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LEONARDO ELECTRONIC ALMANAC

VOL 19 NO 3 VOLUME EDITORS **LANFRANCO ACETI, STEVE GIBSON & STEFAN MÜLLER ARISONA** EDITOR **ÖZDEN ŞAHİN**

Live visuals have become a pervasive component of our contemporary lives; either as visible interfaces that re-connect citizens and buildings overlaying new contextual meaning or as invisible ubiquitous narratives that are discovered through interactive actions and mediating screens. The contemporary re-design of the environment we live in is in terms of visuals and visualizations, software interfaces and new modes of engagement and consumption. This LEA volume presents a series of seminal papers in the field, offering the reader a new perspective on the future role of Live Visuals.

LIVE VISUALS

LEONARDO ELECTRONIC ALMANAC, VOLUME 19 ISSUE 3

Live Visuals

VOLUME EDITORS
LANFRANCO ACETI, STEVE GIBSON & STEFAN MÜLLER ARISONA

EDITOR
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Leonardo Electronic Almanac
Volume 19 Issue 3

When Moving Images Become Alive!

"Look! It's moving. It's alive. It's alive... It's alive, it's moving, it's alive, it's alive, it's alive, it's alive, IT'S ALIVE!"

Frankenstein (1931)

Those who still see – and there are many in this camp – visuals as simple 'decorations' are living in a late 19th century understanding of media, with no realization that an immense cultural shift has happened in the late 20th century when big data, sensors, algorithms and visuals merged in order to create 21st century constantly mediated social-visual culture.

Although the visuals are not actually alive, one cannot fail to grasp the fascination or evolution that visuals and visual data have embarked upon. It is no longer possible to see the relationship of the visual as limited to the space of the traditional screens in the film theater or at home in the living room with the TV. The mobility of contemporary visuals and contemporary screens has pushed boundaries – so much so that 'embeddedness' of visuals onto and into things is a daily practice. The viewers have acquired expectations that it is possible, or that it should be possible, to recall the image of an object and to be able to have that same object appear at home at will. The process of downloading should not be limited to 'immaterial' digital data, but should be transferred to 3D physical objects. [1]

Images are projected onto buildings – not as the traditional trompe l'oeil placed to disguise and trick the eye – but as an architectural element of the building itself; so much so that there are arguments, including mine, that we should substitute walls with projected information data, which should also have and be perceived as having material properties (see in this volume "Architectural Projections" by Lukas Treyer, Stefan Müller Arisona & Gerhard Schmitt).

Images appear over the architecture of the buildings as another structural layer, one made of information data that relays more to the viewer either directly or through screens able to read augmented reality information. But live visuals relay more than images, they are also linked to sound and the analysis of this linkage provides us with the opportunity "to think about the different ways in which linkages between vision and audition can be established, and how audio-visual objects can be composed from the specific attributes of auditory and visual perception" (see "Back to the Cross-modal Object" by Atau Tanaka).

iPads and iPhones – followed by a generation of smarter and smarter devices – have brought a radical change in the way reality is experienced, captured, uploaded and shared. These processes allow reality to be experienced with multiple added layers, allowing viewers to re-capture, re-upload and re-share, creating yet further layers over the previous layers that were already placed upon the 'original.' This layering process, this thickening of meanings, adding of interpretations, references and even errors, may be considered as the physical process that leads to the manifestation of the 'aura' as a metaphysical concept. The materiality of the virtual, layered upon the 'real,' becomes an indication of the compositing of the aura, in Walter Benjamin's terms, as a metaphysical experience of the object/image but nevertheless an experience that digital and live visuals are rendering increasingly visible.

"Everything I said on the subject [the nature of aura] was directed polemically against the theosophists, whose inexperience and ignorance I find highly repugnant. . . . First, genuine aura appears in all things, not just in certain kinds of things, as people imagine." [2]

The importance of digital media is undeniably evident. Within this media context of multiple screens and surfaces the digitized image, in a culture profoundly visual, has extended its dominion through 'disruptive forms' of sharing and 'illegal' consumption. The reproducibility of the image (or the live visuals) – pushed to its very limit – has an anarchistic and revolutionary element when considered from the neocapitalistic perspective imbued in corporative and hierarchical forms of the construction of values. On the contrary, the reproducibility of the image when analyzed from a Marxist point of view possesses a community and social component for egalitarian participation within the richness of contemporary and historical cultural forms.

The digital live visuals – with their continuous potential of integration within the blurring boundaries of public and private environments – will continue to be the conflicting territory of divergent interests and cultural assumptions that will shape the future of societal engagements. Reproducibility will increasingly become the territory of control generating conflicts between *original* and *copy*, and between the layering of *copy* and *copies*, in the attempt to contain ideal participatory models of democracy. The elitist interpretation of the aura will continue to be juxtaposed with models of Marxist participation and appropriation. [3]

Live visuals projected on public buildings and private areas do not escape this conflict, but present interpretations and forms of engagements that are reflections of social ideals. The conflict is, therefore, not solely in the elitist or participatory forms of consumption but also in the ideologies that surround the cultural behaviors of visual consumption.

Object in themselves, not just buildings, can and may soon carry live visuals. There is the expectation that one no longer has to read a label – but the object can and should project the label and its textured images to the viewer. People increasingly expect the object to engage with their needs by providing the necessary information that would convince them to look into it, play with it, engage with it, talk to it, like it and ultimately buy it.

Ultimately there will be no need to engage in this process but the environment will have objects that, by reading previous experiences of likes and dislikes, present a personalized visual texture of reality.

Live visuals will provide an environment within which purchasing does not mean to solely acquire an object but rather to 'buy' into an idea, a history, an ideology or a socio-political lifestyle. It is a process of increased visualization of large data (Big Data) that defines and re-defines one's experience of the real based on previously expressed likes and dislikes.

In this context of multiple object and environmental experiences it is also possible to forge multiple individualized experiences of the real; as much as there are multiple personalized experiences of the internet and social media through multiple avatar identities (see "Avatar Actors" by Elif Ayter). The 'real' will become a visual timeline of what the algorithm has decided should be offered based on individualized settings of likes and dislikes. This approach raises an infinite set of possibilities but of problems as well.

The life of our representation and of our visuals is our 'real' life – disjointed and increasingly distant from what we continue to perceive as the 'real real,' delusively hanging on to outdated but comfortable modes of perception.

The cinematic visions of live visuals from the 19th century have become true and have re-designed society unexpectedly, altering dramatically the social structures and speeding up the pace of our physical existence that constantly tries to catch up and play up to the visual virtual realities that we spend time constructing.

If we still hold to this dualistic and dichotomist approach of real versus virtual (although the virtual has been real for some time and has become one of the multiple facets of the 'real' experience), then the real is increasingly slowing down while the virtual representation of visuals is accelerating the creation of a world of instantaneous connectivity, desires and aspirations. A visuality of hyper-mediated images that, as pollution, pervades and conditions our vision without giving the option of switching off increasingly 'alive' live visuals. [4]

The lack of 'real' in Jean Baudrillard's understanding is speeding up the disappearance of the 'real' self in favor of multiple personal existential narratives that are embedded in a series of multiple possible worlds. It is not just the map that is disappearing in the precession of simulacra – but the body as well – as the body is conceived in terms of visual representation: as a map. These multiple worlds of representations contribute to create reality as the 'fantasy' we really wish to experience, reshaping in turn the 'real' identity that continuously attempts to live up to its 'virtual and fantastic' expectations. Stephen Gibson presents the reader with a description of one of these worlds with live audio-visual simulations that create a synesthetic

experience (see "Simulating Synesthesia in Spatially-Based Real-time Audio-Visual Performance" by Stephen Gibson).

If this fantasy of the images of society is considered an illusion – or the reality of the simulacrum, which is a textual oxymoron at prima facie – it will be determined through the experience of the *live visuals becoming alive.*

Nevertheless, stating that people have illusory perceptions of themselves in relation to a 'real' self and to the 'real' perception of them that others have only reinforces the idea that Live Visuals will allow people to manifest their multiple perceptions, as simulated and/or real will no long matter. These multiple perceptions will create multiple ever-changing personae that will be further layered through the engagements with the multiple visual environments and the people/avatars that populate those environments, both real and virtual.

In the end, these fantasies of identities and of worlds, manifested through illusory identities and worlds within virtual contexts, are part of the reality with which people engage. Although fantastic and illusory, these worlds are a reflection of a partial reality of the identity of the creators and users. It is impossible for these worlds and identities to exist outside of the 'real.' This concept of real is made of negotiated and negotiable frameworks of engagement that are in a constant process of evolution and change.

The end of post-modernity and relativism may lead to the virtuality of truism: the representation of ourselves in as many multiple versions – already we have multiple and concurrent digital lives – within the world/s – ideological or corporate – that we will decide or be forced to 'buy into.'

It is this control of the environment around us and us within that environment that will increasingly define the role that live visuals will play in negotiating real and virtual experiences. The conflict will arise from the blurred lines of the definition of self and other; whether the 'other' will be another individual or a corporation.

The potential problems of this state of the live visuals within a real/virtual conflict will be discovered as time moves on. In the end this is a giant behavioral experiment, where media and their influences are not analyzed for their social impact *ex ante facto*; this is something that happens *ex post facto*.

Nevertheless, in this ex post facto society there are some scholars that try to understand and eviscerate the problems related to the process of visuals becoming alive. This issue collects the analyses of some of these scholars and embeds them in a larger societal debate, hinting at future developments and problems that society and images will have to face as the live visuals become more and more alive.

The contemporary concerns and practices of live visuals are crystallized in this volume, providing an insight into current developments and practices in the field of live visuals.

This issue features a new logo on its cover, that of New York University, Steinhardt School of Culture, Education, and Human Development.

My thanks to Prof. Robert Rowe, Professor of Music and Music Education; Associate Dean of Research and Doctoral Studies at NYU, for his work in establishing this collaboration with LEA.

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My special thanks go to Deniz Cem Önduygu who has shown commitment to the LEA project beyond what could be expected.

Özden Şahin has, as always, continued to provide valuable editorial support to ensure that LEA could achieve another landmark.

Lanfranco Aceti
Editor in Chief, Leonardo Electronic Almanac
Director, Kasa Gallery

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1. 3D printing the new phenomenon will soon collide with a new extreme perception of consumer culture where the object seen can be bought and automatically printed at home or in the office. Matt Ratto and Robert Ree, "Materializing Information: 3D Printing and Social Change," *First Monday* 17, no. 7 (July 2, 2012), http://firstmonday.org/ojs/index.php/fm/article/view/3968/3273 (accessed October 20, 2013).

2. Walter Benjamin, "Protocols of Drug Experiments," in On Hashish, ed. Howard Eiland (Cambridge, MA: Harvard University Press, 2006), 58.

3. " The point here is not to issue a verdict in the debate between Adorno and Benjamin, but rather to understand the debate between them as representing two sides of an ongoing dialectical contradiction." Ryan Moore, "Digital Reproducibility and the Culture Industry: Popular Music and the Adorno-Benjamin Debate," Fast Capitalism 9, no. 1 (2012), http://www.uta.edu/huma/agger/fastcapitalism/9_1/moore9_1.html (accessed October 30, 2013).

4. Paul Virilio, *Open Sky*, trans. Julie Rose (London: Verso, 1997), 97.

ABSTRACT

In this text I wish to discuss, as well as illustrate through pictorial examples, how the Live Visuals of three dimensional online virtual worlds may be leading us into participatory and collaborative Play states during which we appear to become the creators as well as the actors of what may also be described as our own real-time cinematic output.

One of the most compelling of these stages may be three dimensional, online virtual worlds in which avatars create and enact their own tales and conceptions, effectively bringing forth live, participatory cinema through Play.

AVATAR ACTORS

The Tales of Ruysch, Elif Ayiter, 2010. Screenshot of cinematic play session in Second Life. © Elif Ayiter, 2010. Used with permission.

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LIVE VISUALS: A TRANSITION FROM AUTOGRAPHIC TO ALLOGRAPHIC

Before proceeding into the main discussion of this text I would like to dwell upon what Malcolm Mc-Cullough [1] identifies as a novel state that is deeply affecting the nature of all digital visual creativity and that manifests as a transition which has come into effect through the computer (1996). This incorporates a change in the work medium from 'atoms' to 'bits;' which unlike their analogue counterparts (the atoms) are open to infinite manipulation as well as replication. As is already the case with all creative output generated through the computer, this change particularly applies to digital visual artifacts: McCullough takes his trajectory from Nelson Goodman's definitions [2] of the autographic and allographic natures of different types of creative output, saying that in the

digital realm a shift has occurred whereby autographic (visual, what used to be described as hand-crafted) artworks now share the attributes of allographic (notational) artworks due to the computer's schematic/notational language that determines the structural nature of all output – be this visual, sound or text. That the digital work environment has to be considered as centre stage in contemporary creative activity was already evident some fifty years ago when Roy Ascott wrote that "historically it has been a characteristic of the artist to reach out to the tools and materials that the technology of his time produces. If the cybernetic spirit constitutes the predominant attitude of the modern era, the computer is the supreme tool that its technology has produced." [3]

Ascott also recognizes that the computer is much more than a physical tool; that it is in fact a creative medium that may well be capable of extraordinary mental transformations:

> *Used in conjunction with synthetic materials, it [the computer] can be expected to open up paths of radical change and invention in art. It is a tool for the mind, an instrument for the magnification of thought, potentially an 'intelligence amplifier,' to use H. Ross Ashby's term. The interaction of man and computer in some creative endeavor, involving the heightening of imaginative thought, is to be expected.* [4]

Manipulating bits is essentially different from manipulating atoms and this difference between digital and physical media resides in their microstructures: Processes that move physical atoms around constitute the irreversible aspects of traditional work, whereby most operations are beyond recall. By contrast, the microstructure of the digital medium is comprised of bits which are specified arrangements of symbols.

While the hardware of the computer is made out of atoms, its internal logic employs symbols that quantize the physical charges that they represent by obtaining stable bits. In the microstructure of the computational medium, arrangements and values can always be re-constructed, their previous states can be stored and recalled, additional instances and versions can be rep-licated, resulting in a continuously workable medium, in which unprecedented creative freedom for Live Visuals can be experienced. [5]

The constitutive differences between analog and digital media extend themselves to a question of 'language,' which in the case of computational environ-ments are complex symbol systems that the bits carry: Formal notation is a special case of symbol usage and an understanding of it is a good way of getting a sense of the computer as a 'medium.' Notation, as for-mulated by Goodman, is defined as a symbol system consisting of a scheme that is correlated with a field of reference made up of a distinct set of characters plus a syntax for combining them. While symbol schema are the basis of alphabetical and musical notation, they cannot be applied to artifacts such as drawings and sketches since these are comprised of a dense field of overlapping, ambiguous, uniquely executed marks that cannot be defined as a symbol scheme. [6]

A work of music exists in the abstract, and it may be performed, arranged, etc according to its notation in such a way that two different performances of a musi-cal score are clearly instances of the same work, whilst yet remaining distinctly separate. In this sense the cre-ation of the work and its performance are unrelated events. Visual output such as painting or sculpture, however, shows entirely different characteristics since authorship and execution are united. Therefore even the most accurately duplicated copy is not the same as the original. Painting defies notation, since accord-ing to Goodman, we lack any real definition of what constitutes a work of painting.

Based upon this difference Goodman introduced terminology to distinguish between what he calls 'au-tographic' works in which case there exists only one original and 'allographic' works where a symbol sys-tem (notation) carries the work and multiple instances

The Asemic Avatar, Elif Ayiter, 2012. Screenshot of cinematic play session in Second Life. © Elif Ayiter, 2012. Used with permission.
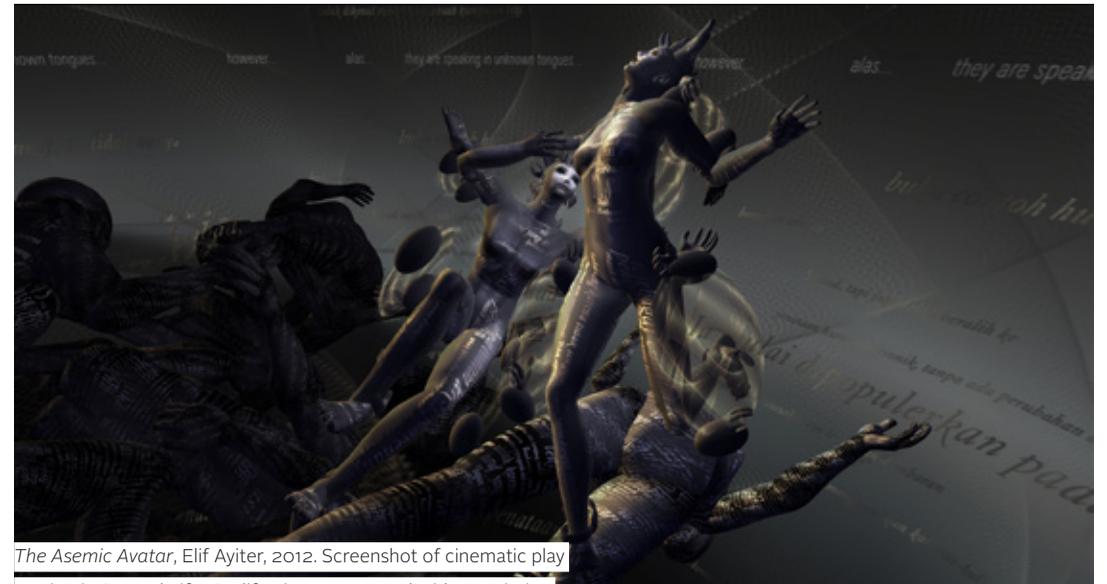
The Asemic Avatar, Elif Ayiter, 2012. Screenshot of cinematic play session in Second Life. © Elif Ayiter, 2012. Used with permission.

of the original work are possible. The second category is more abstract and the route to such a state of ab-straction is to incorporate formal notation.

Since it can be said that avatars are playful beings that have usually been created for just such a purpose, they seem to naturally lead us to an examination of the entire notion of Play: it is a distinct advantage of computation to introduce Play – this is a natural con-sequence of working in bits, since bits enable us to bypass the irreversibility of the traditional processes rooted in the physical laws of material, in the atoms. The very structure of the medium contains variables that invite improvisation along established parameters.

We could indeed say that improvisation is the a priori manner of inhabiting the digital creative medium; a world populated by evolving objects that give the abil-ity to navigate a continuum of possibilities. The key to working with computers is an understanding of them as a medium, in which there exists a perpetual media-tion between action and notation. This means that while work takes place in an abstract métier, it can also actively reshape this very medium within which the user is operating. If one word springs to mind, this could be 'participation,' or in other words, psychologi-cal identification between the medium and the user. Such deep levels of psychological engagement de-pend upon building convincing mental models that are an essential requirement for the computer to be per-

ceived as a medium. Brenda Laurel has observed that this process is similar to what we experience when attending a good play: "Engagement is similar in many ways to the theatrical notion of the 'willing suspension of disbelief,' a concept introduced by early nineteenth century critic and poet Samuel Coleridge. It is the state of mind that we must attain in order to enjoy a representation of an action." [7]

Thus we suspend our awareness that we are working with a computer, and we enter the mental model, as though our monitor were a proscenium, or better yet as if we were onstage ourselves. In the case of three dimensional virtual worlds it is our avatar 'selves,' that construct the perception that we ourselves are situ-ated within our own work – as actors and as Players.

HOMO LUDENS

A noteworthy context to the pre-digital divide be-tween autographic and allographic artwork is articu-lated by Johan Huizinga who observes that notational artworks and the plastic arts also differentiate them-selves when it comes to Play. According to Huizinga, Play is not nearly as apparent in the plastic arts (of his time) as it is in literature, performance and music, since in (analogue) visual work the rigid nature of the materials requires pre-planned approaches and care-ful handling – mind sets that inevitably preclude Play;

which in itself seems to reside upon uncertainty: Huiz- inga is unable to determine what Play is about in its essence – it can only be truly understood by what 'it is not,' rather than by what 'it is.' [9] Just like his predeces- sor Huizinga, Brian Sutton-Smith (1997) too is uncer- tain of what the essence of Play may be; describing it as 'amphibolous,' i.e. 'moving in two directions at the

poses human society, and animals have not waited for man to teach them their playing," from which it would appear to follow that the intrinsic nature of Play for Huizinga is quite intangible: Biological conditions appear to be insufficient for explaining behavior that is as extraordinary and as idiosyncratic as Play is as a natural or as an instinctive state; since nature, he says,

of purely mechanical exercises and reactions. But no, she gave us play, with its tension, its mirth, and its fun." The last concept resists all analysis, and all logical interpretation, in short it cannot be reduced to any other mental category – and it is precisely this fun- element that characterizes the essence of play. "We may well call play a 'totality,' and it is as a totality that we must try to understand and evaluate it." [10]

Although Huizinga is unable to determine what Play is about in its essence, nevertheless he does identify a number of tangible attributes that this intangible thing – which seemingly can only be understood by what 'it is not' rather than by what 'it is' – holds: Play is a voluntary act: It is free – it is in fact freedom itself. Play is 'extraordinary' since it sets the player outside the confines of the 'ordinary' or of 'real' life for the duration of the play session. Play creates its own order as well as its appended rules (which, again, stand out- side of the order of 'real' life); and demands absolute and supreme allegiance to these from the player. Play cannot be connected to material interests, and thus a play state is always entered into with no gain or profit in mind. [11]

Yet another attribute that can be related to 'play' is the secrecy with which players very often surround themselves with. This love of secrecy, which is also evidenced in very early childhood play, points at the exceptional and special position of play as 'a thing apart' from the 'ordinary,' that evokes feelings along the lines of "this is for us, not for the 'others.' Inside the circle of the game the laws and customs of or- dinary life no longer count. We are different and do things differently." [12]

When it comes to avatars – their many identities and the elaborate appearances thereof, Huizinga's thoughts on disguise and representation are most ap- pealing when he tells us that "the 'differentness' and

secrecy of play are most vividly expressed in 'dressing up.' Here the 'extra-ordinary' nature of play reaches perfection. The disguised or masked individual 'plays' another part, another being. He is another being. The terrors of childhood, open-hearted gaiety, mystic fantasy and sacred awe are all inextricably entangled in this strange business of masks and disguises." [13] Performances of this kind are full of imagination. The child is making an image of something different, something more beautiful, or more sublime, or more dangerous than what is ordinarily beheld. This repre- sentation is not so much a sham-reality as a realization in appearance: "imagination' in the original sense of the word." [14]

CREATING A PARACOSM

Writing some 50 years after Huizinga, play theorist Brian Sutton-Smith observes that there are consider- able difficulties in understanding children's play in a culture as dualistic in terms of adults and children as ours is; noting that in general adults appear to be frightened by children's phantasmagoria. Furthermore, only a small percentage of children grow into adults who treasure forever their memories of some recur- rent fantasy that preoccupied them in their childhood. In examining some of these modern 'paracosms,' [15] it can be found that child phantasmagoria is increasingly being staged in solitary play rather than in collective play; and that one of the major implicit cultural func- tions of toys in the past 200 years has been as props to support relatively solitary play. Play in most societ- ies throughout most of history has been a collective activity. However, in modern societies, which require massive amounts of individualized symbolic skill from their members, habituating children to solitary preoc- cupations appears to be a primary function of toys. [16]

The Tales of Ruysch, Elif Ayiter, 2010. Screenshot of cinematic play session in Second Life.
© Elif Ayiter, 2010. Used with permission.

same time.' To further illustrate the ambiguity in Play Sutton-Smith also refers to Gregory Bateson who said in 1955 that 'play is a paradox because it both is and is not what it appears to be;' and Richard Schechner who in 1988 suggested that 'a playful nip is not only not a bite; it is also not not a bite.' [9]

Huizinga proclaims that "play is older than culture, for culture, however inadequately defined, always presup-

would surely have provided far more efficient means for the fulfillment of those functions that scientists have always associated with 'play.'

"Nature, so our reasoning mind tells us, could just as easily have given her children all those useful func- tions of discharging superabundant energy, of relaxing after exertion, of training for the demands of life, of compensating for unfulfilled longings, etc., in the form

The Encounter, Elif Ayiter, 2010. Screenshot of cinematic play session in Second Life. © Elif Ayiter, 2010. Used with permission.

PLAY AND MYTHOPOIESIS

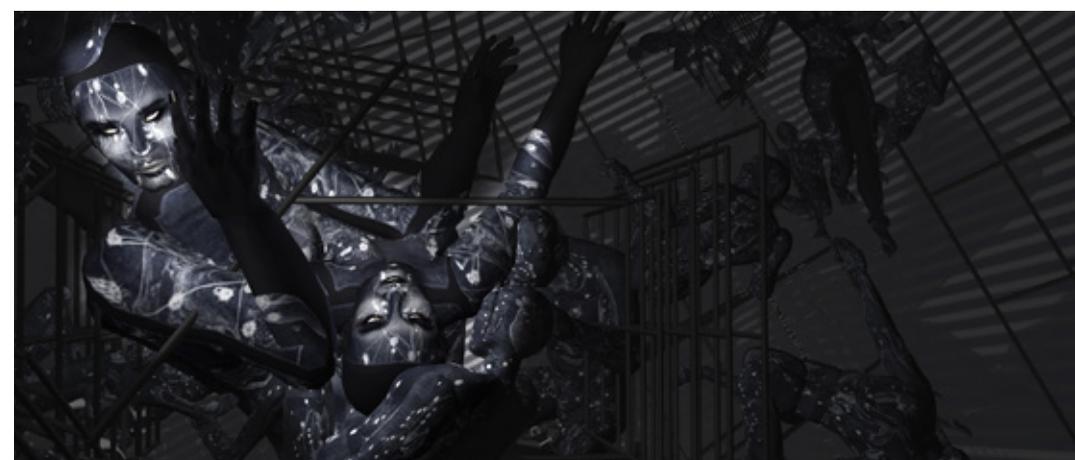Not only the elements of myth but those of poetry are also best understood as Play functions. According to Huizinga, poetry derives its purpose from the timeless, ever-recurring patterns of beat and counter-beat, rise and fall, question and answer – in short, rhythm. Its origin is thus bound up with the principles of song and dance, which in their turn are best comprehended in the immemorial function of Play.

As soon as metaphors begin to describe things or events in terms of life and movement, we are on the road to personification, and this points at a strong cor-relation between Play and 'mythopoiesis,' whereby the representation of "the incorporeal and the inanimate as a person is the soul of all myth-making and nearly all poetry." However, are we justified in calling this innate habit of the mind, this tendency to create an imaginary world of living beings, a 'playing of the mind,' or 'a mental game?' **19**

If this innate tendency of the mind that invests the objects of ordinary life with personality, is in fact rooted in play, then we are confronted with a serious issue given that Play has been present before human culture or human speech ever existed, and as such the ground on which personification and imagination works may indeed reach back to our remotest pasts as living beings. While theriomorphic imagination is at the bottom of the whole complex of totemism, a far more recent manifestation is the 'versipellis,' known the world over as the individual who can temporarily take on the form of an animal, such as a werewolf.

Mythopoiesis and play, when looked upon as Huizinga does, may also answer at least some of the questions as to why avatars have such a profound effect upon us by examining this query from the viewpoint of the theriomorphic imagination which, as Huizinga points out, can be traced back to a very deep level of our psychic evolution, and as such would appear to have a very powerful impact on our beings – often indeed increasingly so, due to its subliminal attributes.

Taken in its most literal correlation some avatars do in fact manifest as animals, effectively allowing the hu-man behind the keyboard to change into fauna at will.

Sutton-Smith refers to several studies which show that children "can comprehend and sustain very com-plex play macrocosms and paracosms, and that this is indeed a testimony to play's independence, without which viable ludic transformations would probably not be possible." Children's play fantasies are not meant to replicate the world, instead they are meant to fab-ricate another world that lives alongside the first one and carries on its own kind of life, a life often much more emotionally vivid than mundane reality. **17** Thus 'play' is also a deconstruction of realistic society, tak-ing the world apart in a way that suits the emotional responses of the player to it. As such, children's play is a deconstruction of the world in which they live. From which it follows that if the real world is a text to be deconstructed, then Play is the reader's response to that text. There are endless possible reader responses to the orthodox text of growing up in childhood since there is an endless play of signifiers of which children and all other players are capable.

Sutton-Smith also quotes Greta Fein who has ob-served that children give their play a structure that is based on experiencing in a safe way the intense and even potentially disturbing emotional relationships of actuality. Their play is not based primarily on a rep-resentation of everyday real events – as many prior investigators have supposed – as much as it is based on a fantasy of emotional events. The logic of play is the logic of dealing with emotions, and it has to do with how these may be expressed and reacted to in any mundane or fantastic way that the Player chooses. What is remarkable about Fein's account is that it par-allels the efforts of biologists who tell us that animal play is also not about realistic representations; that in-stead it is fragmentary, disorderly, and exaggerative. **18**

Uranometria, Elif Ayiter, 2011. Screenshot of cinematic play session in Second Life. © Elif Ayiter, 2011. Used with permission.

Furthermore, many animal avatars are also shapeshifters who will not settle for one representation but will meta-morphose from beast to beast (often in front of one's very eyes, as one is conversing with them); or indeed switch between many types of hard to define life forms that re-side at the intersections of species, if not indeed states.
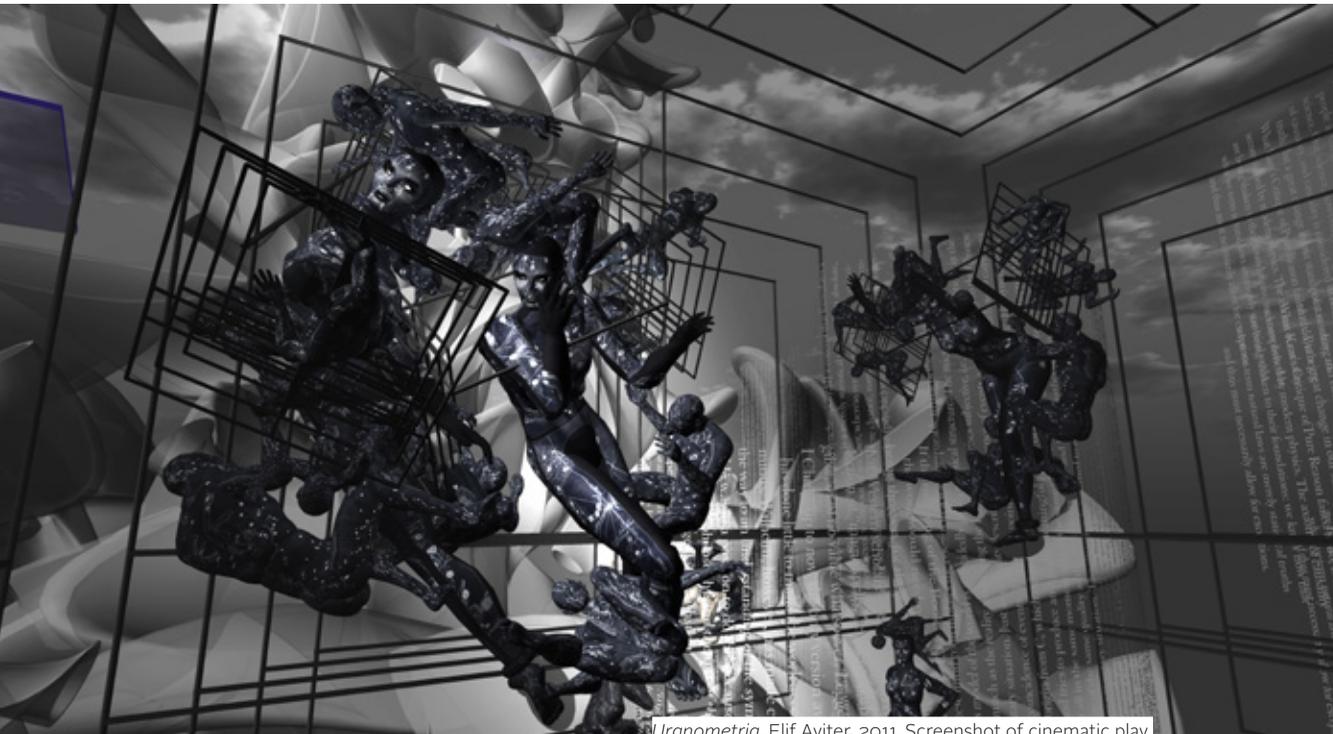
Uranometria, Elif Ayiter, 2011. Screenshot of cinematic play session in Second Life. © Elif Ayiter, 2011. Used with permission.

VISUAL ARTS AND 'PLAY'

When examining the relationship between 'play' and artistic activity Huizinga distinguishes between music/dance/poetry and the plastic arts: For him the former possess an inherent affinity with Play in that they can be seen as immaterial, participatory and performative experiences whereas the plastic arts involve a far more deliberate approach, that involves pre-planned actions which are performed in isolation. This is due to the nature of their materials that do not easily accommodate improvisation. Huizinga traces this differentiation between the poetic arts and the plastic arts back to Greek mythology, where the former were relegated to the jurisdiction of Apollo and the Muses, while the visual arts were assigned to the domains of Hephaistos, the master craftsman, and Athene Erganē, the goddess of the handicrafts. Indeed, the visual arts seem to be one of the very few areas of human activity in which Huizinga cannot seem to find an easy correspondence to Play.

Returning to McCullough's thoughts on how the digital medium has brought into effect a major transformation in which visual 'autographic' output has become 'allographic,' we find that Live Visuals are now effectively in possession of the same age-old attributes of linguistic and sonic output that allow for multiple instances of one artifact which are all open to unlimited further manipulations, mergers and Play. [20]

Homo Ludens was written in 1938, at a time well before this startling transition from atoms to bits as the new medium of visual creative activity was in evidence. Would not Huizinga have taken such a vast change into consideration had he written 'Homo Ludens' today? Would he still have seen a difficulty in the visual medium that was insurmountable when it came to Play, if he could have situated the plastic arts within what I like to think of the ultimate visual playground – the computer?

The metaverse avatar is a uniquely hybrid being that I imagine would have delighted Huizinga in its ability to combine the allographic with what in his lifetime was still autographic: Avatars are visual creatures. They are visual artifacts. However, avatars are equally troubadours and storytellers, poets and dancers and performers and movie stars. And ultimately avatars, at their absolute and consummate best, are – Players!

AVATAR LUDENS

Avatars play in more ways than I could possibly hope to capture here – indeed I would like to posit that most avatar activity is centered on play, regardless of whether we are looking at gaming worlds or at the metaverse. While in gaming worlds this activity is focused upon achievement-oriented 'games' that Brian Sutton-Smith places under a 'Rhetoric of Power,' in the metaverse such 'games' often come out in ways that are far less easy to categorize: More so than structured activities that work towards a predefined outcome or goal (as games tend to be), what makes the metaverse into a very powerful playground for adults is pure Play, which takes place voluntarily and spontaneously, has no predetermined duration, and no expected outcome. [21]

The transition from autographic to allographic output has also brought forth a dramatic new component to an old game – the creation of novel and/or alternative identities. While, until recently, these became actuated mostly in the realm of literature, that is to say on the mental plane of words; the three dimensional avatar of virtual worlds is now enabling us to create novel identities that are also visual beings, complete with virtually embodied personas that may aid in underscoring their psychic distinctiveness.

Once again, I wish to go to play theory – this time through Paul Harris, who describes children's 'role play' using externalized objects, such as dolls or other toy artifacts, as a prop for projecting different personas with which a child will fully identify for as long as the play session is in progress; saying that children "create such characters out of thin air, positioning them at various points in their actual environment." [22] According to Harris, these extended play sessions do not need to involve multiple players; indeed they are most often performed by a child playing in isolation. Role play, says Harris, is further striking since children will temporarily immerse themselves fully into the identity, or indeed concurrent identities that they create; also often shifting their moods and their tone of voice in ways that are appropriate to the part(s) which they are enacting.

This description may serve to explain the fascination that adult metaverse players evince when it comes to 'alt' avatars, through whom such doll play sessions that evoke 'role play' through multiple personas also comes into being [23]. However, Harris's description may be incomplete; that what may be at work with both children playing with dolls, as well as adults 'playing' with alt avatars, may be far more complex since we may in fact be playing with the multiple facets of what is commonly held to be our singular and unified 'self.'

These beings, which emanate from us – and yet may or may not be 'us' – proceed to create their own complex existences, form their own circles of acquaintances, their own unique life-styles culminating in their own tales and narratives. More often than not they will exhibit idiosyncrasies of their own and engage in their own willful behavior that also manifests as highly elaborate Play. Such games come complete with all the outfits that an avatar could possibly wish for, not to even mention all the toys – the elaborate doll's houses, the vehicles to get around with; as well as an arsenal of practical jokes, gestures and animations, nukes, and other diverse armory – everything from fully detailed Uzis to farmyard guard-geese that will ruthlessly chase and bite trespassing avatars into total submission.

THE MULTIPLIED/DIVIDED 'SELF:' HETERONYMS AND AVATARS

Sutton-Smith points at the Renaissance literary theory of the 'selves,' which was exemplified in the writings of Rabelais, Machiavelli, Erasmus and Cervantes, and that

was followed a few centuries later by a group of writers who are held to be the representatives of the 'ludic self' in seventeenth century English literature. [24]

Although Sutton-Smith does not specifically note upon multiple selves expressed through multiple identities in the shape of pseudonyms, nevertheless I would still like to make this leap and discuss the impact that a splitting of the creative self into several discrete personas may have upon creative enablement.

When it comes to an examination of the multiplicity of the self for purposes of creative Play Fernando Pessoa's heteronyms should be considered at the centre of the stage. Not only did Pessoa write as Bernardo Soares, Alberto Caeiro, Ricardo Reis, Alvaro de Campos but he claimed that these were not mere pseudonyms since it was not just their names that were different to his. Rather, they were fully fledged 'others,' with uniquely developed individuated personalities and appearances of their own, whom their inventor called 'heteronyms.' [25] Showing commonalities with Yeats's 'masks' or Pound's 'personae,' the four independent authors also wrote essays on one another, including commentaries on Pessoa's own writing. Such indeed, was their disparity that Pessoa even created elaborate horoscopes through which he charted their individual futures independently of his own.

The heteronyms were not simply a game; they were a highly intellectualized construction that occupied Pessoa's entire adult life. They were the co-travelers of a voyage of self-discovery, or self-invention which he worded as "to pretend is to know oneself," [26] an existential circumnavigation that would not end until Pessoa did. 'Pretending' was actuated through these discrete personalities lived by the author within himself and was given expression through the books which they authored, to the contents of which Pessoa did not claim ownership of. Nor did he necessarily

The Tales of Ruysch, Elif Ayiter, 2010. Screenshot of cinematic play session in Second Life. © Elif Ayiter, 2010. Used with permission.

agree or disagree with what was in their prose and poetry, saying that 'they' wrote through him as if he were being dictated to. Indeed in his most extreme proclamations regarding this literary content, Pessoa claims that the human author of these books has no personality of his own. "Whenever he feels a personality well up inside, he quickly realizes that this new being, though similar, is distinct from him – an intellectual son, perhaps, with inherited characteristics, but also with differences that make him someone else… As the helpless slave of his multiplied self, it would be useless for him to agree with one or the other theory about the written results of that multiplication." [27]

Although Pessoa resolutely maintained the autonomy of the heteronyms, nonetheless he tacitly acknowledged that he was the owner of the overall literary

system that he created through their writings. He also divulged that he may have been only contributing "… to my own amusement (which would already be good enough for me)," [28] in this way also defining his creative act as Play. This acknowledgement is tragically furthered when he expresses the deep seated loneliness out of which these alternative selves have manifested as the quenchers of a thirst for companionship, for playmates:

> *In view of the current dearth of literature, what can a man of genius do but convert himself into a literature? Given the dearth of people he can get along with, what can a man of sensibility do but invent his own friends, or at least his intellectual companions?* [29]

From Pessoa's example it is evident that assuming multiple identities or spreading one's singular being over many 'selves' is an age-old game to which doing the same with avatars only adds a new component. Nevertheless, what avatars bring into this old game is significant: One of the contributions that avatars make to the discussion of the 'Play of the selves' resides in the circumstance that while we identify with our virtual representations to the extent where the boundaries between our physical and our virtual beings seem to blur to quite a remarkable degree; no matter how strong this identification may be, the avatar still resolutely stands outside of us, is not an internalized being that has to rely upon our physical apparatus to become materialized. [30] We can therefore observe our representation through the avatar as a tangibly visualized and externalized manifestation, while at the
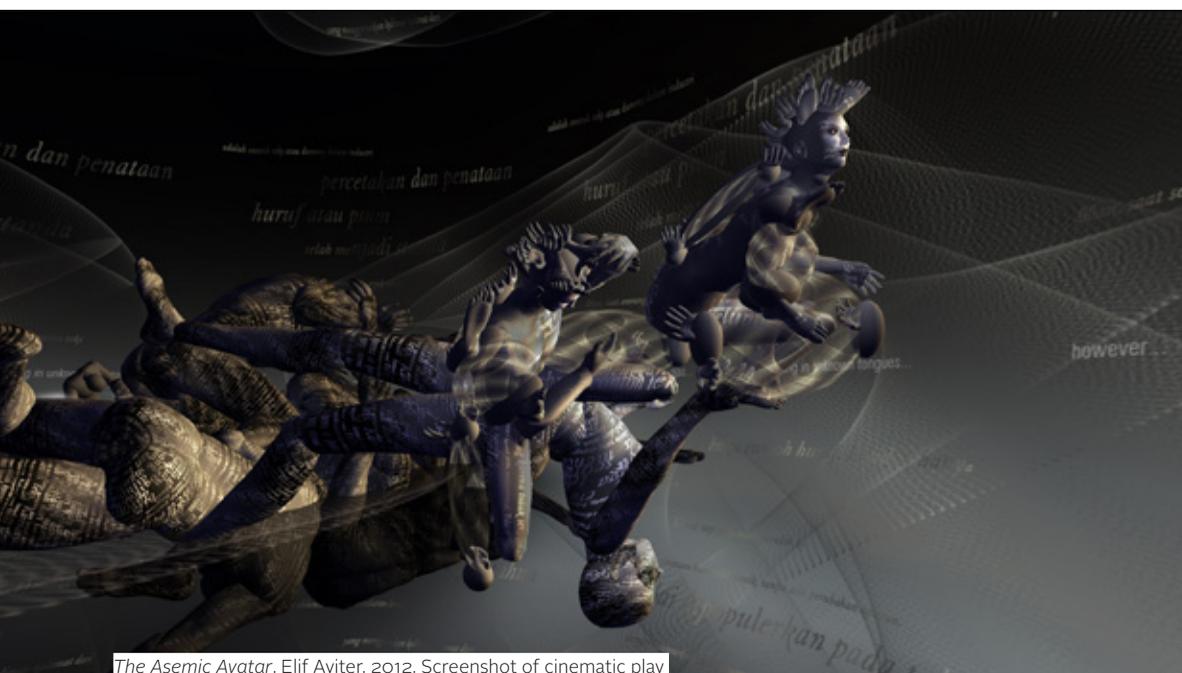
The Asemic Avatar, Elif Ayiter, 2012. Screenshot of cinematic play session in Second Life. © Elif Ayiter, 2012. Used with permission.

same time still being 'inside' the body of our avatar from an emotional point of view. This brings a very bizarre twist to the conundrum of the 'Play of the selves' – especially when examined from a creative point of view, and especially so when the whole notion of the heteronym is brought into the realm of Live Visuals.

AVATAR ACTORS

It would not be an exaggeration to say that the human being behind the keyboard is part of an ongoing movie from the moment of stepping into a three dimensional virtual world. This effect of being immersed in a cinematic environment (in which we are participant as well as viewer) is effectuated through the circumstance that we are watching our virtual body as an externalized representation whilst at the same time actively being inside the selfsame body, both engaged in interaction as well as effectuating changes in the world that surrounds us, as has been described in the preceding section.

Looking at avatars and virtual worlds from a performative vantage point Jacquelyn Ford Morie suggests that there has been a recent paradigm shift in human experience that has been brought on by these phe-

nomena. Morie points at the research of performance artists that contributes to the exploration of virtual environments as a key to our future understanding of ourselves in physical and digital domains, taking on "an experiential locus that is outside the perceptual self." This, according to Morie, signifies "a shift to a dualistic existence that occurs in two simultaneous bodies" through which the lived body has now "bifurcated and become two." [31]

Richard Schechner notes upon several different aspects of a performance that he draws from different performative traditions. One of Schechner's primary considerations is the term 'transport,' which he tells us should always be present in any successful performance, since the performer/participant should literally 'go into another world' to partake in such action. A second term that Schechner applies to performative undertakings is 'transformation' that brings about a change in the performer's self-representation during the performance itself and furthermore this change is expected to retain a lingering effect after the performance is over. [32]

One may thus conclude that Morie's observations on avatars dovetail with Schechner's concept of 'transport,' albeit in a dualistic sense of the word, given that

while we are transported into another world through the bodies of our avatars, we yet remain in our physical bodies simultaneously. My own observations and personal experience verifies that avatars are in fact powerful creative agents that are capable of evoking 'transportation' and 'transformation.' As such they can also be seen as potent performers, bringing to the fore even possibly unexpected talents in their human handlers within these creative domains.

While it is indeed true that we are immersed in an ongoing cinematic event from the moment that we step into an online three dimensional world, there are also countless instances where a performance is staged deliberately – complete with costumes, props and scenery. While avatars that belong to discrete individuals will often come together to stage such performances, an equally fascinating practice is to create your 'movie' solely by yourself, through an assemblage of your very own 'alt' avatars who then become the cast of your performance.

Oftentimes such undertakings involve a process of associative thinking that is brought forth through the ever evolving 'Live Visual' material itself. Such visually associative processes that engender narration and performance are evoked as par for the course in the synthetic lives of users and extended user groups, to the extent where it would not be too much of an exaggeration to claim that the pursuits of these associative trails that have their origins in 'Live Visuals' are at least one of the key joys and components of many a synthetic existence.

What makes the world particularly compelling as a platform of creative expression is the largely unstructured, indeed sometimes emergent, nature of the creative activity that revolves around such enterprises: Residents will combine visual output generated by others, sometimes with their own as well, to create

extraordinary wearable collages and environments that have been assembled entirely or partially out of 'objet trouvé.' The conglomerated apparel, architecture and landscape, as well as a diverse range of objects, will then be utilized as points of trajectories in the creation of involved play/rituals, storytelling sessions, and fantasy role play which then become the incubators for the generation of personal artwork by their participants, oftentimes manifested as videos/machinima or as photographic sequences that are routinely deposited in Web 2.0 sharing domains, such as YouTube, Flickr and vimeo; where the aggregated output is of sufficient volume, as well as of creative and social impact, to merit close scrutiny as a subject in its own right.

I am an avid instigator of such activities myself, staging and enacting many performances through my many personas, my alt avatars. Although I have also used the artifacts of others in the creation of my scenery, costumes and props, largely the artifacts used in these productions are my own output, consisting of the apparel and objects that I sell in my virtual fashion enterprise alpha.tribe. [33] While many of these events came about spontaneously on the fly, and were thus not documented, with others I was more alert and had the presence of mind to capture videos and screenshots while I was actively playing inside the virtual world. These were later edited into short movie clips, reworked into photographic sequences, or used as the material of narrative websites and flipbooks in which a non-linear story is being told – also in combination with soundscapes/music of my own making and accompanied by text that I take from my favorite poets and authors, who are usually the inspirations of the 'tale.' Such, amongst many others, is the case with *The Tales of Ruysch*, [34] *Uranometria*, [35] and *The Asemic Avatar*, [36] that also provide the bulk of the material for the visual documentation of this text.

CONCLUSION

It may be that all of us, child and adult, work at fantasizing metaphysical paracosms all our days. We are eternally making over the world in our minds, and much of it is fantasy. The difference is that while children have toys, adults have images, words, music, and daydreams that are deemed to perform in much the same way as toys do. Our fantasies are the micro-worlds of an inner life that all of us manipulate in our own way to come to terms with feelings, realities, and aspirations as they enter our lives; and in this way children and adults may not really be so different in their use of fantasy play. The difference lies only in the concreteness of the symbols, and in the maturity of their purposes, not in the universal existence of fantasized inner lives.

While it may not be all too easy for most adults to externalize these paracosms within the harsh reality of the physical world, the parallel universe of three dimensionally embodied virtual worlds presents a viable alternative when it comes to actively visualizing what our imaginations have evoked into tangibly embodied (albeit virtual) beings that operate on what can be described as nothing less than the movie sets of our conceptions, manifested as Live Visuals that metamorphose in front of our very eyes, as we and our fellow Players evolve them into ever increasing complexities that evoke even further Play, presenting us with boundless stages for an externalized cinema of the mind. ◼

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13. Johan Huizinga, *Homo Ludens; A Study of the Play-element in Culture*, 13-14.
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15. A paracosm is a detailed imaginary world, or fantasy world, involving humans and/or animals, or perhaps even fantasy or alien creations. Often having its own geography, history, and language, it is an experience that is developed during childhood and continues over a long period of time: months or even years. The term 'paracosm' was coined by Ben Vincent, a participant in a 1976 study instigated by a researcher for the BBC, Robert Silvey. Later the concept was researched in-depth by psychiatrist Stephen A. MacKeith and psychologist David Cohen, and was reported upon in their book *The Development of Imagination: The Private Worlds of Childhood: Concepts in Developmental Psychology* (London; New York: Routledge, 1992).
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