrated, more emotional than non-emotional, more narrative than logical-discursive, as well as capable of branching out in multiple directions.

Although onlife reality could be otherwise due to the configuration of every technology as *pharmaka*, we have seen how it places us in a time characterised by being excessively presentist and ahistorical. We have then described the type of spaces that are configured within it. These tend to be non-places rather than places, fitting perfectly with a temporality that does not become fixed. However, although time and space have a direct effect on the development of the self, we have yet to analyse the configuration of the material underpinning it. There is no subject without a body. Consequently, discussing the effects of onlife reality on the configuration of bodies is essential.

In the onlife world, the body also undergoes a process of virtualisation parallel to that of the space-time dimensions, insofar as the body is composed of matter and an analogue reality affected by the dynamic of these dimensions. Thus, bodies can come to experience in this world the same sense of evanescence and timelessness that is caused by the reconfiguration

of the space-time variables analysed above. In a way, space and time are constituent variables of the physical self, meaning that it is affected to the same extent and in the same way as these variables are restructured. However, it is the body that is in charge of restructuring the situation in the process of returning to the apparently analogue reality and the ease and speed with which it does so is striking. It is precisely this non-traumatic transition between space and cyberspace that the term ‘onlife’ alludes to. It is not traumatic because the border has been removed.

The way in which bodies function could be compared to the embedding, disembedding and re-embedding mechanisms that Anthony Giddens (1986; 1991) used to understand the modern world. He interprets the arrival and development of the modern world according to the displacement between space and time that causes social activity to play out according to a series of disembedding processes and mechanisms that are, in turn, followed by similar re-embedding processes and mechanisms. The disembedding mechanisms detach social relationships from their local interaction contexts and re-structure them in indefinite space-time intervals. In turn, the re-embedding mechanisms require the reappropriation or provision of unlinked social relations in order to connect them to local time and place conditions, even if only partially and temporarily. For example, it is Modernity that brings the need for the self to look to itself for moral guidance, independent of tradition and its context. However, in practice, even if moral guidance is separated from the context, it must be negotiated with in order for it to be truly applicable, as the self never stops growing in any given context. Thus, it is essential to re-embed. Not doing so causes conflict and trauma, making the world an uninhabitable space.

Digital spaces would become and function as mechanisms for disembedding social activity, supported by re-aligning time and space with the help of technology. They also, as disembedding systems, require, create and have re-embedding methods, carried out by the numerous and multimodal models used in digital spaces to produce sites, activities and places close to and familiar to the self, where the body was once immersed. In the same way that this enables us in the field of education to find a satisfactory explanation for why so-called ‘blended learning’ (a combination of face-to-face and online classes) is currently becoming more dominant than online learning alone, it also enables us to find an explanation for the construction of an onlife identity. Just like virtual classrooms, when seen as disembedding mechanisms, require reliability or trust that goes beyond a mere cognitive understanding or mastery of the processes and knowledge they are based on, since they are connected to the transformation and recombination of time and space, the digital spaces involved in constructing the self require us to move beyond the digital literacy stage we currently find ourselves in. The relationship we have with the world and others in the re-embedding process is never created under the same conditions as it was before it was disembedded. Believing that we can face a fully digitalised world under the parameters of an analogue world is a mistake. Yet it is a mistake that we keep making in the field of education. We believe that knowing how to use digital technologies as tools is enough, without fully realising that they are not and never have been just tools (Sánchez-Rojo & Martín-Lucas, 2021). Onlife space and time, as well as its effect on our bodies, does not allow the self to develop under the old parameters.

Giving New Educational Meanings to the Development of the Onlife Self

How can this reality we have just described be addressed in the field of education? We are faced with two routes. On the one hand, we can adopt what would be the attitude of critical pedagogy—a pedagogical line of thinking that sees education fundamentally as a means of political and social improvement (Giroux, 2020). This way, we would highlight the pros and cons, advantages and disadvantages, risks and limitations that digital technologies have on the construction and development of the self. This would provide us with the necessary basis for developing procedural and best practice guidelines for preventing misuse and abuse. On the other hand, there is a second route that, in line with the approach of Hodgson, Vlieghe and Zamojski (2017; 2020), could be said to be based on a post-critical attitude. According to these authors, post-critical pedagogy, unlike critical pedagogy, is not particularly concerned with education as a means of facilitating a better social reality in the future. Instead, it focusses on the present and the strictly educational possibilities that it offers. Although this second route is less trodden, from an educational perspective it is the most appropriate. That is because, rather than imposing ways of being and how to be when faced with a new reality, it allows us to extract what is or is not educational in said reality without having to force it. This type of pedagogical approach, unlike the other, enables us to extract the educational elements of developing the self in an onlife world.

It is true that the first path is the easiest and most commonly studied within the academic field of education (Stephansen & Treré, 2020; Van Laar et al., 2017). The fact that it is easier is because the starting point is an ideal world with a given best and worst case scenario. This route has a point of comparison. It has an implicit look at the modern self, whose consistency and coherence would have been challenged by today's digital technologies. Starting from the ideal of a single, coherent and consistent self, this path leads us to reroute activities, processes and curricula in an attempt to preserve and retain the features of the modern self that have traditionally been considered valuable. In a way, it aims for continuity of the self, whether individual or social, accepting that a certain amount of recycling is needed in the use of a technology that can provide us with increased cognitive and emotional possibilities that are essential for the world we live in. It is this recycling that has given rise to expressions such as 'digital literacy' or 'digital skills'. However, following good and bad practice guidelines or learning mainly technical skills that make us digitally competent or literate does not allow the educational potential of the onlife world to be revealed. Instead, what we do is try to force it to produce benefits from the perspective of a previous reality that it does not know, so it ends up being reduced and undervalued. That is why we, based on the viewpoint that the digital technology around us can create world and culture, believe that it is more worthwhile to choose the second path, one that is much less explored but much more interesting, as we have said, from a strictly pedagogical perspective.

As has already been indicated, in an onlife world the internet is not only a space where one can find information, connect with others or express, in one way or another, our individuality; it is also a place where one decides what is and is not socially relevant and how one should express oneself, to the extent that it defines both the forms and contents governing the actions in life that are not, in principle, mediated through digital technologies. This means that those who, for whatever reason, decide to disconnect, end up feeling lost in an offline world that no longer functions independently and separate from cyberspace reality

(Portwood-Stacer, 2012). Conversations, ways of being and behaving, absolutely everything revolves around what happens online because it is the information that it provides that is increasingly shaping and managing our entire world.

It is true that this means, from the outset, that the forms and traits that can shape a person's identity are more heterogenous. However, it is also true that it has other implications that are not so positive, such as the constant tension that the self experiences while it is being configured due to the permanent visibility forced upon it in cyberspace (Yau & Reich, 2019). This tension tends to increase when the person moves through different places and contexts, even at the same time, leading to what has come to be known as 'context collapse' (Vitak, 2012). That is why it is important to highlight, from a pedagogical point of view, the educational potential of the internet as a multifaceted space that can help to construct a self that is aware of human plurality. However, we must also be aware of this pressure that can easily happen, teaching and learning to relativise and redirect our activities online. It would not be so much a question, therefore, of fixed, watertight prohibitions or limitations, as a critical pedagogy would propose, but of being aware and staying alert.

Young people, based on the ideas of the first line of thinking we mentioned, usually veer towards the importance of encouraging the construction of a consistent self, as this will need to form part of all aspects of their public life for the benefit of their personal identity. This identity must appear to be real, authentic and unique, i.e. neither invented nor false and, if possible, a fairly original character. As the internet is a space characterised by being highly transparent, it finds it difficult to tolerate anyone hiding information, being secretive or lying. So, the idea is to show yourself as you are. However, although a person may claim to be authentic, it seems that there are also some unwritten rules that prevent this from being true (Uski & Lampinen, 2014), so the internet ends up showing an ideal, desired but ultimately unreal self that is also displayed to the offline world. As a result, this onlife life can not only cause identity crises because of not being able to achieve this ideal self (Elias & Gill, 2018), but also makes it impossible to build intimate relationships with others (Forbes, 2017). This is another example of how onlife reality tends to be forced to produce a self that, due to the way it is configured, it cannot produce, thus having a negative effect on individuals.

The onlife world has produced a new configuration and relationship between public and private spheres and domains in the construction of the self, a new space where the public activates and catalyses the private, where the private finds what it needs and who it needs for its construction and development—another place where the self finds the exact people it inevitably needs in order to construct itself freely and independently. This is possible due to a new 'materiality' that blurs the lines or boundaries when beginning and developing the construction of the self. We can no longer ignore the fact that today's technology offers the possibility of constructing new realities (networked individualism) and new biases (network subjectivation processes), with de-re-territorialising repercussions that can shape and develop identity in an ecology unique to an onlife world and life (Zahn, 2019).

The characteristics of this technology make it possible for one subject to have multiple identities or construct/manipulate identities ad hoc depending on both individual and collective interests, as well as for some pathological aspects involved to be involved in shaping a person's identity (D'Arienzo, Boursier & Griffiths, 2019). However, they also pave the way for people to construct a large, wide-ranging identity (Azuma, 2009). An identity that is varied and rich, despite suffering from momentary inconsistencies and gaps. It is the risk

we run, the greater it becomes the more precarious our understanding is of the potential of a technology that has been calling for some time now for teaching to be redirected in the context of a post-digital culture of our time. The field of education has focussed more on moulding it than studying it and that is a big mistake.

Breaking down, from a pedagogical perspective, the grammars of the onlife world for the construction of the self requires extracting the educational elements of this way of life. Its plurality, the opportunities it offers to experiment, negotiate and participate in the construction of social reality should be promoted. However, context collapse, the demand for constant exposure and rigid nature of social media and platforms of expression should also be taken into account. It would not so much be a question, from a post-critical educational point of view, of managing use according to social, political or personal objectives, but putting education at the centre and utilising onlife reality on this basis. Thus, perhaps, rather than focussing on developing people's digital skills, we as teachers should focus on analysing the pedagogical potential of these tools and encourage or discourage their use accordingly. Designing tools is not a trivial thing, it is essential (Case, 2016), and we are making a big mistake if we focus on their efficiency and functionality instead of their intrinsic pedagogical nature.

However, we must be careful when looking at these technologies from a pedagogical point of view, as they are emerging in an educational environment that has its own devices and techniques. Some authors such as Masschelein and Simons (2013) have tried to define the grammars of school based on its origins in Ancient Greece. However, these grammars must now be connected with those of the onlife world and this, as we can see in the work, *Taking Care of Youth and the Generations*, in which Stiegler (2010) tries to do this, is extremely difficult. And that is precisely because in among the mixture of grammars, we can be contaminated by the parameters of worlds that are no longer our own. This is what happens to Stiegler, as Vlieghe points out (2011; 2014; 2018) in multiple works. In order to protect new generations from the damaging human use that an incursion into the onlife world guided by bodies such as the entertainment industry can bring about, Stiegler (2010) sees education as a brake, assigning it the role of perpetuating a cultural heritage that according to him seems bound to be perpetuated. However, it is problematic "to claim simultaneously that our constitution as subjects is dependent upon contingent technological conditions and that education should consist in preserving an existing frame of reference across the changing of generations" (Vlieghe, 2014: 534). In our view, this is due to an attempt to merge two grammars by trying to combine them as though they were separate elements, instead of observing how old and new devices cannot but merge into one sole grammar. It is not a question of forgetting that education has certain principles that define it, or of forgetting devices such as schools that emerged long before our onlife reality, but of defining and applying them based on current parameters. It is the task of educators to do this, and we already have specific examples, such as that of a teacher who managed to transform a Massive Open Online Course (MOOC) from space for individual learning to a space for collective study (Vansieleghem, 2019), or a poetry teacher who, by composing a poem through smileys, managed to get his students to experience the ontological power of a poem (Koopal & Vlieghe, 2021).

This approach does not, therefore, respond to the demands made by the profile of certain people, such as the "digital natives" that Prensky (2001) thought he had identified, but to a "greater continuity between teens' online and offline worlds" (Boyd, 2014: 38). The emer-

gence of social practices that belong to both worlds, the creation of environments for digital mediation, coexistence and action that affect each and every level of everybody's daily life, must be understood according to strictly educational as well as onlife parameters. We therefore need to develop a pedagogy that goes beyond the instrumentalisation of education to reach the anthropological roots of education. A pedagogy that goes beyond a knowledge of technological languages, how to create and send messages, better and increasingly diverse uses, technology consumption, didactic productions and programmes linked to technology. A pedagogy built from the independence of the individual, from their responsibility and capacity to self-regulate and, above all, from their ability to adapt to the social space-time of cyberspace. A pedagogy in line with a humanism of belonging to the digital world and neither dominating it—as is obvious—or depending on it—as in this case—but of belonging, and not becoming entangled, to a new environment that the subjects already live in. An *onlife world*.

Conclusions

In this article, we have shown that education must understand technology to be a culture and, consequently, not so much a method of accessing a different social reality but the reality in which we live, in which we have to focus and see the real possibilities it offers from an educational point of view. We have shown how the development of the onlife self acquires meaning from the co-narrative understood to be a dynamic of social exchange of meanings and life experiences between the individual and their interwoven digital and real-life world. The onlife self is noticeably dialogical, with an individuality that is formed almost exclusively through others. It is defined by contact and context. It is practically impossible to run away from this and undoubtedly, from an educational point of view, it has its risks. Yet there is no point in trying to solve them based on a logic that no longer fits the way in which the world is structured. Onlife educational risks must be addressed with onlife educational strategies and tools.

It will not be difficult to continue finding educational approaches in the coming years based on critical pedagogy, anchored visions of the self that are typical of Modernity. It is not easy to escape from education understood from an exclusively normative perspective that aims for social improvement and optimisation of the subject, when in recent years this has been the dominant trend (Merieu, 2022). And it will take some time to understand that pedagogy should do more than issue good practice guidelines on the right and wrong ways of using technology. We must overcome pedagogical pessimism, educational resentment and move on to an inspiring education based on basic concepts such as trust, experience, and responsibility. To do this, we need to know the grammars of the onlife world we live in and to identify the principles that define education within them. As we have seen, the onlife self is capable of re-embedding itself in history, as well as embedding itself in cyberspace and turning parts of it into places. It is possible to train its attention, experience otherness and create communities. It is simply a case of observing the world, understanding the technology that defines it, bearing in mind its *pharmaka* nature and learning to move within it in a less damaging and more human way. Although what we do with it is important, we must first consider where its design leads us and what possibilities we have to make it into something that can be taught. That is the way to build an onlife world worth experiencing.

Funding This work is framed within the development of two Spanish national research projects: 1) "Hyper-connected identity of young people and their perception of time in digital leisure". Spain's Ministry of Science, Innovation and Universities (ref. PGC2018-097884-B-I00); 2) "Digital identities in hyperconnected young people: challenges facing the family, social and learning context". Regional Government of Castilla y León (ref. SA038G19)". Open Access funding provided thanks to the CRUE-CSIC agreement with Springer Nature.

Open Access This article is licensed under a Creative Commons Attribution 4.0 International License, which permits use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons licence, and indicate if changes were made. The images or other third party material in this article are included in the article's Creative Commons licence, unless indicated otherwise in a credit line to the material. If material is not included in the article's Creative Commons licence and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder. To view a copy of this licence, visit <http://creativecommons.org/licenses/by/4.0/>.

References

- Arendt, Hannah. 1998. *The Human Condition*. Chicago: The University of Chicago Press.
- Azuma, Hiroki. 2009. *Otaku: Japan's Database Animals*. Minneapolis: The University of Minnesota Press.
- Bauman, Zygmunt. 2000. *Liquid Modernity*. Cambridge: Polity Press.
- Boyd, Danah. 2014. *It's Complicated: The Social Lives of Networked Teens*. New Haven and London: Yale University Press.
- Case, Amber. 2016. *Calm Technology: Principles and patterns for Non-Intrusive Design*. Sebastopol: O'Reilly Media.
- Casey, Edward S. 1993. *Getting Back into Place: Toward a Renewed Understanding of the Place-World*. Bloomington: Indiana University Press.
- D'Arienzo, Maria, Valentina Chiara, Boursier, and Mark D. Griffiths. 2019. Addiction to Social Media and Attachment Styles: A Systematic Literature Review. *International Journal of Mental Health Addiction* 17: 1094–1118. <https://doi.org/10.1007/s11469-019-00082-5>.
- Debord, Guy. 1994. *The Society of the Spectacle*. New York: Zone Books.
- De Fina, Anna, and Sabina Perrino. 2017. Storytelling in the digital world: New Challenges. *Narrative Inquiry* 27 (2): 209–216. <https://doi.org/10.1075/ni.27.2>.
- Descartes, René. 1998. *Meditations and Other Metaphysical Writings*. London: Penguin Books.
- Elias, Ana Sofia, and Rosalind Gill. 2018. Beauty surveillance: The digital self-monitoring cultures of neoliberalism. *European Journal of Cultural Studies* 21 (1): 59–77. <https://doi.org/10.1177/1367549417705604>.
- Floridi, Luciano. 2014. *The 4th revolution: How the Infosphere is Reshaping Human Reality*. Oxford: Oxford University Press.
- Floridi, Luciano. 2015a. *The Onlife Manifesto*. New York: Springer.
- Floridi, Luciano. 2015b. A Proxy Culture. *Philosophy & Technology* 28: 487–490. <https://doi.org/10.1007/s13347-015-0209-8>.
- Flusser, Vilém. 2007. *Crisis of Linearity: Bootprint* 1 (1): 19–21.
- Forbes, Cameron. 2017. Authentic friendship in the age of social media. *Pacifica* 29 (2): 161–174. <https://doi.org/10.1177/1030570X17715283>.
- Foucault, Michel. 1995. *Discipline and Punish: The Birth of the Prison*. New York: Vintage Books.
- García del Dujo, Ángel. 2009. Análisis del espacio en los entornos virtuales de formación. *Teoría de la Educación* 21(1):103–128. <https://doi.org/10.14201/3157>.
- García del Dujo, Ángel; Vlieghe, Joris; Muñoz-Rodríguez, José Manuel and Martín-Lucas, Judith. 2021. Pensar la (teoría de la) educación, desde la tecnología de nuestro tiempo. *Teoría de la Educación* 33(2), 5–26. <https://doi.org/10.14201/teri.2021332>.
- García Morente, Manuel. 2011. *Ensayo sobre la vida privada*. Madrid: Encuentro.
- Gay, Peter. 1984. *The bourgeois experience: Victoria to Freud vol 1. The Education of the Senses*. Oxford: Oxford University Press.
- Giddens, Anthony. 1986. *The Constitution of Society: Outline of the Theory of Structuration*. Cambridge: Polity Press.
- Giddens, Anthony. 1991. *The Consequences of Modernity*. Cambridge: Polity Press.

- Goriunova, Olga. 2019. The Digital Subject: People as Data as Persons. *Theory, Culture & Society* 36 (6): 125–145. <https://doi.org/10.1177/0263276419840409>.
- Giroux, Henry. 2020. *On Critical Pedagogy*. London: Bloomsbury Academic.
- Hodgson, Naomi, Joris Vlieghe, and Piotr Zamojski. 2017. *Manifesto for a Post-Critical Pedagogy*. London: Punctum Books.
- Hodgson, Naomi, Joris Vlieghe, and Piotr Zamojski. 2020. Manifestations of the post-critical: from shared principles to new pedagogical paths. *Teoría de la Educación* 32 (2): 13–23. <https://doi.org/10.14201/teri.22576>.
- Killeen, Colin. 1998. Loneliness: an epidemic in modern society. *Journal of Advanced Nursing* 28 (4): 762–770. <https://doi.org/10.1046/j.1365-2648.1998.00703.x>.
- Koopal, Wiebe, and Joris Vlieghe. 2021. Seeing through a glass, darkly? Towards an educational economy of the digital screen. *Educational Philosophy and Theory* (latest articles). <https://doi.org/10.1080/00131857.2021.1872018>.
- Lipovetsky, Gilles. 1983. *L'ère du vide*. Paris: Gallimard.
- Masschelein, Jan, and Marteen Simons. 2013. *In Defense of the School: A Public Issue*. Leuven: E-ducation, Culture & Society Publishers.
- McIntyre, Lee. 2018. *Post-truth*. Cambridge: MIT Press.
- Merieu, Philippe. 2022. El futuro de la pedagogía. *Teoría de la Educación* 34 (1): 69–81. <https://doi.org/10.14201/teri.27128>.
- Ōgai, Mori. 1970. Delusion. Mōsō. *Monumenta Nipponica* 25 (3–4): 415–430. <https://doi.org/10.2307/2383543>.
- Oliveiro, Stefano. 2019. Screening the classic: A case of re-mediation? The new chronotope and some possible educational consequences. In Vansieleghem, Nancy, Vlieghe, Joris & Zahn, Manuel (ed.) *Education in the age of the Screen*. London: Routledge.
- Ong, Walter. 1982. *Interfaces of the Word: Studies in the Evolution of Consciousness and Culture*. Ithaca: Cornell University Press.
- Ortega y Gasset, José. 1994. *The Revolt of the Masses*. New York: W. W. Norton.
- Portwood-Stacer, Laura. 2012. Media Refusal and Conspicuous Non-Consumption. The Performative and Political Dimensions of Facebook Abstinence. *New Media & Society* 15 (7): 1041–1057. <https://doi.org/10.1177/1461444812465139>.
- Prensky Marc. 2001. Digital Natives, Digital Immigrants Part 1. *On the Horizon* 9 (5): 1–6. <https://doi.org/10.1108/107481201110424816>.
- Sánchez-Rojo, Alberto. 2019. The Formative Value of a Room of One's Own and its Use in a Hyperconnected World. *Journal of Philosophy of Education* 53(1):48–60. <https://doi.org/10.1111/1467-9752.12306>.
- Sánchez-Rojo Alberto and Martín-Lucas, Judith. 2021. Educación y TIC: entre medios y fines. Una reflexión postcrítica. *Educação & Sociedade* 42. <https://doi.org/10.1590/ES.239802>.
- Sennet, Richard. 2003. *The Fall of Public Man*. London: Penguin Books.
- Stephansen, Hilde C., and Emiliano Treré. 2020. *Citizen Media and Practice. Currents, Connections, Challenges*. New York: Routledge.
- Stiegler, Bernard. 1998. *Technics and Time 1: The Fault of Epimetheus*. Stanford: Stanford University Press.
- Stiegler, Bernard. 2010. *Taking Care of Youth and the Generations*. Stanford: Stanford University Press.
- Stiegler, Bernard. 2013. *Die Aufklärung in the Age of Philosophical Engineering*. In Hildebrandt, Mireille O'Hara, Kieron & Waidner, Michael (ed.) *Digital Enlightenment Yearbook 2013*. Amsterdam: IOS Press.
- Taylor, Charles. 1992. *Sources of Self: The Making of Modern Identity*. Cambridge: Harvard University Press.
- Turkle, Sherry. 2011. *Alone together: why we expect more from technology and less from each other*. New York: Basic Books.
- Turkle, Sherry. 2015. *Reclaiming conversation: the power of talk in a digital age*. New York: Penguin Group.
- Uski, Suvi, and Ari Lampinen. 2014. Social norms and self-presentation on social network sites: Profile work in action. *New Media & Society* 18 (3): 447–464. <https://doi.org/10.1177/1461444814543164>.
- Van Laar, Ester, Alexander J. A. M Van Deursen, Jan A. G. M. Van Dijk, and Jos De Haan. 2017. The relation between 21st-century skills and digital skills: A systematic literature review. *Computers in Human Behavior* 72: 577–588. <https://doi.org/10.1016/j.chb.2017.03.010>.
- Vansieleghem, Nancy. 2019. Scholastic practices in digital education: on grammatization and poetization in bMOOC. In *Education in the age of the Screen*, eds. Joris Vansieleghem, Nancy, Vlieghe, and Manuel Zahn, London: Routledge.
- Vitak, Jessica. 2012. The Impact of Context Collapse and Privacy on Social Network Site Disclosures. *Journal of Broadcasting & Electronic Media* 56 (4): 451–470. <https://doi.org/10.1080/08838151.2012.732140>.

- Vlieghe, Joris. 2011. Education, Corporality and the Evolution towards Digital Learning. A «Stieglerian» Perspective. *Teoría de la Educación* 23 (2): 129–150. <https://doi.org/10.14201/8649>.
- Vlieghe, Joris. 2014. Education in an Age of Digital Technologies. Flusser, Stiegler, and Agamben on the Idea of the Posthistorical. *Philosophy and Technology* 27 (4): 519–553. <https://doi.org/10.1007/s13347-013-0131-x>.
- Vlieghe, Joris. 2018. Stiegler and the Future of Education in a Digitized World. In *International Handbook of Philosophy of Education*, ed. Paul Smeyers, New York: Springer.
- Vlieghe, Joris. 2019. Education and world disclosure in the age of the screen. In Vansieleghem, Nancy, Vlieghe, Joris & Zahn, Manuel (ed.) *Education in the age of the Screen*. London: Routledge.
- Winner, Langdon. 1999. Do Artifacts Have Politics? In *The Social Shaping of Technology*, eds. Donald MacKenzie, and Judy Wajcman, Philadelphia: Open University Press.
- Winner, Langdon. 1986. *The Whale and the Reactor: A Search for Limits in an Age of High Technology*. Chicago: The University of Chicago Press.
- Wittgenstein, Ludwig. 2009. *Philosophical investigations*. Oxford: Blackwell.
- Yau Joanna and Reich Stephanie. 2019. "It's Just a Lot of Work": Adolescents' Self-Presentation Norms and Practices on Facebook and Instagram. *Journal of Research on Adolescence* 29(1):196–209. <https://doi.org/10.1111/jora.12376>.
- Zahn, Manuel. 2019. Beyond digital screens—media ecological perspectives on artistic practices in the digital media culture. In *Education in the age of the screen*, eds. Joris Vansieleghem, Nancy, Vlieghe, and Manuel Zahn, London: Routledge.

Publisher's Note Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.