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Storytelling and Videogames. An interdisciplinary approach to interactive multimedia models for children

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A good story is always a good story, no matter where he is told, if around a fire hundreds years ago or today, through a games console.
Alec Sokolow

All along, fairytales and game-playing have defined the space inside which children are experimenting reality functionally, but in a highly ritualized way. Not only this, fairy-tales are also the places of possibility, of the experimenting, of the ritualized infringement of rules, of invention and creativity.

In the history of education, the mention to the playing activity is a not-to-be-overseen constant presence: from the Pre-Socratics to Plato, from Aristotle to Quintilian, across the Middle Ages and Renaissance to reach Johan Huizinga, Walter Benjamin, Bruno Bettelheim, Roger Caillois and Friedrich Georg Jüngerer on, there have been many scholars who dealt with game-playing as the founding dimension of human societies.

It is through the game-playing that mankind creates its own world, a world reflecting the image every culture has about itself in the given period. A world "put to play" – as underlined by Huizinga – through three fundamental stages: the language (and also the language tools), the myth (and thus the storytelling) and the ritual – that is to say the sacred undertakings serving as warranty for the world's wellbeing[1].

Game-playing is not only the founding element of culture due to the fact that it reunites a multiplicity of belongings and significations: it is at the same time metaphor and alternative to the real world where we are living, it's creativity, daydreaming, rules compliance; yet, also is game-playing breaking these same rules, is it causality, dressing up, illusion.

Game-playing is, moreover, tightly connected with the learning processes, to the testing of possibilities and limits, to the definition of the boundaries of one's own experience, to the interaction with other individuals or devices.

[1] Cf. A. Antoniazzi, *Labirinti elettronici. Letteratura per l'infanzia e videogames* (*Electronic labyrinths. Children's Literature and Videogame*), Milano, Apogeo, 2007.

Studi sulla formazione, 1-2013, pag. 67-76
ISSN 2036-6981 (online)
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The features identified up to now, describe not only traditional games, actually they can be found also in video-games which represent – or, better said, *should represent* – an important educational tool; particulary when the ludic dimension is associated and supported by another fundamental dimension: the storytelling. The reason lies by the consciousness that together with game, and more than the game itself – coming across all the life ages – narration is a component of the human being that cannot be renounced.

Under the folds of disenchantment and of a technology that seems cold and insensitive, the present time hides a deep need to tell stories: the need to tell stories crosses over the skills of each medium and involves a rethinking and reprocessing of the tradition, especially as regards orality and writing.

Remo Ceserani, on the subject, knowns as «many disciplines and fields of knowledge, even the ones that should be closed and bounded in their specialized world and in their technical language (mathematics, biology, physics, natural sciences, but also philosophy, history, geography, anthropology), and a fortiori those linked to human activities – too often entrenched in their methodologies and terminologies (medical, legal activities) – show a very strong need to converse with each other and with the world of literature, seeking to speak with the language of literary tradition, borrow metaphors and forms of storytelling[2]».

Children's Literature

From storytelling around the fire to the cave graffiti, to theatre, to books, to cinema, till the most advanced video-game, mankind has always felt the need to project and find himself reflected in a narrative dimension.

A way out of himself, from the apparently inconsistent and nonsense of the day by day matter, useful not only to evade, but also to find the sense to the own existence.

Among the ways and forms of narrating – also in video-ludic dimension – Children's Literature plays a fundamental role because, since its origin it maintains a unchanged one characteristic that is making it unique and immediately recognizable: being an hybrid product, contaminated, at the edge between a multiplicity of linguistic codes and different communication tools.

Child and youth books are not only at the borders among myth, fairytale, novel, and popular storytelling, but seem to evolve as to content and graphical form capturing and re-elaborating transformations deriving from the coming of every new media and new technology.

Children's Literature is telling stories, proposing story-lines in which the protagonist after abandoning the "status quo" of his/her own experience, opens him/herself to the possibility of accessing to somewhere else unexplored and different dimensions of being, to experiment alternatives to everyday life.

[2] R. Ceserani, *Convergenze. Gli strumenti letterari e le altre discipline* (*Convergences. The literature tools of and other disciplines*), Milano, Bruno Mondadori, 2010, p. 9.

The narrative dimension is that of "fictions", having in its own statute a recognizable structure that, although mobile and sometimes only roughly drafted, consists in - as indicated by Vladimir Propp[3]– a beginning, a progress rich of twists, upside downs, of adventures and a finale where the protagonist collects the fruits of the own experience.

It is also well understood how the approach to Children's Literature's specific narration owns a recognizable epistemological statute of its own, and how this moves inside particular dimensions and – under some aspects – how it is autonomous in respect to other interpretational[4] approaches.

Attributing specific characteristics to the children's publishing industry means drawing it closer to other "fictions", to other forms of storytelling that are sharing its perquisites, specifically – as underlined before – the myth, the epic novel, the traditional and popular fairytale. Moreover the affinity to the antique oral narrations is consenting the access to a particular dimension of Children's Literature: its being multi-medial since the very beginning.

Whereas the *medium* consist in a single communication instrument, Children's Literature has always used contemporaneously a plurality of "media" to diffuse – utilizing the McLuhan's terminology – the content of its own message. Comenius, already in the mid of the 17th Century, underlined the need to complete Children-Books with images with the objective to reinforce the impression on things, to prompt the still soft minds to find enjoyable matters in further books, to learn reading easier.

Since the publication of the *Orbis Sensalium Pictus*[5], almost two centuries went by before the part of the publishing industry we call today Children's Literature started developing. Sure enough, as soon as Children's Literature settled as an autonomous and recognizable production, it was immediately associated to other "hybrid writing" forms, that, with the expansion of the

[3] V. Propp, *Le radici storiche dei racconti di fate* (*The Historical Roots of the Wonder Tale*), Torino, Bollati Boringhieri, 1972.

[4] The term *narration* features a series of different meanings, in relation to the specific research field dealing with it. The autobiographical approach – adopted in both the psychoanalytical field as well as in adult's education – is particularly interesting. Gaston Pineau, one of its first theoreticians, claims that through autobiography it is possible to transcend the linear timeline rediscovering the biographical timeline, meant as a dimension which is able to connect past, present and future in order to recompose individual identity in its temporal *continuum*. On his side, Edgar Morin proposes a *complex anthropology* which, starting from auto-narration, arrives to take the fundaments of human condition in exam, a condition that can only be understood embracing a cognitive paradigm that appeals to complexity and that opens through dialogue to the construction of interconnections among different knowledges. Jerome S. Bruner, on the other hand, sees narration as the main way in which individuals conventionally represent reality where they are the main players. In the Italian *milieu*, Duccio Demetrio suggests that autobiographical exploration may be both a creative and self-directed liberation as well as the re-discovering and the recomposition of one's own past.

[5] Comenius, 1658. Cf. Roberto Farné, *Iconologia e didattica. Le immagini per l'educazione: dall'Orbis Pictus a Sesame Street* (*Iconology and teaching. Images for Education: by Orbis Pictus to Sesame Street*), Bologna, Zanichelli, 2002.

reader groups, started to diffuse more and more, mainly into popular milieu: serial stories, the almanac, the cartoons. All of them are hybrids, on the borderline between different media, or, even better, the result of overlap and contamination between written word and image[6].

The fairytale, the genre fiction and the classics of children's literature have inspired storylines and characters to the new media. In silent era film, for example, many filmmakers have borrowed storylines from children's literature: the movie *The Kid* (1921), directed by Charlie Chaplin, and *Cinderella* (1899), by Melies, are very significant examples in this regard.

Digital technologies, then, amplify this phenomenon not only because, since the Seventies, the "text-based games[7]» told stories about adventures and rites of passage – borrowed from fairy tales and genre literature – but also because the computer-animation continued to be inspired by the classics of children›s literature. Cross-mediality, finally, continues to dilate and further to complicate this situation.

Media convergence

The fact of being, due to its own epistemological statute, at the junction between so many codes and different languages predisposes – as already observed – Children's Literature to a privileged relationship with other media, also and above all with those which are most distant from writing. Like so well explained by Joshua Meyrowitz[8], in fact, the power of a new *medium* doesn't emanate uniquely from its use and its features, but also out of the manner it compensates or bypasses usage and characteristics of previous media.

This way, video-games with a deep narrative matrix, do not represent the sum of previous narrations or a synthesis of the used languages, but a new way of telling stories and a new way to "educate" through stories.

The images, the sounds, the interactions, the I.T. structure, the languages build a new narrative texture and match with the wording not as simple descriptions, but as a possibility. Every element, if properly integrated, allow to deepen the story by exploring its contents – at the same time, in first instance,

[6] Cf. A. Antoniazzi, *Cuori d'inchiostro. Contaminazioni mediatiche: libri, tv, videogame e altri media* (*Inkheart. Contaminations among media: books, TV, videogames and other media*), in *La letteratura invisibile. Infanzia e libri per bambini* (*The invisible literature. Childhood and children's books*), a cura di E. Beseghi e G. Grilli, Roma, Carocci, 2011.

[7] Text adventures, also known as Interactive Fiction, convey the game's story through passages of text, revealed to the player in response to typed instructions. Early text adventures, such as *Adventure*, *Hugo's House of Horrors* and *Scott Adams' games*, used a simple verb-noun phrase to interpret these instructions, allowing the player to interact with objects at a basic level, for example by typing "get key" or "open door". Later text adventures, and modern interactive fiction, can interpret far more complex sentences like "take the key which is on the desk, then open the door". Cfr. http://en.wikipedia.org/wiki/Adventure_game.

[8] Joshua Meyrowitz, *No sense of place. The impact of electronic media on social behavior*, New York, Oxford University Press, 1985.

or separately – starting from points of view other than the one of the text writer, the illustrator, the composer, the IT-expert, etc. who were involved in the creation of the video-game. Last but not least, the hypotized approach allows to open always new perspectives of learning and knowledge acquisition.

Now the video-game – never mind on which IT-hosting support such as the PC-console, the Smartphone or the Tablet – constitutes the sole instrument consenting to activate separately – but more often in a integrated form – ludic, sensomotoric, representational, narrative, strategical and simulation activities[9]. This, at least in theory, since it is sufficient to simply look at the propositions presented on kids' computers to notice the real attitude of the video-game producers (and not only), towards the children and children's needs. The games installed into kids' computers, in fact, are not only in completely out of target regarding age indications (e.g. it is supposed that 3 year old kids already know numbers, alphabet and are able to compose words and perform calculations….), moreover they are very little appealing from the strictly ludic point of view, as well as taking into account the visual-iconography and the sound effects.

But not enough: we need only observe a small child in front of a computer keyboard or facing written texts, the prerequisite to carry on the game action with the multimedia objects dedicated to him, to sense the deep frustration coming from the impossibility to proceed on his own with the game and to the discovery of all its contents.

Many many times, more than what would be actually due, he will be heard asking for help because to go on with the video-game activity he needs to read (acquire) specific instructions or because the interactivity requires complex procedures beyond the logic or the learning way of the childhood.

And that is a paradoxal situation since, as stated by Roberto Maragliano (1996), «The child is a "multimedial creature" because the logic he use to know, to know himself and to enter into a relationship with his peers is based on co-integration of a wide variety of media (telephone, radio, tape-recorder, television, newspaper, book, sticker albums, toys, etc...) devoid of the traditional hierarchies of cognition and use […] The child also is a "multimedial creature" because within the multimedia he thinks to himself in a new, multifaceted and "plural" way: the encounter and the collaboration between the codes (iconic, acoustic, semiotic, tactile) – until now understood as separated – produces in the child the expansion and the redistribution of the mechanisms of knowledge and consciousness»[10].

Notwithstanding the attendance of an adult being absolutely imperative, infact, the child should be put into position to find – also through experimenting by trials and errors – the way to play the game, to resolve the riddles,

[9] R. Maragliano, *Esseri multimediali. Immagini del bambino di fine millennio* (*Multimedial Creatures. Depictions of Millennium Children*), Firenze, La Nuova Italia, 1996.
[10] Ivi, pp. 3-4.

yet following the path of models and modalities he already masters or he can easily guess, on his own; that is to say, the child should be able to find appropriate solutions to complete the task trying out his own limits and abilities. These limits and possibilities to-date are not measurable for the age range 0 to 6 years by the child on his own, let alone for an external observer; this because products to be effectively used by our reference target, and particularly for the lower age range – the 0 to 3 years children – are nonexistent or, in the best case, very little spread.

Methodological prospectives

In order to assure that also children, and in particular the youngest ones, may positively and actively enter in the "converging culture" mentioned by Henry Jenkins[11], a general rethinking of the Education Sciences is needed, in order to take into the due consideration kids's specific requirements, the competences and the skills peculiar to the different evolutionary stages.

The negligence towards children's real participative needs, indicates often scholars' true uneasiness regarding changes and the new challenges proposed by actuality.

This being a negligence that becomes even more obvious and dramatic in the field of multimedia and new technologies.

More specifically, the design of video-games calls for a rigorous and adequate support by the Education Sciences, yet is it too often abandoned to the mere technical realization: one of the most evident (and most dangerous) consequences of this particular situation is that the design of children targeted video-games – also in the field of edutainment – is realized mainly without advice or supervision of pedagogists, psychologists and other childhood experts. Or, anyhow, without regarding the selected audience's requirements, last but not least their formative aspect.

Generating a systematic change of the multimedia studies targeted to childhood and – at practical level – in the creation of video-games, appears as a fundamental milestone toward the one Knowledge Society about which Human Sciences are dealing with since a long time.

One of the big challenges to the Knowledge Society is in fact to overcome the disciplinary fragmentation through the creation of a context, inside which each area of interest shall be given the opportunity to contribute. In particular, Edgar Morin[12] argues that the extreme fragmentation of knowledge operated by the individual disciplines makes it often impossible to link the parts to the whole; therefore, the need arises to create the space

[11] H. Jenkins, *Convergence Culture. Where Old and New Media Collide*, New York and London, New York University Press, 2006.

[12] E. Morin, S*even Complex Lessons in Education for the Future*, Paris, Unesco Publishing, 1999.

for a kind of knowledge capable of framing things into their own contexts, complexities, aggregates.

Inflecting the cultural reform claimed by the Knowledge Society in a particular context like the one of the video-ludic proposals addressed to kids, means, to some extent, accepting the big challenges also on the pedagogical field, turning the attention to all who will be the real protagonists on the adult scenery of tomorrow: today's children.

This consciousness takes to the revision of the approach to New Technologies no more, and not only, to be considered as an essential communication tool for the civil participation, but as the founding educational moment.

Moreover, at the social level, story-telling should be recognized, and auspiciously accepted, as a fundamental cognitive and educational element, overriding the prejudice of amenity and superficiality that too often accompanies the literature and all forms of narration dedicated to childhood. Being able to read the world through the filter of metaphor – from the youngest age on – means having access to a knowledge of society which penetrates beyond the surface and can open a positive renewal of civil living.

The very dangerous risk is in fact to deepen the gap among languages, tools and means used by kids in social ambit, which are in fact dominant, and those of the educational tradition.

Considering the necessity that the traditional educational instruments be confirmed as non renounceable, it is equally needed for the Educational Sciences to descend into the arena to participate actively to the change and the challenges coming with it. Taking into account, by the way, not only the limits but also the inherent potentialities of the change.

Specifically about video-games we should keep in mind that – differently from traditional media (listing cinema and television among them) and thanks to interactivity – these are allowing a new kind of experience: ludic and cognitive at once. The simulated interactive ambient allows, in fact, to directly experience and not only to observe passively: the acquisition of information is possible; it is possible to act and – to some extent – to change one's own condition.

Grammars of Fantasy

In his studies Seymour Papert[13], reversing the hierarchical scale identified by Piaget, underlines the importance of considering concrete intelligence as a privileged form of knowledge; knowledge based on direct experience, and consisting in the gradual development of everyone's skills, by weaving significant relationships.

[13] S. Papert, *Mindstorms. Children, Computers and Powerful Ideas*, New York, Basic Books, 1980; S. Papert, *The Children's Machine, Rethinking School in the age of the computer*, New York, Basic Books, 1993.

As Gianni Rodari stressed, creativity, autonomy, and liberty are not given one time for ever, they are not instrumental goods, they are achievements to be reached through trial, test, comparison and error as well. Taking Rodari's "The Grammar of Fantasy" (1974) – true *manifesto* of a poetics and of a pedagogical philosophy putting childhood at the center of the educational experience – as a reference and expanding it, if we apply it to video-playable contexts (i.e. the subject of the present research) we realize that, at least from the theoretical point of view, we are facing a possible revolution of the educational models for the first childhood and looking to a possible reconsideration of its perceptive, cognitive, and sensorial capacities.

In this sense it can be affirmed that video-games, if conveniently designed, may be implicitly and sometimes explicitly formative. Both because they give form to the kid's experience, getting him/he involved inside the dimensions of virtuality, of agreement, of operativeness, and because video-games are projecting their action on the kid's way to gain knowledge of the world[14]. Especially when the game-playing does not end in itself and fits into a narrative framework which is welcoming, reassuring, and propositional and stimulating at once.

The child grows through the journey among images, music, enigma, tests, initiations, because that is the bottom line of what it is about; he/she grows in consciousness and determination, comes harmonically into the surrounding reality and becoming the creator of reality and – in the end – its empathic narrator.

Also advancing by omissions, by seemingly narrative blanks – a meaningful and rich of sense practice –, may translate the video-game into the motor of the story, entertaining, unsettling, and surprising the player who is left to formulate questions and to find possible answers.

Only inside a video-game, up to now, is it possible to find a context in which playing and narration can interact exponentially amplifying their own intrinsically great potentialities.

The need linking the world of play to that of narration in a multimedia ambient is supported, moreover, by the indications of Bruno Bettelheim[15]. The Austrian psychoanalyst not only considers game-playing as a bridge toward reality, he also implicitly invites to take the narrative variables into account and to reflect about the fact that through the ludic approach, children get to know and to experiment the co-existence of the rules of behavior to be respected and the laws of randomness and of probability. And it is between these two distinct but inseparables moments – playing and narration – where the intellective and psychological development of the child is founded.

[14] R. Maragliano, *Esseri multimediali. Immagini del bambino di fine millenni* (*Multimedial Creatures. Depictions of Millennium Children*), Firenze, La Nuova Italia, 1996.

[15] B. Bettelheim, *The Uses of Enchantment. The Meaning and Importance of Fairy Tales*, New York, Knopf, 1976.

By the continuous passage from the one to the other dimension, the child achieves the perception that mistake in itself is an integral part of experience, and through mistakes it is possible to learn and gain access to new areas of knowledge. On the other hand, also for Walter Benjamin, repetition and absoluteness are fundamental characteristics of child play.

Taking advantage of the ludic moment as privileged medium, children are then stimulated and encouraged to build a world in their own scale by themselves, trough imagination; a micro-world useful in escaping the continuous frustration imposed by a world which is far too large and too complicated.

At a closer look, this modality turns out to be of fundamental importance, since allowing to the child to fantasize by inventing alternatives to what happens in everyday life, it allows to him/her not only to act – from a very early beginning – the distinction between real and imaginary, but to explore always new situations and to open his/her own mind to the dimension possible as well.

As Dickens very well knew, in fact, curiosity is – and has been since the creation of the world – a dominant passion. Stimulating it, supplying a row of gratifications, while always leaving something suspended means to secure the strongest way the readers' and listeners' interest; and those of the video-players.

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