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DOTTORATO DI RICERCA IN SCIENZE DELLA FORMAZIONE E DELLA
COMUNICAZIONE

The World Makers' Playgrounds:
Mapping the Networked Spaces of Ludic Creation

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Abstract

Game Design – Community – Participatory Learning – Media Ecology – Media Education

The present dissertation is aimed at offering an explorative perspective toward original forms, organizations and contents of learning which characterize the present "media ecology", proposing an ethnographic and qualitative mapping of participatory dynamics as pertaining the discussion, modification, design, and creation of games (be them digital or "analog") within a plurality of communities and contexts, be them "virtual" or "real", within and without formal learning institutions. These communities and contexts will be thematized as "playgrounds", spaces of production and interaction characterized by horizontality, heterarchy and reticularity, spaces where a systems-oriented, constructivist, cooperative and transdisciplinary literacy is being built from the grassroots, a literacy necessary to be an active and participative "world maker" in the present Information Age.

Part I of this tractation will be aimed at contextualizing the study of play and games from an historical and transdisciplinary standpoint, both through a literature review aimed at highlighing the contested relationship between playfulness and the serious character of formal learning contexts, and through an exploration of play's relevance in psychological, social, cultural and evolutive processes, concluding with the proposal of "game design" as a possible, unifying metaphor for the diversity of the sciences of living systems.

Part II will explore the close links between the present participatory patterns within media cultures and the methodological choices I operated during my fieldwork, highlighting the political relevance of the "Information Revolution" in disrupting institutional infrastructures through its influence on the patterning of learning systems both formal and informal, evidencing the consequences of this paradigm shift on the epistemological fundations of research in human sciences.

Part III will then offer, through a series of Cases and "ethnographic sketches", a synthetic panorama of the plural realities of ludic "Do It Together", evidencing within them the use and co-construction of complex models and metaphors (both on a formal and on an aesthetical level). In discussing the fieldwork within communities of game creators (be them formal or informal, online or offline), ample space will be given to difficulties, criticalities and insights, so as to further highlight the methodological quandaries of working in these specificcontexts.

The whole of this work will, in conclusion, be aimed at proposing a new, possible role for learning professionals: that of the meta-designer, co-constructor of interactive open spaces and catalyst of ludic/learning/researching communities, where the activities, defined through non-programmatic and co-designed patterns of participation, will move through and beyond media education, meant as a meta-discipline aimed at the construction of an inclusive, distributed and democratic paradigm of learning.

To the dreams of those who have fallen,

To the hopes of those who will follow

Contents:

Pre-<u>lude</u>: Of Playgrounds, Messiness and How to Build Your Giant Robot

Luca loves his building bricks, even if he sometimes spends hours just to chase the right piece in his big, oh-so-messy boxes that contain dozens of demolished and randomly mixed up things.

His grandmother accepts that he just pours the pieces from the box and wades in them, as long as he keeps them contained to the living room's carpet. He likes that huge mess of blocks on the carpet, it looks to him so...Alive. Still, he does his best to comply with grandma's orders, as he does not like to lose pieces all around the house. He also likes the security and the warmth of that big carpet near the fireplace: it's his own personal magic playground, where he can create anything.

Well,almost anything. It is quite easy to follow the instructions and build big, working things, but Luca is more than a bit annoyed by the fact that the instructions included in the boxes are always for somewhat plain stuff. Yes, yes, a castle or a galleon can't be really called "plain", but why don't the Brick People make instructions for even cooler things? For example, Luca loves the architecture of Uncle Scrooge's Money Bin, with all those traps to stop those thieving Beagle Boys. Or the huge starships of the Star Wars movies. And let's not even get started on UFO Robot and all his awesome weapons and transformations!

Speaking of this, Luca is trying to build his own giant robot, but there are no instructions on how to build it. The robot lies face up, looking at the ceiling with perplexed, plastic eyes while Luca tries his best to provide it with a working shoulder articulation (and maybe with rocket punches, if he can manage). After a while, Luca stands the robot up and looks at his work. The robot looks quite good, with his big arms, wings, horns and pauldrons, but it does not seem very resilient, especially those spindly legs. At least it can stay up standing.

Well, time for a test drive: Luca grabs his toy tyrannosaurus and puts it in front of his newest creation among the debris of a hundred demolished buildings. Then he issues the challenge in his best giant robot voice: "If you don't fear this power, fight!", roaring the dinosaur's response, as the the two miniature titans clash, sending some bricks flying immediately. Very soon the working shoulder articulation gives up, and a robotic arm falls to the ground. Then one of those thin legs crumbles in pieces, the robot following suit. Putting aside the triumphant toyrannosaurus, Luca looks at the fallen robot with a mix of disappointment and clinical interest. If it can't even defeat a simple dinosaur, it surely can't win against those cybernetic space monsters UFO Robot defeats on a daily schedule.

His grandmother calls from the other room: "Luca, your friend is here!". Luca barely raises his eyes from to greet his friend Paolo, whose stare follows almost straight to the poor remains of the

robot: "Were you trying to build UFO Robot? It looks cool.", he immediately asks. "I was trying to make my own giant robot, but he can't even fight a dinosaur...I can't build it strong enough." replies Luca, still pondering what exactly went wrong. Paolo picks up the robot's arm (with its not-so-working shoulder articulation) and looks at it closely, then smiles: "I'm sure we can rebuild it, then build one for me too. And then together they can train for fighting dinosaurs and monsters!"

Luca smiles too, as he and his friend start crawling on the brick-laden, warm carpet, looking for pieces for another giant robot's skeleton. He learned some very important important things today, on trying to build something beyond the instructions.

First, you can't really plan much on, but, keeping your vision in mind, you build as you build.

Second, it's so much easier if you do it with someone else.

Third, and maybe most importantly, you need a playground to do it together. The messier, the better.

Why Did It Have To Be Games? An Autobiographically Charged Account Of This Thesis's Structure

"Games are beautiful. They do not need to be justified."
- Eric Zimmerman & Heater Chaplin, "Manifesto" -

"This reminds me of a story..."
- Gregory Bateson, Steps to an Ecology of Mind -

"I know it is selfish, but this is my story!"
- Tidus, Final Fantasy X -

To even start writing this thesis forces me to confront a whole slew of paradoxes, both personal and philosophical, that I, more or less consciously, tried to avoid for a very long time. The first that comes to my mind is: this is a thesis on play, but can writing a thesis be itself playful? From this issue, many others follow: can it be fun, if still hard and taxing? And what about reading through it? Is a doctoral thesis just a necessity imposed by the traditional structure of the academia, a modern version of ancient and painful rites of passage? Were those rites "playful"? Do I write because I want to be told I am good enough (and if so, "enough" for what?), or because I want to tell something? Who's my audience? Am I calling for the players to fully acknowledge their potential in regards to learning? Or am I calling for the academia to recognize the "game-changing" potential of playful spaces? Is it childish to keep trying to be playful at my age, and wanting to preserve spaces for other people's playfulness? Is this desire a matter of reason or emotion? Is this even an meaningful dycotomy, when speaking of play? And when speaking of learning?

So many questions and doubts. This thesis will hardly answer any of them in a direct way, but will most assuredly touch on them while moving towards its purpose. And the definition of its purpose is an extremely delicate issue, because it is indeed purpose itself, to look for a "why", the most deep paradox when we speak of play. For putting forward any argument for an instrumental purpose in play would be to me the most unhealable paradox, one that would impede the continuation of this work itself.

But, even so, a question (and its answer) is unavoidable, if I want to offer an honest perspective on the meaning I, as an author, attribute to my work: why did it *have* to be games? It's to confront the

above mentioned paradoxes while still trying to answer to this question that I turned wholly to storytelling (even though I will use throughout this work different terminologies, such as ethnographies and qualitative accounts, which of course imply very different criteria), and especially to my autobiography, starting from this introduction, and the childhood episode recounted in the "Pre-lude", in the effort to give a meaningful and grounded account of this work's structure (Merrill & West, 2009).

In doing this I try to follow theologian James Carse's advice, as discussed in his *Finite and Infinite Games* (1986): storytellers, at least honest ones, will not aim at converting their listeners through stringent causal chains and unassailable rational argumentations. Necessity does not make for a good story, nor, in fact, allows for playfulness. Storytellers, instead, just try to offer possible visions, and this is what I will endeavour to do, starting the weave of stories that composes this dissertation from the single thread of my autobiographical perspective. This deep and recurring storytelling theme also resonates in the title I chose for this thesis: the "world weaver/maker" metaphor, one of educator Neil Postman's plural, possible "ends of education" (Postman, 1995), refers humankind's ability to craft worlds through language, be it description and metaphor, but also fantasy and narration, therefore acknowledging that the "map" that is often mistaken for "reality" is indeed not a necessity, but merely a possibility that can be collectively (if hardly and maybe painfully) reshaped. More than that, and still with Postman, I want to underline how the structure of language itself defines and delimitates the stories that can be told, therefore touching another root of this work: the Piagetian call for transdisciplinarity (see Piaget, 1970; 1987). I will therefore adopt a radically constructivist perspective according to which each discipline into which knowledge is subdivided is not its contents, just as the map is not the territory, but a special language that can tell a very specific kind of stories. This mirrors my main theme: games are, in a way, a huge and ever expanding collection of loosely related special languages, and therefore methods for the generation of stories, stories that can be shared and collectively acted upon through the characteristic interactivity of the medium. Games also have another "advantage", from a philosophical and pedagogical standpoint: they are very explicit about their metaphorical nature, so that they can hardly be mistaken for "reality" (lest they cease to be play proper; see Bateson, 1972, on this key distinction), as the validity of their claims remains bounded and ecologized, while not denying them meaning and life.

Speaking of life, one more word of forewarning is needed before diving into both my life history and, concurrently, my index: as I am (messily) writing this, going back and forth in both my personal narratives and in the themes that compose this work, I become more and more aware that the "academia" vs. "life" divide is a somewhat recurring theme in my accounts, an experience of

separation that, through my experience as both a learner and as a teacher immersed in networks of relationships, I can certainly affirm is not isolated, but indeed extremely common in every kid's bored (and sometimes even angry) "school is sooo useless" claim (of course I am referring to specific moments in my personal experience, but this sentiment is, sadly, a common and documented one; see Freire, 2004).

What games (which are, by most definitions, necessarily separated contexts) always did was helping me to bridge and heal the divide between knowledge and life, as well as other many other divides: as a popular quotation often misattributed to Plato goes, I really do believe it is possible to discover more about a person in an hour of play that in a year of conversations (Lindgard, 1907). Play and games were, in a way, and quoting Gregory Bateson for the first of what will be many, many times, the first "pattern which connects" I, as a somewhat shy child, explicitly acknowledged. Thus it *had* to be games, for games unite.

I wrote "what games always did", but of course it's impossible for anyone to remember when and how anyone began playing, and indeed, this is not probably a meaningful question, as will be touched on later in this thesis. So, while I am obviously unable to tell the tale of "the first time I played", I offered, as a first framing device, the earliest account I can remember of ludic creativity as pertaining to the core of this thesis. Following this thread, I will now offer an account of this thesis structure, while making clear at each point what personal experiences, well beyond mere academic "theory", (but tightly interweaving with it) shaped me as both a player and a researcher, and therefore shaped this work

The first part of the thesis, **Looking Through the Magic Circle: Researching Play and Games**, is apparently the most distant from everyday experience, being mainly a theoretical one. Still, I want to underline again how its contents will be reflective of the epistemological and philosophical lenses that guide my everyday experience, not only as a player, a learner and a researcher but as a human being, reflective of the epistemology that I <u>am</u>.

The first chapter, **Homo Ludens in the Information Age: Stories, Places and (Dis)Placements of the Study of Games**, is, indeed, a characterizing necessity of the "thesis" literary genre, an obligatory bibliographical exploration (and a very historically oriented one) focusing on the increasing attention that formal learning institutions, and within them different, well established fields of research (among which Psychology, Education and Information Sciences) are devoting to the field of play. Indeed, the transdisciplinary extensions of this field, which seems as hard to define as games themselves, are only very recently coalescing as "game studies" proper, in a somewhat paradoxical quest for disciplinary identity, autonomy and independence. This Chapter will also focus on how, after a long period of marginalization underlain by a deep conflict between

the "unproductive" character of game and the lofty seriousness of academic contexts, in the information age the above mentioned discursive polarity is currently being displaced, mostly (and sadly) through the economic relevance of games as an extremely profitable media market, both making game studies a "productive" activity and constituting (at times) game studies as a field of "resistant uselessness" (Simon, 2014).

While this might seem to be the Chapter most segregated from non-academic life, concerned with books more than with life experience (and I keep finding myself trapped in this dualism of cultural discourse, a dualism much more aptly discussed by Italian pedagogist Riccardo Massa's discussion of the *dispositif* which separates "world-of-life" and "world-of-education"; Massa, 1990), indeed my first brush with the academic study of games, the event that in the end made it possible to me to write this thesis, happened outside the university. It was almost nine years ago when a friend, coming back from a trip to the U.S.A. and having in his mind to try and "invent" a new card game, showed me a book he found over the ocean, the very seminal *Rules of Play: Game Design Fundamentals*, by Katie Salen and Eric Zimmerman. This was not a paternalistic booklet for parents wanting to help children in making their own games, as too many others we had found here in Italy, but a hefty, complex tome that touched on Cybernetics, Communication Theory, Cultural Anthropology and, ultimately, Systems Thinking. All this, and it still managed to keep alive the playfulness of its theme, its vibrant life.

As I flipped through those pages I suddenly (and finally!) found myself on a sort of metaphorical bridge between those separated worlds of life and Academia: what I was studying (and the themes I was most interested in) during my psychology courses were suddenly revealed in a very different, "truer", light. As for our "design" (that was the right word!) experiments, more feeling intellectually legitimated in our efforts than actually making use of the book and the deep insights therein contained, we were able to throw together a "Ninja Cardgame" that went through a couple of enjoyable-ish iterations, got a bit of skeptical interest among our circle of friends and then was quickly forgotten when the summer ended and my bachelor thesis had to be written. Still, the book remained on its bookshelf in my friend's home, a constant (and colorfully eye-catching) reminder of our "failure" as game designers, and at the same reinforcing a growing question in my mind: "would it be possible to study games at the university?"

Come on, just one book at least touched almost everything I studied (among other apparently "well defined" disciplinary fields: Mathematics, Logic, Biology, Sociology, Anthropology, Psychology, etc.), and it even closed quoting that Bateson's metalogue on play! So one day I borrowed it and brought it to my master thesis supervisor Walter Fornasa, with whom I had initiated a fruitful collaboration after my bachelor degree (my fieldwork for my bachelor thesis consisted, indeed,

mostly of watching children play together, even if it was cloaked under the much more scientifically looking title of "Aspects of Cooperation in Nursery School Children"). We perused the book together, while I explained why I deemed it so significant. Then I asked The Question: "Would it really possible to study games at the university?". As a hardcore Batesonian and Piagetian, professor Fornasa was deeply intrigued by the theme of play and games, and he answered with one of his catchphrases: "Why not?", which he meant as the opposite of verifying an hypotesis: allowing space for possible worlds. Again, it was an issue of finding legitimation. Not through authority, but indeed through the opposite of it: to find a space of possibility sheltered from the rigidities and fixations (the arbitrary "because-nots") of ordinary academic language and practices. He built a "playground", we might say.

Indeed, my subsequent studies, even if my master's degree diploma is formally labeled "Clinical Psychology", a very specialized field of knowledge, opened up well beyond the established boundaries of this discipline and shifted more and more to the ecology of communication, and to the simulated and delocalized spaces generated by the explosion of information technologies, the "external channels" of the mind. In a way it was, and it is, still "Psychology" to me, but it entails a quite different definition of "mind" than some are ready to accept. It's in the second chapter of this thesis, **Higher Order Playfulness: Learning, Evolution, Creation**, that I recapitulate and further this enduring course of reflection, using the philosophical implication of the "play" metaphor to present a network of examples of play-like patterns, drawing upon a wide range of closely related but much too often reductionistically separated fields of inquiry, among which Systems Biology, Evolutionary Synthesis, Ecosystems Ecology, Evolutionary Psychology, Developmental Psychology and Systems Psychology. My aim will be to propose a further expansion and ludic interpretation of the "ecology of mind" framework sketched by Gregory Bateson, through the discussion of the notion of "higher order playfulness". I will then go on to argue how the contribution and the potential of play-like conceptual lenses for the understanding, description and development of living and learning systems is (at least) twofold: first, by providing a deep unifying pattern as a powerful epistemological tool, it will be argued that a playful vision allows for a deeper exploration of the interplay between the different individual parts, contexts and structural rules that underlie living and learning processes. Second, but probably most important, is again the issue of transdisciplinarity, as both an epistemological and political issue in today's knowledge economies.

The first part of this thesis will therefore argue, in its conclusion, that in the interconnected and systemic awareness achieved through deep, reflected-upon participation in play and games and in their creation lies the possibility to go beyond understandings of ecology, evolution and learning bounded and directed by mere necessity and utility, to better appreciate the "powerful play" of

beauty, life and mind.

Thus it *had* to be games, for games are the stuff of life.

While (as I will lengthily expound in the sections discussed above) the separation of life sciences and human sciences is, in my opinion, at the very least questionable, the second part of the thesis, **Mind the Channels: Researching Participatory Cultures**, is probably much more easily contained within this second field while still, again, referring to the "external channels" of the mind granted by information technologies, in the most transdisciplinary sense, and to the concept of participatory culture brought forward by Henry Jenkins. This section has both sociological and methodological focus, trying to weave theory, praxis, politics and personal experience in proposing a very wide (and, as for the title, messy) account of phenomena in which I participated, often in very un-academic stances, and reflecting on the best ways in which accounts of these phenomena can be shared and discussed on the edges of academic discourse. Again this separation persists in my discourse, but this time gains a new, and often less visible layer: "the Academia", in this specific context, must be considered a special case, or branch, of the political and cultural structures that, concurrently and recursively with the epistemological and disciplinary ones above mentioned, shape and define the boundaries and the patterns of possible discourse and of its possible uses.

In the third chapter, **Creative Commons, or: How Networks are Taking Back the Means of (Cultural) Production**, I will directly confront the modalities through which the "Information Age" has remade the processes of culture making, touching on issues of intellectual property, sharing and creativity, but also on the themes of sociology of science and how the aforementioned formal learning structures react to this ongoing, deep change.

The lexical choice pertaining the term "common" will be thematized as twofold, wanting to underline and discuss both an explicit link to the modern movement for the sharing of knowledge and to older conceptions of "commons", social structures in which hierarchic and capitalistic modes of production are substituted by alternative systems. While the so-called "tragedy of the commons", the catastrophic overdrawing from a freely accessible common pool of resources, is indeed an historical fact (Hardin, 1968), a change in the situation has been introduced by the possibilities of digital technology which, at the very least, allow for something quite close to informational post-scarcity, giving way to heterarchic, non-linear and networked approaches to culture making (see Bookchin, 1982), most famously exemplified by Wikipedia (the often maligned within academic circles, but ever expanding, self-correcting and, most importantly, free online encyclopedia), but finding higher orders systemic complexity in the participatory design of games.

To root this global, historical processes in a more approachable perspective, and to better relate it to the personal relevance of theme of play, I once again resort to my autobiography: while I have

already proposed an account of early playful creativity in my opening "giant robot" narration, I can also clearly remember the first time I created content for a digital game. I was eleven when, using the track editor included in the game *Stunts*, I carefully engineered the tracks, adding ramps and loops, as to send the car flying as high as I can. This was not (only) for merely spectacular ends, but as to try and hit the game spaces' invisible ceiling (knewing there would be one, having already hit the invisible walls around the level, delimitating the game space according to the then very limited computing memory). Many years before knowing the proper terminology, I was experiencing firsthand the very human push for probing the boundaries of the game's "magic circle", as of any conceptual space's boundaries. The "circle" was, however, also transgressed in another, equally relevant way: through the digital medium I could save my creations and easily send them to friends via email, or just bring it to their homes in a (nineteen years later already seemingly antediluvian) floppy disk. Suddenly the "playground" was not anymore localized within a single carpet, a living room or a fenced garden. It was "portable" and delocalized in its insubstantiality, even beyond national boundaries. To tell the whole story, even beyond legal boundaries, as this specific digital "playground" was shared and replicated in overt violation of (unenforced and probably unenforceable) intellectual property laws.

In a few months, indeed, I was participating in the Nineties "*Doom* modding scene" (short for "modification", a widespread, online community based ludic creativity phenomenon which I will touch in Case I), if only through the creation of a couple of extremely banal and simplistic home-made levels. Still, it was for me the first opportunity to participate in an international community, and through this shared interest move my first true steps in the burgeoning "internet", which was until that time mostly a means to copy & paste answers to middle school's often too trivial questions. My first brush with playful creativity, with the non-trivial answer to the desire for something new, occured outside the places that should teach children, where any injection of creativity beyond primary school is, at least in my personal experience (if supported by scientific literature, see Robinson, 1998; Azzam, 2009), too often reliant on the personal initiative of brave and lone (if not even mobbed) innovating teachers. Indeed, it happened outside any localized context, within communities of seemingly faceless people whose "nicks" & "avatars" become rapidly almost as telling, of relationships that were undoubtedly "real" in their shared passions.

Only a couple years later, however, I found a quite more local and embodied dimension of playful creation, rekindling my passion with what was most assuredly the most important influence on my "game design thinking", the seminal role playing game, *Dungeons & Dragons* (an experience I share with many professional game designers, as touched on in Part III), participating in which, I realize, still might amount to a somewhat stereotypical paradigm of nerdiness. However, role

playing games have an intimacy that's hard to convey to those who haven't tried them, and while they may look as "speaking of wizards around a table", role playing is mostly about trust and acceptance, a strategy to endure social exclusion and find people with whom to share some personal "weirdness", some "difference that makes a difference" (see Hitchens & Drachen, 2008, on the inclusive character of these games). Deeply enthralled by this "weirdness sharing", my teenage will to accurately portray my favourite fantasy characters through the game rules (which very closely mirrored my above mentioned infantile experimentations with LEGO bricks) and to create new ones pushed me to contemplate the inner workings of a book-sized rules system (and I want to emphasize how I am using this term in its full, system science meaning) , a system that I had to know perfectly when I chose to "step behind the screen" or, in non-nerdy language, I chose to became a narrator of co-constructed tales, by making whole worlds, setting the stage for other players to interact with as fictional characters, instead of being a "simple" participant. This new kind of "modding" could look easy a first glance, as it did not even require the simple technical skills of computer game editing (as will be discussed in Case I). Still, a much deeper structure become rapidly evident and, years before I knew the terms "feedback" or "threshold", I learned with the help of communities of fellow players (both locally, in comic stores and around kitchen tables, and digitally, in websites that gathered players from all around the globe) how changing a simple rule or narrative element can echo through a whole cosmos. Through this participatory learning of "systems competence" I found ways to make whole worlds more mine, and even to "Do Them Myself".

And here comes the punk theme. As I write these lines, the last punk concert I attended is merely a couple of weeks past. Again, is it childish? As a patented clinical psychologist I might ask myself, is it a symptom of some unresolved issue with authority figures? While I am wise enough not to deny this, it would not be enough to ignore the deep political implications of the punk movement, and not only in the (often) more evident, destructive parts of it, the caustic rejection of authority and power structures. Indeed, what always captivated me more in punk cultures is the ever-present irony and playfulness of their social criticism, and, even more than that, its emphasis on the democratization of culture making process, the so-called, above mentioned "Do-It-Yourself" attitude.

I would be not the first one to suggest (see Anthropy, 2012, and Juul, 2014) that the current emergence of a global game making movement is today's version of that attitude, replete with the same political undertones. But how to construct accounts of these messy phenomena in forms that can be accessed (and maybe more relevantly, accepted) by much more "orderly" academic power structures? Here comes the methodological challenge that is fully tackled in Chapter IV, **Punk Methodologies: Sketching Politics, Quality and Representation in Messy Networks**. The

"sketch"metaphor (borrowed from French cultural theorist Pierre Bourdieu) is here chosen as a metaphor of knowledge which includes not only a recognizable pattern from the "outside world", but, like I said of games, makes a point of mantaining its nature as an account completely explicit, as it includes the hand of its author and the messiness of the drawing effort. While sketches are often of simple objects, complexity is retained through their ability to mantain in themselves an account of their making, a characteristic that, while apparently common in scientific literature, will be examined in this Chapter as often lacking the "messiness" and raw emotions that often characterize the daily, embodied experience of so called knowledge work (and not only within social sciences), far from stereotypes of aloof rationality and almost sterilized "neatness". "Punk" in this sense comes to mean a will to break with some of the less discussed issues and rigidities inherent to accepted scientific protocols: the fixation with measurement (and its very close relationship with management), the fact that "dirtying one's hands" is at the same time perceived as the root of fieldwork and as a menace for "validity", which I will, in this section, try to reframe not as its usual meaning of proposing a perfect mirror of "reality", but as being aesthetically sensible to patterns and being able to communicate the "constructs" (and not "findings") of research in a meaningful, accessible and democratically progressive way.

Thus it *had* to be games, for games allow for change.

The third part of this thesis, **Sketches From the Playgrounds: Three Case Studies on Ludic Creation**, is therefore constructed from apparently much more bounded, fragmented collections of "stories from the field", ethnographic case studies which are however aimed at constructing a network of maps, not only of different (if at some places overlapping) territories, but construsted through different criteria, and therefore underlining which "different differences" are <u>chosen</u>. This collection of "cases" is not meant in any positivistic sense, there are no "control groups", double blind or reciprocal confirmations concurring to construct a "master story". On the contrary, my intent is to provide the reader with a multiplicity of points of view, sometimes even contraddicting ones, as to keep us from "simple vision and Newton's sleep".

The first Case, **The World Makers' Virtual Places: of Networks and Inclusion**, is an account of my main ethnographic work, which transversed a variety of online communities devoted to the discussion and design of games, both digital and "traditional", transversing a wide variety of different cultures and ecologies, differentiated by their interests, their social structure and their declared purposes. Through this map I will discuss the diverse challenges posed by online ethnographic work in its various declinations, and the shifts in perspectives on "world making" due to these difficulties and critical incidents. My tentative creation of a "wiki" will be a key turning point in confronting the themes of inclusion, openness and heterarchy in playful, networked

cultures, helping me in moving away from the contents, the theme of "game design thinking" I mentioned above, focusing more on relationships and contexts, "virtual" as they may be, that make this particular kind of thinking possible, that is, moving from the games to the "playgrounds" and their inhabitants.

The second Case, **How a Node Connects to the Whole: the Stories and Spaces of Tampere's Game Creators**, is an account of an eco-biographical work, recounting the four months I spent in Finland, at the University of Tampere's GameLab. There, with the help of game researcher Olli Sotamaa and professor Frans Mäyrä , I had the opportunity to participate in first person in the academic activities of a "game studies" group, finding some very disciplinarily competent "critical friends". Still, the most important people I met were most assuredly the students of the "Game Design Workshop", a vibrant community of creatives and learnens, bearer of widely differing and sometimes contrasting vision of what a game, its creation and its role in cultural processes should be. Living in the city of Tampere I had the opportunity to meet the local community of designers, entartain eventful chats with renown professionals and independents, but again, it's as much about the people as about their spaces. In this very localized and embodied reality, transversed by powerful creative currents and an explosively growing game market, I walked the formal and informal places where those people connect, exemplified in the "Oasis Room", a so called "social learning space", and a materal metaphor of the contradictions, paradoxes and possibilities of trying to be playful within the academia.

The last Case, **The Game Jam Experience: Transient Spaces of open cooperation,** recounts the participation of all the acors mentioned above, be it through the above discussed "external channels" of the mind, of local learning institutions, and of local marginal spaces, in a series of "Game Jams", informal events meant as "playgrounds" for the creation of new games, underlining the conceptual leap from a "simple" Do-It-Yoursel attitude, to a "Be-In-It-Together" one. Through field experiences in jams and interviews with creators of such playgrounds, both virtual and material, the possibilities of the creation of inclusive, playful spaces and the disruptive value of community-oriented creative practices will be discussed, weaving most diverse contexts and postions held together by the will to create temporary open, inclusive, dedicated spaces for playful creatvity, disrupting the seriousnes and individualized fragmentation of our ecologies and of our standardized learning and production practices.

Lastly, the conclusive chapter, **Making a More Playful World** , draws on the whole work to weave together the narratives hereby proposed in a solid, playful base, and to provide a multi-prespective standpoint on the present situation of the relatonships between making games and the construction of learning. A strong, explicit and multifaceted claim for the necessity of playful spaces within

learning institutions will be made, reflecting on some misuses of games, proposing possible scenarios for their meaningful inclusion and confronting the most common objections and quandaries at the intersection of knowledge institutions and playfulness. All this will be conceptualized as an effort to try and save, as often happens in games, at least some possible worlds, thus projecting the possible spaces of playfulness and learning into possible futures, particularly regarding its deep ecological and political implications.

One last, very personal addendum: this is not a "hero's journey", but still, this is my story, my ideas, and the stories and ideas of the people who have always accompanied me and, more than everything, played with me, stories that I accounted for in the opening and closing narrative segments. If nothing else it's for those people that it *had* to be games. So, as I ultimately have to give a definite (and concise) answer to the question that titles this introduction, my answer will be:

"Why not?"

PART I

Looking Through The Magic Circle:

Researching Play and Games

Homo Ludens In The Information Age:
Stories, Places and (Dis)Placements of the Study of Games

"When reading a book, we must not ask ourselves what it says, but what it wants to say"

– Father Guglielmo, The Name of the Rose -

"The books I write because I want to read them, the games because I want to play them"

- Gary Gygax -

Summary: My aim in this chapter will be to locate and define my position, to at least broadly outline my "research objects" and my "research questions" linking them to historical processes pertaining both a singular, if still evolving, disciplinary field, the larger history of knowledge and even History in its widest sense. I will therefore propose an historically oriented perspective on the studies of play and games. to define a research field since its inception, to review and contextualize the breadth of work in it and, done this, to find and make explicit my own place and intent in its regards, both as a continuation and as a critical approach.

I started this work by telling stories, and I will continue in similar way even if, from now on it won't be (so much) about me anymore. As I mentioned in the introduction, there is something all dissertation works have to include, in a way or another: to look for proverbial giants on whose shoulders to stand on. However, to avoid making these giants into infallible titans, or rendering their works into apodictic and decontextualized statements-of-facts, it's useful to spend some pages to inquire into their whole social/historical whereabouts, and how those shaped both the authors' own outlook and, maybe most importantly, the culturally accepted ways knowledge (especially regarding a "fringe" field such as play and games) could be, in wildly different contexts, formalized, shared and presented to "peer" scholars, students and the public in general.

This chapter will therefore offer an historical cavalcade across more than two millennia of play and its studies within the academia, entwining the history of play with the history of knowledge, and focusing on the (often quite peculiar) places of play and games in respect to institutionalized knowledge structures. The objective of this is twofold: to tell a meta-story of play in such (apparently?) unplayful contexts, and, through the discussion of this story, to introduce any reader who might be a newcomer to this field to a fundamental conceptual vocabulary that will constitute

much of the terminological core of the present dissertation.

One first warning is needed: in building the aforementioned lexicon, I will not hereby peruse all the manifold writings pertaining the *functions* attributed to play, especially those that link it instrumentally to learning and education, as those will be addressed in Chapter II. I will instead, as one of my main epistemological inspirators, Gregory Bateson, suggested, try to "make a distinction" between the ways in which institutionalized education, at different points in History, tried to shape play to their own ends and, viceversa, the ways play shaped educational institutions. My interest will be especially focused on the creation of institutional spaces focused on "the study of games for games' own sake", as game scholar Frans Mäyrä defined the perspective of games studies (Mäyrä , 2008), and in highlighting how my proposed distinction will, at some point, seem almost impossible to make, evidencing the close and circular relationship of the apparently separated instances of educational institutions and play.

Indeed, one of the main objectives of this Chapter is to hint at how the discussions of play and games, both those treating them as pedagogical tools and those considering them as something separated from any functionalism and utilitarism, have often come to enact important, if subtle and just as often overlooked, steps in the birth, disruption and restructuration of knowledge paradigms and disciplinary boundaries. In doing this, I want to issue a second warning: this exploration will probably look unapologizingly eurocentered, and even if I am well aware that different civilizations have not produced their own valuable perspectives on play. To give just two, relevant examples of non-european playful approaches to knowledge, which, most assuredly, have not entered the normal structure of western institutions: japanese zen "koan" riddles, and the healer-satirist role of jesters in many north american cultures (see Laude, 2005). However, my intent to focus on the interdependent relationship between play and the present shape of knowledge building institutions forces me to mirror their same unapologizingly eurocentered paradigm, and with it its cultural baggage of constructions on play, learning and work, if only to make it fully visible while trying to put it under proper historical scrutiny.

As we reach globalized modernity in our cavalcade, the second part of the chapter will then go on to expand our "playful lexicon" by exploring the state of the present, formalized field game studies, through a brief history of its origins and debates, while also highlighting its close relationship with technological innovation. Indeed, the way in which the comparatively recent advent of digital technologies, and the so called "Information Society", reshaped our global play-scape, while at the same time creating new pathways for the construction and dissemination of knowledge, paths that are shaking up the very "seriousness" and enclosure of academia as a whole, as I will discuss more in depth in Chapter III.

Given the above mentioned criteria of historicity, institutionality and focus this literature review will not, by necessity, be complete, and might even feel a bit constrained in its selectivity. It is, however, the outcome of a conscious and very reflected upon selection, aimed to highlight the role of game and play studies within the evolution of formal knowledge structures, and their influence in a wide variety of fields of study. Hence, all throughout this Chapter many themes will be barely hinted and touched on briefly, among which the above mentioned, multifaceted links with education, the complex relationships between play and power and between play and work, or the systemic nature of games. All these are themes that will be confronted in much more depth later in this work, and such are the inconveniences of the linearity of written, non-hypertextual language, especially when confronting such a complex, nonlinear theme as play and games. And, I have to add, especially when writing in a form (that of the thesis) in which seriousness and clarity are (or should be) paramount, and for a context (the academia) still deeply shaped by linear thinking.

This is why in the last part of the Chapter, to discuss the paradoxes and shortcomings of present educational institutions, and their contested relationship with play and games that, I will qualify this particular thesis's position in respect to both the present review of play-and-game-centered literature and the wider scope of play-and-game-related literature, opening up our scope in preparation for Chapter II, outlining my position in respect to both the aforementioned perspectives, and, consequently, my research questions and objectives.

History(es) of/and play: knowledge, work and leisure

As often happens, it might be useful (if, just as often, ultimately inconclusive) to start by confronting an origin problem: when did the study of play and games begin? Indeed how can this field be defined? Or, in other words words: *What Is Play (according to formal knowledge structures) ?* Following this direction of inquiry provokes a related, wider meta-question: should we leave its definition in the "serious" hands of philosophers and academics, even if everyone of us can recognize, by heart, what is play? And indeed, pushing the issue to its very end, should we relinquish to those people the reins of definition in general? But, even if, as we will see below, definition and play are closely related themes, let us keep focused, at least for now.

Since play itself is much older that humanity (as will be discussed in Chapter II), writing on play and games is probably as old as writing itself, even if often cloaked in its close relatives of ritual and narrative performance (Turner, 1982). Indeed, language itself seems to get quite cloudy when getting close to the area of game, as the terms defining playful activity tend to be quite all encompassing, to the point that specific words referring to it often seem to emerge quite late in

many languages' history, in an apparent contrapposition to the radical, even primordial, presence of the play function.

When we look into the history of those words, most indoeuropean and even native american and asian languages (see Huizinga, 1949) seem to link play with a wider semantic area of "light, free, rhytmic movement", its words crossing linguistic and cultural boundaries to acquire three main, widely encompassing meanings:

- play as functionally limited mobility (e.g. a wheel).
- play as ludic activity proper, be it free play, a structured game or playful activities such as ring-around-a-rosie.
- play as aesthetic performance, be it music or drama.

These recurring semantic areas convey a deeper, common meaning of "bounded freedom", be it by a mechanism, the rules, or the stage: play, if we are to heed semiotics, is achieved through both **rigidity** and **autonomy**, **determinacy** and **contingency**, **rules** and **freedom**. Being such a radical synthesis of opposites, it's not surprising that we can find play as deep mytheme at the core of many world religions: a well known example is the Hindu concept of *Lila*, often roughly adapted in english as "Cosmic Play" (while a more literal translation would be close to "make-as-if"; see Sax, 1995) , a holy metaphor for the emergent freedom and everchanging character of cosmic creativity which can also be found, almost without variations, at the very roots of western thought (see Dursun, 2012), in the writings of Heraclitus, where *"the Aeon* (which we can roughly translate as "time") *plays as a child"*. We shall focus for a while on ancient Greece, as the cradle of our written-word-based, institutionalized structures of knowledge making: in the works of Plato where, indeed, the discussion of written knowledge itself is of paramount importance, we can still find a great relevance given to the weaving of play and sacred, highlighting "man's rightful place as God's Plaything" in his book of *Laws*, but we can also pinpoint the first steps toward a different, somewhat "secular" conception of play, separated from the above discussed mythological character to become, for the first (recorded) time, something instrumental, a *techné* (a skill, or an art) to be employed in the education of athenian citizens. Let's pause for a moment, as I start here to exercise my aforementioned distiction: I am, in discussing Plato's pedagogical conceptions of play, defining it as the first (recorded) instance of an institutionalized educative agency explicitly trying to shape play to its own agenda, and while Plato's writings were, most assuredly, not studies in play proper, the deep but often underestimated pervasivity of the play spirit in greek culture (see D'Angour,

2013) and the latter's above mentioned importance as the root of present knowledge institutions, being Plato the founder of Academia itself (the proper name of Plato's philosophical school, which started as a gathering of intellectuals on a sacred ground dedicated to hero Akademos), most assuredly give his works a well deserved place in this tractation, if I want to construct a meaningful discussion of the complex relationship between institutions devoted to learning and play.

Speaking of greek conceptions of play, language itself can be, again, quite muddled: of course, as it is widely known, one the ruling ideals of ancient greek life was *agon*, that of ritualized contests toward *aristeia* , excellence, (it's also important to note how *agon* is closely related to *agòra*, the main city square meant as the political heart of Athenian life; see Kolb's discussion of the common roots of these two institutions, 1981), but the main, "everyday", greek word for play was, and still is, *paizein*, a verb used since Homeric times in the aforementioned three meanings. While *paizein* is undoubtably related to *pais,* child, it was however differentiated from *paidia*, "that which pertains to children", which was usually used to specifically refer to children's improvisational play, and was sharply contrasted with the much more recent term *paideia,* a philosophical and political concept, variously translated as "culture", "education", "instruction", that emerged with the urbanization of Greece, and the subsequent widespread adoption of written language for administrative purposes. Education historian Marrou (1956) suggests to understand *paideia* as "the treatments to which children should be subjected to become men" and, I add, to become men in a urbanized, male-dominated, oligarchic society (we must not forget that so-called athenian democracy, if quite ahead of its time, still excluded from participation women, foreigners and slaves, even if freed ones). Among these "treatments", Plato, in *The Republic*, proposes one which I will report here, as it constitutes, in many ways that will be discussed throughout this dissertation, the very anti-thesis of my work:

> *...one should regulate children's play. Let them always play the same games, with the same rules and under the same conditions, and have fun playing with the same toys. [...] If children introduce novelties into their games, they'll end up as adults who are quite different from the previous generation, looking for a different way of life—which means new laws and new social institutions and, as I said earlier, disastrous consequences for society as a whole.* Plato, The Republic, Book 7

And so we come to two further reasons why I touched on Plato's pedagogy of play: first, to provide some evidence of its reactionary, conservative and aristocratic character (and I want to point out how this rethoric still seems to survive into modern times, if clouded in popular contempt of

"today's kids' games"), and second, to define one of the main objectives of my work by trying to make a further distinction. Plato, as one of the first writers in pedagogy, was also the first to contrast educational policies and free play, attacking any kind of play that is not "by the rules" but also **"with the rules"**, a discourse that will constitute a major theme of this dissertation, especially when I will focus on the contested relationships between the spaces of the making of games, the institutions of the making of learning, and the games of the making of culture.

Going back to Greece, and speaking of knowledge institutions as the matrix of society at large, it's indeed in the same Attic cultural climate that we can pinpoint the birth of school, though not in its modern sense, but in the form of *scholè*, literally "leisure", meant as a **productive** and "virtuous" way to spend the (very abundant) spare time of ancient Athens' aristocratic class, engaging in "serious play" (*spoudaios paizein,* as Plato writes, again in *The Republic*) , mostly in the form of a variety of rethorical contests. It is quite fascinating to realize how this "leisure" came to mean something very different, and often quite unplayful, in modernity, even accounting for our very different socio-economic structures. Aristotle himself, as one of the founders of the original Academia, is among the first to take a very strong position in separating true *scholè* and "mere" or "frivolous" play, in the eighth book oh his *Politics*:

> *We should ask what activity real leisure (scholé) consists of. It's certainly not playing.*
> *That would mean play was the be-all and end-all of life, which is out of the question.*
> *The fact is that play relates to work more than to leisure: the worker needs a break, and*
> *play is about taking a break from work, while leisure is the antithesis of work and*
> *exertion.*   Aristotle, Politics, Book 8

It is important, in contextualizing this particular rethorical construction of the play-work divide, to highlight how "work", in the aforementioned, greek oligarchic intellectual context, was essentially conceived as an agrarian, lower class activity. The seed of a recurring contrast between play and work can be found here, a contrast marked by a strongly aristocratic bent, with "simple", "unserious" play conceived as a mere, almost physiological, break from the humiliating and exhausting necessities of life, and "higher" play as a privilege to be reserved for those influent intellectuals who were not to be burdened by such low trivialities (read: those who had slaves to bear that burden for them).

This seed would successfully sprout, growing into a peculiar way of articulating the temporality of leisure and production, that the latins would soon come to call "otium et negotium", with the former word defining entertaining, "higher" intellectual activities, and the latter to providing to the material

necessities of life (see, for example, Cicero's *Tusculanae Disputationes*, and many instances of Horatian poetry, among which the famous *Carpe Diem*). However, as the roman civilization gained more and more in political influence and economical power (read again: more slaves to support labor), less affluent citizens finally had more and more spare time, thanks to governmentally funded food subsidies, and participated in state funded, massified entertainments (a state of affair rendered in the famous expression by latin poet Juvenales, "panem et circenses", bread and circus plays), provoking a subtle shift in meaning that we can detect as soon as the 1st century B.C. , with Cato the Old famously calling "otium" the "father of all vices". "Otium" had indeed, with the urbanization that followed the ascent of Rome as a political power encompassing the whole mediterranean area, lost its higher intellectual connotations, but we cannot miss the socio-political charge of Cato's affirmation: "otium" had started to lose its aristocratic character, being no more a rightful privilege for the cultured elite, but something squandered and degraded by the uneducated masses.

This contested separation of frivolous play and noble seriousness, of games and work, so very important in the culture of the Roman Republic, was subsumed by its cultural successor as the ruling cultural force in western thought, Roman Christianity, causing the cultural value of play, and with it its explicit study, to apparently go "undercover" in the subsequent centuries (see Huizinga, 1949). Even before the fall of the Western Roman Empire, early christian philosophy placed the greatest importance on seriousness, assuming on itself, and reinforcing, Aristotle's position on "leisure" (among many other callbacks to the Athenian philosopher's "auctoritas"), thus apparently completely expunging playfulness from intellectual discourse, with St. Augustine even letting out dire warnings against the "noxious contentiousness and puerile bombast" of playful rethorical contests in his *De Doctrina Christiana*. This attitude, however, could not eradicate play as, behind scholastic philosophy's outer austerity, an inner, implicit dimension of playfulness remained paramount, with an extreme emphasis given to the same rethorical challenges St.Augustine denounced, "philosophical sports" aimed at the resolution of contraddictions, whether through sheer verbal skill or deep erudition. We could even say, following scholar of medieval philosophy Hurgronje (1957), that theological debate was, for a few centuries, mostly played, as a kind of competitive performance, both among christians and muslims, and it's indeed in this playful light that we can reframe the birth of medieval University, a place to be fully dedicated to those intellectual contests, and where to gather the best "players". For the sake of my opening distinction, it was, in that period, the play spirit to shape, if only implicitly and furtively, the institutions of pursuit of knowledge (Huizinga, 1949).

However, in this same cultural climate, explicit playfulness, and especially its most popular, lower

class forms, became something to be looked upon with pitiful disdain (once again demonstrating a persisting, aristocratic character of "intellectual play") if not outright suspect, and again took, in its most public manifestations, mainly ritual forms: sacred representations, carnivals, or "Feast of Fools", which worked both to subvert and maintain (if not even reinforce) the accepted, religiously charged, structures of social order (see, among others, Bakhtin, 1984, and Harris, 2011), while explicit writings on play mostly disappeared, as, I might half-jokingly add, the writing of plays. Nearing the Protestant Reform, the marginalization of play goes even further: work became noble and sacred, in a full reversal of ancient, mythological paradigms, while playfulness (and, again, play performances) was accused of moral dangerousness and paganism.

This inclination toward ritualized and "hidden" forms of play began to reverse only with a modification in societal structures and productive processes: as agricultural production increased thanks to advances in technology, so did rationalization of labor, political fragmentation and urbanization (see Diamond, 1998, for a systems oriented account of these historical transitions). Europe progressively shifted away from its feudal organization, and the divine authority of kings and popes had to yield to the economical power of bankers and merchants. These figures, less bound to codified and ritualized standards of conduct, took the liberty of becoming playful again (Ascoli, 2014), and took interest in promoting science and the arts for both economy's and aesthetics' sake, thus kickstarting Renaissance (se Panofsky, 1961, and Burke, 2000). Indeed Renaissance Humanism can be seen as a playful challenge to the (explicit) utilitarian character of scholastic philosophy and to it's emphasis on the rule-based, formal aspect of games, favoring instead the emergent, aesthetic aspect of the play spirit. We can follow this attitude down to Renaissance's direct cultural successor, Enlightenment (too often remembered mainly for its "Cult of Reason" derivations), which recovered the role of playful imagination as central in the quest for truth, with literary critic McFarland (1984) even suggesting that Imagination, in this secularizing society, took the place of the Soul as main agency of meaning, and tracing examples thereof from the writings of Rousseau to the poetry of Wordsworth and Coleridge. It's indeed with Romanticism that the aesthetics of play were, at last, explicitly and fully re-evaluated, not merely as a secondary source of knowledge, but as a fundamental part of human experience (Spariosu, 1984), and with Idealism this re-evaluation achieves new theoretical heights in the *Aesthetic Letters* by Fredric Schiller (1794), where he famously wrote that *"Man only plays when in the full meaning of the word he is a man, and he is only completely a man when he plays"* . In his tractation, however, Schiller once again idealized play in an artistocratic sense, recovering the ancient notion of "higher play", and indeed the quotation above can mostly be thought of as playfully self-referential: play is only "true" when it is source of aesthetic revelation such as this. However, Schiller also tried to

trace the origins of "mere play", thus proposing one of the first psychological and physiological explanations of play: naturalized as an "instinct", the "play drive" is defined by Schiller as necessary mediation between a more physical, sensuous "sense drive" and a rational, truth-seeking "form drive", also proposing explicative concepts such as "superabundant energy" and "non utilitarian exercise", which will be mainstays of discussions of animal play until the present (once again, see Chapter II for a more modern discussion of research in this field).

Starting in the same historical period of Schiller's writings, the second half of the Eighteenth Century, the Western World experienced an extremely abrupt transition, as in less than a hundred years society went from the *Ancièn Regime* to the so called industrial modernity. It's in this historical phase that we begin to recognize the present forms of knowledge building and dissemination (see, among others, Rothblatt & Wittrock's history of modern university, 1993), with the Protestant Ethic and Puritanism coming to the forefront in shaping new kinds of production patterns and learning institutions (see Weber, 1904, 1917, in his linked reflections on protestantism, the role and place of intellectual professions and the spirit of capitalism), and once again distancing academia and playfulness.

However, we can also pinpoint, in this very same historical moment, the mass manufacturing of childhood (and, with it, of most of its more innocent looking modern toys; see Gross, 1996) as a chronologically separate, and idealized, declination of human existence and experience, to be dedicated to play detached from, and in preparation to, the participation within "serious" productive processes, just as, paradoxically, children of lower classes were at the height of their exploitation, with the machinization of production decreasing reliance on physical strength and increasing the importance of fine manual dexterity. For the same reason, however, this was, in an apparent paradox, also a moment of unprecedented political empowerment for children, through this same, heavy involvement in productive processess (see, for a poignant example of these contested dynamics, Erica Burman's writings on children's unions in nineteenth century United Kingdom, 2001).

Drawing on this complex cultural milieu, German pedagogue Friedrich Froebel, who had worked with Swiss pedagogue Johann Pestalozzi on the transition from farming communities to industrialized schooling processes, is the first to re-evaluate play as a principal way for self realization and the development of moral character (putting playfulness even higher than other famous pedagogues such as Rousseau, who was more interested in creating a unified individual), and in this re-embracing of play by educational institutions, created the first modern *kindergartens*. Froebel approach was, however, marked by its turbulent historical context, favoring an heuristic approach an altogether ignoring the irrational, darker aspect of the play-spirit. We can trace to him

the modern, "sanitized" construct of play as something completely innocent and childlike (and the consequent moral outrages toward darker playfulness), a (perhaps exaggerate) effort to shelter children from the violent contraddictions of early modernity.

Seriously studying play, or "The Founding Fathers"

It's in this deeply reshaped socio-political, intellectual and instructional context, that we finally come to find the first modern academic inquiries on "games for games' own sake", not as a tool to be devoted in service of education, social stability or any other end, but as an aspect of human life deserving attention in itself, if just thanks to some deep curiosity in its multifaceted manifestations. It's indeed, most assuredly, a "simple" powerful curiosity that motivated American businessman Stewart Culin to engage in his proto-ethnographic writings, starting from his examinations of gambling practices in chinese immigrants (1889), in an historical moment where steam powered commercial networks were effectively and reliably linking all the planet together, giving rise to new phenomena of migration and intercultural exchange, and through them birthing new fields of inquiry. After gaining recognition for this work (triggering a widespread popular curiosity, however burdened by a character of attributed "exoticity" typical of what would be then called the "Museum Age" of anthropology; see Bazin, 2012), Culin went on to study italian marionette theatre (1890) and children's street games in Brooklyn (1891)*,* in a line of inquiries culminating in his most famous work: *"Games of the North American Indians"* (1902). In these studies, which began more than 30 years before ethnography's most renown seminal text, Malinowski's "*Argonauts of Western Pacific"*, Culin proposes an encyclopedic account of play practices among very diverse cultures and sociocultural contexts, not limiting his work to mere recapitulation and description, but highlighting how the universality of play practices, and similarities among them, entail not only ancient contacts and exchanges between different population, but a more fundamental unity of human experience.

Just as play and culture seem to be closely entwined in their birth (as we will, again, read more in depth further in this Chapter and in Chapter II), modern, formal study of play and games goes along the first steps of the development of modern study of culture, formalized in the discipline of anthropology, helping to define key features of its main methodological approach, the then nascent ethnography genre. As we read above, Culin was not, indeed, a formally trained anthropologist (just as Malinowski himself was trained mainly in chemistry and economics), not even holding a degree, still his playful curiosity marks a fundational landmark in a discipline which had yet to be fully formalized. For the first time (of what will be many) in this dissertation the role of a so called "amateur", someone not "professionally trained" for a specific, well defined field of activity comes

to the forefront, somewhat disrupting ideas of "expertise" and "competence", built within a knowledge framework that puts a lot of value on specialization. Playfulness had at last, with Culin, reentered the academia, actively and explicitly reshaping it, burdened neither by the hidden character of scholastic contests nor by the aristocratic overtones of ancient and romantic writings. As mentioned above, Culin did not observe specific ludic behaviours as particular and isolated phenomena, but offered a glimpse of a deep unity of human cultures.

Still finding its roots in cultural inquiry, but going further beyond ethnographical case studies, the first modern general theoretical and philosophical perspective on play and games comes, by consensus, in the essay *Homo Ludens* by Johan Huizinga (first written in 1938, and revised in 1949), a Belgian historian perhaps more noted for his magnum opus, *The Autumn of The Middle Ages,* and, like Culin before him, among the founding fathers of a new disciplinary field, that of cultural history. Just as this particular branch of history underlines the strong relevance of popular aesthetics and narratives, in his seminal *Homo Ludens* Huizinga argues for the pre-cultural character of play, and he attributed to it a fundamental function in the production of culture. In his historical perspective, any kind of social system, any kind of civilization is, in its first steps, actually "played". But the Belgian historian goes even beyond that, as this famous (and, dare I say, beautiful) quote testifies:

> *You can deny, if you like, nearly all abstractions: justice, beauty, truth, goodness, mind, God. You can deny seriousness, but you can't deny play. And in acknowledging play, you acknowledge mind.*   J, Huizinga, 1949, p. 3

Starting from this widely encompassing position, of play as the **matrix of abstraction** itself, he proposes one of the first formal general definitions of play, putting forward a set of explicit, distinctive criteria for a universally experienced phenomenon, articulated in a definition that will constitute the root of much of game studies to come. According to Huizinga, play is to be defined as:

> *...A free activity standing quite consciously outside 'ordinary' life as being 'not serious' but at the same time absorbing the player intensely and utterly. It is an activity connected with no material interest, and no profit can be gained by it. It proceeds within its own proper boundaries of time and space according to fixed rules and in an orderly manner. It promotes the formation of social groupings that tend to surround themselves with secrecy and to stress the difference from the common world by disguise*

A full discussion of this key definition is not immediately necessary. It will be articulated at length through its successors and critics in the rest of this chapter, and often touched throughout the rest of this dissertation. As for now, it will suffice to just focus on two criteria: play's **bounded condition** and its **gratuity**: play, according to Huizinga, is separated from ordinary life, both as a dimension of autonomous meanings and of material relationships, but it is not disconnected in a cultural and social sense. Indeed, it appears, according to the Belgian historian, radically interweaved with the emergence of societies of any kind.

Keeping these criteria in mind, it is particularly notable in furthering the historical contextualization of Huizinga's work, and in refining his definition of play while giving it materiality, to touch on his treatment of organized sports, which, in the same *Homo Ludens*, he denounced as an "unholy" activity that has lost any cultural value whatsoever, "especially when state sanctioned". While these propositions, and especially the use of the adjective "unholy", might sound overblown or confusing to modern readers, we can easily link them with the emphasis placed in those same years on oceanic (and very publicized) sport meetings by the nazi government and other dictatorial regimes (see Hoberman, 1984, for an in depth account of sport practices in dictatorial regimes). These gatherings constituted an evident instrumentalization of the play spirit as a way to tame bodies (see also Foucault, 1988, on the same theme) while making them physically ready for war and giving an embodied anchor to the symbols of power, legitimizing them. However, as later critics noted (Malaby, 2009), while this kind of practices still endure today, the contingent character of play can make them backfire, as shown in Jesse Owens's famous triumph against his supposedly "master race" opponents during 1936 Olympic Games. We touch here, for the first time in this dissertation, on the theme of **power**, (which will be much more central in Part Two) : as systems defined by both **rules** and **contingency** (as we will read much more in depth in Chapter II), formalized games can lend themselves to become both systems of control and systems of subversion, a resource both to and against disciplination.

Huizinga's pseudo-Russelian of construction of play, as something which can both build and disrupt boundaries and abstractions, joined with a then extremely innovative interdisciplinary approach, is what guided Gregory Bateson's inquiry, first in his metalogues *Why a Swan? Of Games and Seriousness,* in his essay *A Theory of Play and Fantasy* (first written in 1954) and, a year later, in convoking a group of scholars from a variety of disciplines to discuss *The Message: "This is Play".* While the above mentioned metalogues and essays and this specific discussion's contents, will be key themes in subsequent Chapters, I chose to include this conference among the key passages of

the history of play and academia for its peculiar nature: it was the first, true transdisciplinary conference on the theme of "play for play's sake", thus marking, thanks to "big names" such as Bateson himself, Margaret Mead, Erik Erikson ans Howard Liddell, a relevant step in the construction and legitimization of spaces dedicated to thinking about play within the academia. Starting from a discussion of Russelian logical types, the debate touched on animal play, psychotherapy and communication theory, confronting the "onion-like" stratification of categories that is play, but always steering the debate clear from any kind of ultimate definition, and, at the same time, from any possible instrumentalization of play. Indeed, Bateson reached the conclusion that "the message this is play", as the fundamental paradigm of meta-communication (Bateson, 1954), is necessary to make "non playful" things conceivable, or at least "biological". Given these criteria, play does not *serve* the continuation of life, but it is indeed *"so to speak, life itself"*.

Another problematizing definitory approach comes, in those same years, from Eugene Fink, a German philosopher, heir to the phenomenological tradition of Husserl and Heidegger, although distancing himself from the latter's political and philosophical endorsement of nationalistic policies. Fink, in his, meaningfully titled, *The Oasis Of Happiness: Toward An Ontology of Play*, tried to inquire into the paradoxes of the aforementioned "uses" of play spirit, proposing a study in the constitutive characters of play, it's "ontology", which Finks describes through four structural elements:

- **Pleasure** *in* and *for* play, not simply rational nor simply sensuous, able to embrace, in playful representation, even sadness, fear and horror.
- **Meaning** as a fluid bridge between the "in" and "out" of the play-world.
- **Community**, as we can't play alone, we always have at least a represented "other" as adversary or participant in our play.
- **Rules**, as an exploration of the circular, creative relationship between limitations and possibilities.

Through all these elements play, wrote Fink, is "in front of", in its capability to embrace and represent other aspects of life, making them open to scrutiny and change, as "*We play with seriousness, authenticity, work, struggle, love and death. We play with play itself"*. Working on this foundation, Fink went on to examine western institutional systems' unanimous dequalifying dispositive employed toward play, one that reduces it to a collection of techniques for passing time, or to "a form of education apt for children", thus progressively reducing its value with age. This,

wrote Fink, is due to industrial modernity's "futurism", its unceasing push toward ends and results, which is disrupted by the interruption of temporal continuity granted by the "oasis" of play, its **self-sufficient** and **self-contained** character which separates it from accepted, external goal directed forms of work and learning. Fink spoke, in worried tones, of the artificious ways in which industrial modernity, with the complicity of educational institutions, responded to the human need to play with the regimentation of sports, the machinization of leisure, and its tranformation in a form of therapy, as opposite to gratuitous expression and creativity. Fink, however, also warns the reader against the dangers and seductiveness of play as an all encompassing world-symbol, which, as we read above concerning to sports, can become a potent tool of social coercion through its community and rules, and a technocratic affair of social management in its neutralized pleasure-seeking and self-referential meaning.

Other authors soon came to touch on the darker aspects of play, evidencing how it can become an hard-to-oppose tool for domination, or even a route to self destruction. It's in this sense that we should approach the first articulated criticism of Huizinga's work, coming from Roger Callois, a french sociologist close to Bachelard, Breton and the surrealist movement. In his *Man, Play and Games* (1958) he acknowledged the groundbreaking value of Huizinga's work , but criticized his definitions, especially Huizinga's emphasis on competitive, structured games. Callois endeavoured to complexify and open up Huizinga's definition of games, proposing four categories to describe ludic phenomena, which are however not meant to be mutually exclusive:

- *Agon*, or any competition framed in a way to give participants equal chances to victory, and consequently to give precise and incontestable meaning to their triumph.

- *Alea*, or any game based on decisions outside the control of the players, determined only by the favour of fate.

- *Mimicry*, or mimesis, or role playing. Becoming an illusory character in an imaginary milieu, even shedding one's own personality.

- *Ilinx* (Greek for "whirlpool"), or the pursuit of vertigo, the search for a sense of altered perception, a momentary disruption of the self's own stability.

Callois went on to provide a meta-disciplinary commentary to this classification, distinguishing between pedagogical, psychological, physiological and mathematical approaches to the study of play, and highlighting how each expert in one singular field tends to ignore some specific forms of

play: *"Games of chance are boycotted by sociologists and educators. The study of vertigo has been left to physicians, and the computation of chance to mathematicians",* denounced Callois, implicitly calling for a necessary interdisciplinarity in an academic contest more and more characterized by reductionism and specialization. As a further parallel for the above categorization, Callois also provided the first modern thematization of the Play vs. Game divide, proposing a whole playful continuum going from ***Ludu***s, *"the taste for gratuitous difficulty"* achieved through fully structured rule based games such as Chess, to ***Paidia***, the unstructured make believe of children, *"the power of improvisation and joy".* He however highlighted how any definite separation of these necessarily concurrent phenomena is unconducive to a deeper understanding of play as a whole. Also unconducive to this understanding is, according to Callois, Huizinga's wholesale expulsion from the playsphere of activities such as sports and gambling, which Callois preferred to consider as insidious "corruptions" of the play spirit, or in a way, unchecked expansions of some of its characteristics at the expense of other ones, and far beyond its usual, bounded character (conceptualizing, for example, drug abuse as a corruption of *ilinx,* or superstition as a corruption of *alea*).

As we enter the Seventies, and as quite more optimistic, if contested, visions find their way, Canadian philosopher Bernard Suits, in his *Grasshopper: Life, Games and Utopia* (1978), once again proposed a definition of play, one that looks much leaner that Huizinga's, but is still full of philosophical implications: to play, writes Suits, is *"to voluntarily overcome unnecessary obstacles".* While apparently simple, this kind of definition actually entails deep philosophical issues, which Suits went on to explore using a very unusual and extremely playful writing style, in a collection of dialogues between fictional character, be them animals from the fables of Phaedrus (such as the eponymous Grasshopper) or characters caricaturized from the Cold War cultural climate, such as spies and generals, lightheartedly evidencing paradoxes and inconguences in those years' political discourse, and implicitly calling the academia to renounce its own overblown, politically detached seriousness.

Touching on issues of free will and necessity, while mantaining a character of inclusivity toward the whole, apparently barely connected, "family" of playful behaviours, Suits postulated, as a requirement for the paradoxical endeavour of voluntarily seeking for unnecessary trouble, the concept of "**lusory attitude**", our capacity and willingness to choose less efficient means to reach something that has no extrinsic value, "just because this makes such an activity possible". With the realization of play's **intrinsical value**, in the last part of his treatise Suits discussed the deepest political implications of play, and this is indeed a work markedly of its time, touching on the then very central discourse of Utopia, which is defined, maybe quite surprisingly, as the "Art of Playing

Games". Suits, going beyond pragmatic considerations of economical scarcity, outlines how game playing, as an activity that is purely valuable in and by itself is *"what makes utopia intelligible"*. As Suits wrote his witty dialogues between bored clerks, retired generals and workaholic ants, play was indeed, at that point in History, an explicit and relevant actor in the discourse of knowledge, arts and politics. "Laughter will bury you", shouted students and workers in the streets, for the first time uniting "productive" and "unproductive" segments of society in a playful efforts to deconstruct societal rigidities, an aspect of disruption of the until then well established "division of labor", one that we will come to touch on within the next segment of this Chapter and, in more depth, in Chapter III.

However, before reaching the present in our cavalcade, it is only good that we, at the same time, focus for a while on the aforementioned rethorical power of play and take a step back to look at the whole discourse of play until this moment. To do this, it is Brian Sutton-Smith, an New Zealandish educator and long time scholar of play, who came to our help, proposing what is, at the present moment, the widest review of the studies of play (and one toward which this Chapter is deeply indebted) in his book *The Ambiguity of Play* (1997), which lists and explores a set of rethorics that have been used through history to understand play, games and their place in society. They are the rethorics of:

- **Progress**, as a way to turn children into adults.

- **Fate**, as an argument against free will.

- **Power**, as a conflict to fortify the status of its winners.

- **Identity**, as a means to construct or confirm a community.

- **Imaginary**, as a sinonimous with creativity and flexibility.

- **Self-evolution**, as a way to provide aesthetic satisfaction.

- **Frivolity**, as opposition, parody, even with a revolutionary character.

It is easy to pinpoint, in this list, key aspects of more than one of the aforementioned views. It is, however, important to underline how, through Sutton-Smith's work it's not only play that gains an official History, but also its discourse, making it more visible, and therefore evidencing its close relationship with societal structures and institutions, leaving, however, something still missing at the time. A new, powerful rethoric, **Play as Design**, is emerging in recent discourse of inquiry, focused on play and games as something that is also artfully and technically made (thus echoing the "three meanings" mentioned in the first part of this Chapter). In doing this I want to make explicit another

of the main objectives of this tractation: to reflect on a necessary shift in academic discourse, from a transmissive, reproductive institution to an constructive, innovative, and therefore more playful space. But once again, let's keep our historical focus as, in the next segment of this chapter I will recount some stories from this possible, still evolving transition.

From studying to making: spaces, books and games

During the second half of the 20th century the reins of creativity seem to experience a shift, away from the exclusive and expert hands of professionals and toward the domain of "amateurs", with a variety of so called *Do-It-Yourself* cultures coming to the forefront (as we will read in much more depth in Chapter III and IV). It's in this cultural climate marked by grassroots creativity that Bernard DeKoven, a scholar of English and Theater, created one of the first academic "playgrounds", the Games Preserve, located in Eastern Pennsylvania, a research center completely dedicated to the study of play and games. DeKoven, drawing on his experience with theatrical performances, subtly shifted attention from the (maybe too) theoretical reflection on play toward a more embodied, more pragmatic approach which took great care to include the players themselves in its design. This allowed him to reconcile the study of play, as emergent, embodied experiences, with the study of games as formalized rule systems (see Salen & Zimmerman, 2001). This approach expanded through the New Games Foundation and with the publication of *"The Well Played Game"* (1978), where DeKoven criticized the excessive value given by society and educational systems to individualization and competition, emphasizing instead a cooperative perspective on play, and the active role of players in reshaping their experience, encouraging players to take into their hands the responsibility to create "new games", to spread and reflect this political and ethical attitude.

DeKoven's work on "new game" design fully bridges us to a new generation of relevant writers in the field of play, authors often on the edges (or completely outside) of academia, but still bearers of "embodied" and "grounded" experience in the cultural dynamics of play. The Seventies were indeed a time of ludic renaissance, with small companies experimenting and achieving enormous popularity and economic success through playful and creative use of the new digital technologies. This kickstarted the spreading, at first in the United States and in Japan, but quickly spilling all over the world of the then so-called "amusement arcades", or "penny arcades", a new place of socialization, where electronic games became fully globalized and massively produced means of entertainment and, in that, with the rise of the first iconic characters and games such as *Pac Man* and the *Mario Bros*, generated a common cultural and narrative frame of reference, shared and differently elaborated across the otherwise impassable political boundaries that characterized that

historical period. On both sides of the "Iron Curtain", kids played the new games, as, again on both sides, their parents looked upon them with disdain (see Huhtamo, 2005). Plato, were he alive, would have probably been quite worried for the "disastrous consequences".

One of the active creators of this new kind of "playgrounds" was Chris Crawford, a student of physics who, after his degree, became a game designer, creating much beloved classics such as *Tanktics* and *Eastern Front.* However, he was also one of the first scholars to take a designer stance toward digital games (and, indeed, toward games in general), and to create legitimate spaces for such academic interests, with the founding, in 1987 and 1988, of both the *Journal of Computer Games Design* and the *Computer Games Developers Conference,* that will become the first hub for the then still submerged community of game designers and scholars.

By the second half of the eighties many game designers had indeed, thanks to the above mentioned global explosion of digital games, rose to fame as individuals, not yet accepted neither as "true artists" nor as "intellectuals" by society at large (and most assuredly not by academic art historians), but still gaining widespread individual recognition. One of the most famous of these "game design celebrities" was (and is) Will Wright, who gained notoriety as the creator of the hugely successful *Sim City* series, in which the player is called to build and maintain an ever expanding city, while lacking a true and final "objective", characteristics which, according to some commentators, made it more resembling a toy than a game proper, again eliciting definitory troubles. Wright himself soon put to an end this quarrel, by expounding his own, personal definition of game as *"the exploration of a possibility space"*, a quote (discussed at length by Wright himself, 2006) which still remains as a landmark of ludic literature, undoubtedly borrowing from his interests in ecology and evolutionary biology, which he, however never fully pursued in an academic sense, being what could be rightfully defined a "college dropout". This is an example of the above mentioned "rise of designers" as a relevant cultural force, with design thinking coming to the forefront, in recent years, not only as a technical skill, but also as a distinct epistemological and political approach, founded on interdisciplinarity and constructivism, which will be further explored in Chapter II. Until then play and games (and with them, following Huizinga's theory almost to the letter, the whole of human knowledge) were phenomena which were mostly studied "in third person", as pre-existing artifacts or cultural practices, not as creative, co-constructive processes.

This design oriented perspective finds its definitive consecration in 2003, year that marks, as mentioned in the introduction, the publication of a seminal text, which became a kernel around which the then still fragmented community of game scholars found a meeting place and a newfound legitimacy: Katie Salen & Eric Zimmerman's *Rules of Play* is a vast, transdisciplinary treatise, which aims at exploring the underpinnings of "game design", in its systemic, social and

cultural dimensions, acknowledging that any meaningful analysis of games (as well as the capacity to create new ones) requires a spectrum of competences that trascends any singular disciplinary categorization. The book starts with a basic vocabulary of "core concepts", proposing new definition of both play and games, both based on a Systems Thinking approach: according to Salen & Zimmerman play is *"free movement within a more rigid structure"*, thus once again including the originary "three meanings", and modernizing the boundaries of their semantic area, while a game *"is a system in which players engage in an artificial conflict, defined by rules, that results in a quantifiable outcome."* Building on these key definitions the authors then proceed to discuss in depth both the formal characteristics of games as rule-based systems and gameplay as a multifaceted psychological and sociological experience, and eventually closing with an exploration of what happens *around* the magic circle, the cultures that surround, shape and are shaped by games.

While the book was, in itself, more than remarkable, what made it even more interesting was its effect on the then dispersed community of scholars of play and games: following the transdisciplinary call of this book, and gathering from many different disciplinary fields, a vast array of scholars began to find each other, build networks and merge into laboratories or research groups, each individual bringing very different pragmatical, epistemological and political assumption on what constitutes knowledge and research. A playful "laboratory" was constructed, which, on a meta-level, implicitly put into discussion the "seriousness" of academia itself. Speaking of this peculiar "migratory" phenomenon, Finnish game researcher Olli Sotama (2013, private communication) once told me: *"Game studies are a discipline of refugees".* This metaphor of the (dis)placements of academic structure will recur throughout this thesis, and will be further explored in its political meanings in Part Two.

Only in very recent years, Game Studies are, at last, losing this "nomadic" character and building their own true homesteads, emerging not only as an informal sub-field of interest, spread among many different practitioners and researchers, but as an institutionalized subset of knowledge structures and a network of scholars, constituted in 2003 in Finland as the DiGRA, the Digital Games Research Association. This means, concretely, that in many universities is now possible to obtain a specific degree in "Game Studies". Is this the play spirit shaping the academia? Or is it the academia that has finally tamed play? I'll delay a bit my answer, while underlining that the above mentioned institutionalization of the field means the creation of spaces, both conceptual and physical within the academia, a mobilization of economic and human resources, that is however closely link to a word which I quietly clouded over only a few lines ago: **Digital.**

Why were "game studies" (mostly) focused on digital games (at least in their initial and current

phases)? Game scholar and DiGRA founder Frans Mäyrä links this to quite a contingent factor: the spark of interdisciplinary interest that occurred between information sciences and humanities, as information technologies explosively rose in social relevance, and, maybe most importantly, consolidated their place within the spaces of education, rapidly (and often compulsorily) substituting paper-based means of administration and documentation. Year 1997 effectively marks the planting of the seed of modern, digital oriented, game studies (just as, in the same year, *The Ambiguity of Play* marks the first retrospective of the study of games in general), with the publication of both Janet Murray's *Hamlet on the Holodeck: The Future of Narrative in Cyberspace* and, most key to our focus, Espen Aarseth's *Cybertext: Perspectives on Ergodic Literature.* While both texts explore future possibilities of interactive drama and narrative made available thanks to digital technologies, Aarseth's choice was to focus specifically on digital games, defining them as "ergodic texts", or as a narrative which requires non-trivial effort to transverse. The success of his perspective almost single-handedly legitimized the study of videogames within literature departments, and those two books constituted the very basis of the so-called "Ludology VS Narratology debate", which exploded about a couple years later, and, as happened since the age of ancient philosophers' debates, by evidencing a place of conflict, also consolidated a community.

The story goes (and I am consciously choosing to use this informal register, as the event has been, according to all "parts" involved, somewhat overdramatized into a "foundational myth" in subsequent histories of game studies; see, among others, Jenkins, 2006 and Juul, 2014 for quite different accounts) that in 1999 literary conferences saw a "rebel faction" of "young ludologists", headed by Uruguayan game designer Gonzalo Frasca and by Danish educator Jesper Juul, "attack" literary theory based approaches to videogame criticism, demanding a new, autonomous approach for the study of games, independent from the categories of other disciplines, and, in that, for the foundation of a new disciplinary field in itself, one which would ultimately come together only a couple more years later, as I recounted above.

Beside this (continuously playfully re-elaborated) "mythical" account, modern, digital-oriented game studies do not have (yet) conflicting "schools" or interpretations, having still to explore the whole, ever evolving space of their inquiry, and are indeed peculiarily spurious, not having any scholar ready to adopt hardline interpretive position, not even in regard to the categories above, to which no one would define himself or herself essentialist. Game studies are, coherently, quite playful in their theorizations, being open to "free movement", as long as they continue to retain the autonomy granted by "more rigid structure" of their own, dedicated academic spaces.

In more recent years, however, two new debates seem about to emerge: the first one is characterized by markedly different positions regarding the economical and social dynamics of game production

(and thus, following Huizinga, of cultural production), which on a side sees an ever increasing interest on the economic impact and monetization strategies adopted by the digital games mass market (which is expected to breach an overall, worldwide value of 100 billion dollars by 2017, and is experiencing an exponential growth even during the present economic stagnation; see http://alldidigames.com/video-games-industry-infographics/ for an overview of the industry), and on the other side sees the explosive emergence of innovative, grassroots networks of non-professional who, starting as players, are becoming "game-makers", in a parallel and sharing based playful ecology. One of the major scholars of this second perspective is Olli Sotamaa, by whom I had the privilege of being supervised during the period of my Ph.D. Course I spent in Finland (period which will be the main focus of Case Study II), who promotes the necessity of a shift of scholarly focus toward the figure of players-as-producers (Sotamaa, 2009). Again "amateurs" come to the center stage, as a paradigm for both material and cultural production, across the boundaries of knowledge making institutions: Henry Jenkins, with his examination of participatory cultures in his book *Fans, Bloggers, and Gamers* did a lot to complexify the supposed boundary between academic professionals and fans (even starting with the title of his blog, *Confessions of an Aca-Fan)* as culture makers; beside academic authors, voices from outside the "ivory tower" have rose as influential commentators, not lacking any of the depth of the above mentioned scholars, and often providing insightful and atypical perspectives, indeed participating in whole ecosystem of reclamation of the means of cultural production, which will constitute the main focus of Chapter III. As for now, wanting to focus on the aforementioned debate within game studies and on the contested relationships between play and academia, I consider one of the paradigmatic examples of this "grassroots" tendence to be game designer's Anna Trophy's "*Rise of The Video Game Zinesters: How Freaks, Normals, Amateurs, Artists, Dreamers, Drop-outs, Queers, Housewives, and People Like You Are Taking Back an Art Form".* It's interesting, if somewhat humorous, to notice "normals" among this poignant list of socially excluded categories. But why the author speaks of "taking back"? From whom? Surely from the massified production mechanisms I touched on above (the first emerging debate in game studies), but also from a variety of instances that, in a way, and to very different degrees of both efficacy and ethical concern, try to recover platonic instances of controlling play for a variety of ends, as we will se in the next (and last) section of this Chapter, touching on the other, emergent debate of present game studies.

Of getting played and making games: on the "taming of play"

Having reached the present state of "game studies", I choose here to point in the opposite direction

of "studying games for games' own sake", as, at this point, it is paramount to discuss the "violation" of this same criteria put into act by a variety of social instances and disciplinary fields.

Let us, once again, go back in history to start with some extremely noble, and apparently very blatant "omissions" from the preceding tractation: works that are essential mainstays and masterworks of educational field, such as Piaget's *Play, Dreams and Imitation in Childhood,* Vygotsky's *Play and Its Role in The Development of The Child* and Winnicott's *Play and Reality.* Or, to not discount "hard sciences", Von Neumann's *On the Theory of Games of Strategy.* And let's not forget philosophy, with Wittgenstein's *Language-Games.*

I want to (literally) underline that <u>I do not</u> have the slightest intent to put into discussion the enormous value of this kind of works, especially not those concerning the role of play in learning, evolution and modelization. Indeed, as I wrote in the Introduction, these approaches will constitute the main foci of Chapter II, and will be thereupon discussed at length and in depth, in both their (huge) advantages and in their (subtle, and therefore moreso insidious) limitations.

What I want to address now is how all of these approaches, in a way, allow for a "taming" of play, to "put their harnesses" on play to a specific end, be it cognitive development, the modelization of strategic and economic problems or the solving of philosophical dilemmas (see Sutton-Smith, 1997, for an in depth discussion of this "taming") . And while the texts I mentioned above are among the noblest examples I could muster, as I will quote and honor them at length throughout this dissertation for never trivializing the theme of play and treating it with its due complexity, I, indeed, have the intent to discuss other, less noble, less complex approaches.

As we foray into the so called "Ludic Century" (see Zimmerman & Chaplin's admittedly quite bombastic "Ludic Manifesto" 2013), and being someone implied in the field of education, it is paramount, for me, to start my exploration of the "taming of play" with Csziksentmihaly's work on "positive psychology" (see Seligman, 1998, for a full treatise on this emerging field) and the "flow" state, which is defined as the ideal level of stress to experience during a performance, in an unstable equilibrium between anxiety and self-assuredness (Csziksentmihaly, 1990). While I would put Csziksentmihaly himself, if not among the "giants" of the above paragraph, among those who have given play its due, by underlining the necessity of its **autotelic**, or intrinsically valuable, character, I want here to outright denounce a number of its readers and followers, who have trivialized playfulness as means to an end, a prescriptive strategy used to artificially achieve "well being" in a variety of contexts. This happened as, following Csziksentmihaly's quite open theoretical perspective, more direct, and dare I say coercive approaches toward the play-spirit are emerging in recent years as a new research trend, especially among psychologists and educators with a strong cognitively inclined approach (see Hamari, Koivisto & Sarsa, 2014).

This new paradigm calls on a spectrum of approaches, among which we can find "Serious Games" (defined as a game designed for a primary purpose other than pure entertainment; Abt, 1970) and "Gamification" (defined as the use of game mechanics in non-game context to engage users in solving problems; Zichermann, 2011). These approaches seek, to various degrees, the integration of ludic aspects in "serious" contexts, such as school or workplace. One of the most popular proponents of this perspective, Jane McGonigal, promotes this "gameful" approach, contributing evidence as to how a game-based curriculum can contribute to generate "measurable change" in people's attitudes toward issues of poverty, disease control, global hunger and renewable energies (McGonigal, 2011). However, as well intentioned as it might be, this approach has raised a whole host of criticism from both inside and outside the academia, with the keyword here being *measurable.* Scholars of games, from both inside and outside knowledge-making institutions, highlighted how the nature of games as formal, rule based systems can lend them to become tools for unilateral control, measurement, and evaluation, evidencing a (legitimate preoccupation) with reductionism and measurment as connected to game research that I will further explore in Chapter IV. Within game studies themselves opposition to gamification can, however, get quite explicit, as in this quote from American game designer and game critic Ian Bogost (himself quoting and paraphrasing German philosopher Harry Frankfurt):

> *Gamification is bullshit. I'm not being flip or glib or provocative. I'm speaking philosophically. More specifically, gamification is marketing bullshit, invented by consultants as a means to capture the wild, coveted beast that is videogames and to domesticate it for use in the grey, hopeless wasteland of big business, where bullshit already reigns anyway.*   I. Bogost, 8/8/2011, blog post.

This tirade is not aimed at preventing anybody from "doing things with (video) games", to quote the title of a book from Bogost himself, who, proposing the concept of **procedural rethoric,** thematizes the apparent efficacy of game based approach in learning processes: games are indeed very good at making their arguments, as they can use not only words and images, but **processes**, and as such a game with well-designed win conditions can make the player reach the same conclusions as its designer, in an only apparent autonomy established by the game's interactive medium. Gamification is, in a sense, a way to get people played. The point here is that game designers, and especially educators who (legitimately) want to leverage the "power" of games within their curricula, need to be extremely **ethical** and **open** in their design philosophy, an approach that is endorsed by American educators James Paul Gee, in his *What Video Games Have to Teach us on Learning and Literacy*

(2003)*, and Kurt Squire, in his *Video Games and Learning: Teaching and Participatory Cultures in the Digital Age* (2011)*. Both authors underline how games are learning opportunities in themselves, and it's not necessary to make them into measuring or controlling tools, or, indeed, into tools of any kind. To nail this point before moving on to the real conclusions of this Chapter, I want to quote American Sociologist Bart Simon, who, during 2014 "Critical Evaluation of Game Studies" seminar held at Tampere University, came to connotate this discipline as academia's "**last bulwark of uselessness**", and, thus, an area of possible resistance within a context more and more marked, shaped (or even directly controlled) by market interests and by often unclear power dynamics.

End of the beginning: questioning knowledge and/of play

We have explored, if briefly, the articulated situation of the present moment, discussing the status of games as cultural artifacts and as spaces of cultural production. This seems to go well beyond their "mere" entertainment value, but their higher evolutive potential is still less acknowledged than their market potential or their cognitively oriented training capacity, both in everyday life and in the academia. We are indeed in a playful age, where whole stadiums are stuffed to see the "Pros" (professional, paid players) compete in skillfull acts of virtualized combat (which feels somewhat worrisome, in the light of Huizinga's considerations about organized play). Yes, we are in a dangerously playful age where the explosive spreading of gamification within learning institutions can morph learning environments into quiz-bits walled panopticons (even using so called "buzzers" to suddenly question sleepy students). While all this happens, we have seen that game studies, our much discussed "studies of games for the games' own sake" try, not without difficulties, to obtain some "structural integrity" and, most importantly, some dignity as an autonomous discipline (with a very diverse range of success, depending on national cultures and local contexts).

And so we come to where we started, and to the question that constitues the final focus of this Chapter: where am I in all of this? What of this plurimillenial, complex and contested story I want to save, what to recover and what to deconstruct? Do I want to tame play for education'sake? Or do I want playfulness to fully conquer the academia? Ultimately, where do I place myself from a disciplinary standpoint?

If I want to be fully honest, it's much easier for me to say that this work is "at the crossroads" of many fields. Let us give this approach a round, starting with my "work placement": as I am indeed part of an education department, and I am of course deeply interested in learning, this is (also) an education dissertation, at least if for education we do not intend only didactics and institutional learning processes as means of mere "transmission" or evaluation. I fully know this might look, to

the more savvy readers, like a strawman argument, and badly put together one, at that. Still, the one I expounded is an extremely widespread representation of learning processes, both within and without learning institution. Let's take, as a significant example, Wikipedia, the "free encyclopedia" which probably constitutes the very paradigm of constructivism, and let's read an excerpt from it's definition of education:

> *Education, in its general sense, is a form of learning in which the knowledge, skills, values, beliefs and habits of a group of people are transferred from one generation to the next through storytelling, discussion, teaching, training, and or research.*

Thus, this is an education dissertation, as long as we are, as a whole culture, willing to redefine the meaning of education, and especially its spaces, as something fundamentally, freely co-constructive, and therefore playful, not limiting it within the walls of schools and academias, but embracing the cultures and the communities that live around them and that endlessly play with learnings.

Speaking of cultures and communities, I also have to, briefly, point out that this is (also) an anthropology dissertation. This because, as we will read at length in the Second and Third Part of this dissertation, I have used many of the conceptual tools and methods that characterize that disciplinary field, even if I am not a trained anthropologist and I most assuredly cannot pretend to be an "expert practitioner" of the inner workings of ethnographic practices, and I will therefore not write full "ethnographies of play" as Culin did. However, I will try to follow what Clifford Geertz maintained to be anthropology's main objective as a field of studies: *to push the boundaries of human discourse.* Or, as I would put it, to playfully push the boundaries of the game.

Let's now confront my personal curriculum: as I am, as I already wrote in the introduction, trained as a clinical psychologist, this is (also) a psychology dissertation, with the aforementioned caveat of a different definition of mind mutuated from systems thinking, according to which a mind is indeed embodied, but not localized within brains or nerves. In fact, given this premises, and as I expounded when discussing Csziksentmihaly's work, I can't align fully even with the most ludically oriented branch of this discipline, "positive psychology" and yet, if we accept Huizinga's and Bateson's frameworks, by researching play, and its ever evolving role within cultural dynamics, we come most close to researching minds.

Finally, and most importantly in regards to the focus of this chapter, this is (also) a "game studies" dissertation, if for game studies we mean the recurring, discerning criteria I mutuated from Frans Mäyrä , "studying games for games's own sake", lest we think that of "game" is a truly all-encompassing metaphor, an approach which some of the above mentioned authors have warned us

against, and one I will fully articulate in the next Chapter. But if even this metaphor does not hold, for what sake am I doing this? And why did I spend more than twenty pages writing on the history of play and instruction? Research, to me, is not a game to be played, but indeed something else, on a wholly higher order of playfulness. Again Mäyrä , in his *Introduction to Game Studies* gives us this, to me, fundamental passage:

> *The work of a scholar is actually much like that of the <u>game designer</u>, who must develop and implement a systematic structure for new ideas, and then see how its creation is "played with" by the other members of the academic community.*   F.Mäyrä , 2008, p.4

So this is my final metaphor, and one I hope to have given full meaning, contextualization and weight through this whole Chapter's discussion: that of a scholar, any scholar, not just as a passive player, someone who experiences and interacts with a pre-constituted outside reality, but as a constructive player-producer, a game designer, a creator, a "world-maker", and here is my structure for you to play with: as I wrote in my introduction, I am designing for the sake of **unity, change and possibility.** Let's start with unity: this aims to be, first of all, an interdisciplinary work, or, better yet, a transdisciplinary one, echoing Jean Piaget's appeal for the necessity to go beyond isolated fields (Piaget, 1970; Nicolescu, 2014) in the quest for knowledge, and an epistemological exploration of the many contraddictions in researching play, traversing academically marginalized areas, themes and approaches to research while, just as a refugee, I probe their borders, looking for safe places to pass to and fro, and to build sustainable "playgrounds". Thus here is my first, epistemologically oriented, question:

What can play teach us about the nature of knowledge?

Then comes the theme of change: in our current "mediatised society" we most assuredly can't rely on the linear methodologies of research and education that have sustained our society at least since the invention of the printing press. In other words, in our rapidly changing times, were children have been, since the seventies, masters of games their parents can't even fathom, we can't retreat in the security of the unchanging games proposed by Plato, and we could, in fact, metaphorically reverse its proposal. In touching the theme of making new games, I reach again for my title and for Postman's metaphor, to make new, possible worlds. It is almost trivial to repeat that limitations and possibility are closely entwined, and this discourse, with the (superficial) spreading of system

thinking and complexity science risks to become a kind of buzzword, neutered of its meaning to become an intellectualized litany of acquiescence. However making games, and making them with other people, can truly awaken our sensibility to limits and freedom, and, most importantly, let us understand, and cooperatively renegotiate, the consequences of both.

Thus here is my second, politically oriented, question:

What can knowledge-making institutions learn from game making communities?

I fully know that this extremely broad question might look utopian, but, following Suits' perspective, this notation will only reinforce my determination to follow my playful ways, and knowing where I am standing, the journey can truly begin: it is now time to start confronting the first of these three questions, by going beyond the study of play proper and fully embracing the play metaphor in its dangers and its lights, to launch a transdisciplinary exploration of learning, evolution and creation through the lens of "higher order playfulness".

Higher Order Playfulness: Learning, Evolution, Creation

"Play! Invent the world! Invent reality!"

-Vladimir Nabokov -

"Life is far too important to be taken seriously"

- Oscar Wilde -

"One of the most difficult tasks people can perform, however much others may despise it, is the invention of good games

- C.G. Jung -

Summary: This theoretical Chapter will, at first, explore the modern landscape of game design literature, to focus on key metaphors of this process shared across a number of disciplinary fields. The aim is to deconstruct the separation of game play and game creation through the identification of distinct "elements of game design". Subsequently, after having fully confronted the non-definite character of games, the Chapter will propose a transdisciplinary exploration of play-like processes in evolution, communication and learning, through a wide array of levels of complexity ranging from biochemical processes to social learning. The underlying thesis is that a radical unifying pattern of playfulness can be identified among those diverse dynamics. The chapter will then close with a final expansion of scope, introducing the necessarily playful character of large scale networks, thus laying, through a general definition of game design, the foundation for the next, more sociologically and methodologically oriented Part of this dissertation.

Play & games: designs, distinctions and definitions

I will start from the metaphor of the "researcher-as-a-game-designer" discussed at the end of last Chapter and, in the first part of this one, I will examine it in its literal basis, that of game design in itself. If playing a game is, as Bernard Suits suggested, confronting an unnecessary problem (Suits,

1978), the same character of problematicity and non-necessity pertains to designing a game (echoing an old joke of the game design community: "We sell people problems 50$ each"; see Dovey & Kennedy, 2006). A problem, however, that is situated on a higher order: that of generating a "possibility space" (see Wright, 2006, and Squire, 2011) where a variety of different, single games can be played to different outcomes. This is the most basic meaning I attribute to "Higher Order Playfulness", being myself willing, as Gregory Bateson was, to question the analytical usefulness of the distinction between playing and making games:

> *The game and the creation of the game must be seen as a single phenomenon , and indeed , it is subjectively plausible to say that the sequence is really playable only so long as it retains some elements of the creative and unexpected.*

G. Bateson, 1979, p.128

This quote from *Mind and Nature* forced me to rethink the deep connection between *playfulness* (a term which I have extensively used since Chapter One) and *game design,* and to fully confront the subtle distinction between play and game (so subtle that it is not even present in many languages; see Huizinga, 1949), now recognizable as constitutive of a *strange loop* (see Hofstadter, 1979, and Hofstadter, 2007), a hierarchy which can be understood both ways.

In fact, games, as formal rule systems, can be considered a subset of playful behaviour, in the sense that there exist forms of play that seem to be looser and less organized than most games, such as wordplay and make-believe; but play too can be considered as a component of games, as its experience is but one point of view toward their understanding, and it is fully expressed only through their creation, be them as simple as ring-around-a-rosie or million dollar budget video games (see Salen & Zimmerman, 2003, on this double formulation).

With this radical conflation of playfulness and game design, it will also be necessary to reconsider my metaphor of the researcher, and, in its most general sense, of any learner as a game designer, as it will constitute the epistemological lens for much of this Chapter's investigations. But, as for now, I can't dodge a key question anymore, if I want to truly explore the meaning of this metaphor: **what is "game design"?** To answer this question amounts to truly and finally confronting my introductory discussion of "why did it have to be games" in a fully thematized and non-rethorical way, as in to further specify the characteristics of games-and-their-creation as a whole, integral process that I deem worthy of the transdisciplinary attention that I will suggest throughout this Chapter (see also, on the theme of disciplinarity and game studies, Mäyrä , 2008, and Perron & Wolf, 2009).

I will therefore (briefly) outline some relevant definitions of game design established within this field, while highlighting links and parallelism with formalized epistemologies and theories of learning. To do so I will start with Chris Crawford's seminal text on the matter, *The Art of Computer Game Design* (1984), probably the first book-length essay devoted to the process of creating games (and is unavoidable to notice how "late" it is in the story of play related literature): while in his book Crawford does not give a full walkthrough of the game design process, still he gives us most suggestive pointers, when he writes that a game designer *"creates a complex network of paths cunningly crafted to show the player all possible facets of a single truth"* (Crawford, ibid. p.3). While Crafword was mainly referring to the non-linear nature of the medium (and in that contrasting games with "puzzles", which can be univocally and once-and-for-all solved) it can be noted how the metaphor of researcher-as-game-designer resonates strongly with this particular approach, echoing paradigmatic disputations among scholars around the "objects-of-research". This argument can also highlight both the designer's and the researcher's responsibility in the construction of these "complex paths", even if, most appropriately for our academic comparison, Crawford also warns us that *"Discussions of game design"* (as in, discussions of the epistemological roots of the making of those paths) *"frequently disintegrate into arguments over semantics."* (Crawford, ibid. p.4)

As I wrote in the preceding Chapter, the game design discourse remained almost completely "hidden" during the last part of the 20ᵗʰ century, and ten years must therefore be waited for Crawford's discussion to be took up and brought further by game designer and science fiction writer Greg Costikyan who, in his famous "manifesto" *I Have No Words and I Must Design* (1994), tries to confront the "nebulous issue of good gameplay" by "chunking" its creative process into discussable units. First he proposes a useful distinction, and one that I have not yet thematized in this dissertation, that between toy and game proper: a toy, writes Costikyan, can be any object which can be interacted with and manifests "interesting behaviours", as defined as retaining both a measure of foreseeability and space for experimentation, the most simple and common examples being probably a ball or dice. To make a proper game, however, according to the author, a whole set of limitations, and especially those usually called "goals", need to be overlaid to those "behaviours", as to give both structure and struggle to the game, to give it direction and, most importantly, give it **Meaning**. And ultimately, according to Costikyan, game design's most key part is indeed the generation of "endogenous meaning", which he explains through a poignant example:

> *Suppose you're walking down the street, and someone gives you a $100 in Monopoly money. This means nothing to you; Monopoly money has no meaning in the real world.*

The guy who gave you the bill is probably some kind of lunatic. Yet when you're playing Monopoly, Monopoly money has value, it has meaning.   G. Costikyan. 1994, p.3

This example shows how the act of game design requires a deep awareness of the entwined character of **Contexts** and **Meanings**, a key theme of constructivist epistemology (whose links with game design will be more amply discussed later in this chapter), but something that, in common sense, should not pertain something as apparently "trivial" as the creation of games, highlighting, once again, the above discussed cultural dequalification of games theorized by Fink (1968).

Our exploration of the landscape of game design definitions continues, and as seen in Chapter I, gains widespread recognition, almost ten more years later, with Salen & Zimmerman's most-often-quoted *Rules of Play* (2003)*,* which proposes to define game design as *the process by which a designer creates a context, to be encountered by a partecipant, from which meaning emerges.* Katie Salen, in her subsequent (and much more learning focused) *The Ecology of Games* (2008) further refines this definition, as *the iterative process by which a designer conceives of and plans a system to be encountered by a partecipant, from which meaning emerges* (p. 41)*.* Echoes of Costikyan's manifesto can be noticed in this definition, again with its emphasis on the value of C**ontext**, and with them a mainstay of modern game design theory: that of **Meaningful Play** (Salen & Zimmerman, 2003), which is explained by the two authors employing a "double definition", one side of it pertaining description,

> *Meaningful play in a game emerges from the relationship between player action and system outcome; it is the process by which a player takes action within the designed system of a game and the system responds to the action. The meaning of an action in a game resides in the relationship between action and outcome.*
>
> K. Salen & E. Zimmerman, 2003, p.34

and one side pertaining evaluation:

> *Meaningful play is what occurs when the relationships between actions and outcomes in a game are both discernable and integrated into the larger context of the game.*
>
> K. Salen & E. Zimmerman, 2003, p.34

Therefore, designing meaningful play, for the authors, equals to providing coherent, responsive spaces for action, such that the players' decisions can bear real (even if bounded) and

comprehensible (even if complex) consequences.

A similar perspective is shared by video game designer Jesse Schell, who in his admittedly practices-oriented *The Art Of Game Design: A Book Of Lenses* (2008) tries to give a very direct definition of game design, which he calls *"the act of deciding what a game should be",* very quickly establishing, however, that this kind of decision is of the most complex and high order, and actually *"requires hundreds, usually thousands of decisions"* (ibid.), most of which will have to re-discussed or changed at some point of the creative process.

Schell's and Salen's definition have another relevant theme in common, another keyword of modern game design studies (see Salen & Zimmerman, 2003; Schell, 2008; Kultima, 2010; Despain, 2013): **Iteration**, the approach according to which the only way to experience whether a game is actually meaningful and fun is to play it, as any "good" game is such that can't be easily anticipated, keeping itself **Novel** (Kultima, 2010); how this very empirical experimentation and tinkering process develops in a variety of contexts will be one of the foci of the Cases that constitute Part III of the dissertation.

Speaking of fun, a connected, but quite differently focused, point of view is proposed by Ralph Koster in his *A Theory of Fun for Game Design* (2008), starting from its title theme which seems often (and weirdly) absent from other theorizations of play and games. Fun, according to Koster, is *"the act of recognizing and mastering a pattern"*, drawing on Piagetian theorizations of cognitive development (see, among others, Piaget, 1948, Piaget, 1951, and Piaget, 1952, and also a further discussion of piagetian constructivism later in this Chapter) to once again higlight the role of both **Novelty** and **Iteration** as core elements of game design. Starting from examples as simple as tic-tac-toe, the author goes on to explain how games, as all other forms of art, can be fun because allow for interpretation, thus for re-creation of new meanings, being built on the essential ambiguity of any communicative process (Sutton-Smith, 1997). While again not giving a full, formal definition of game design, Koster moves from these premises to argue that the act of creating a game must balance *"order and chaos, silence and noise"*, leading him to close the book with an appeal to game designers to be ethical, which he describes as never creating games that only have one right answer , but, on the contrary, as challenging the player to challenge the games themselves, and through them bring **Novelty** to society as a whole.

Following this last thread, and relevantly to the strong political undertones of this dissertation, I want to close this outline of the modern game design theory landscape with Mary Flanagan's "radical game design" approach. In her *Critical Play* (2009) Flanagan goes straight against the "Platonic Idea" of unchanging games expounded in Chapter I, arguing that the design of new, different games is, in itself, a way to achieve new societal configurations through a feedback loop of

Novelty, implicitly attributing a special social role to the game designer, that of the subversive critic:

> *Because they primarily exist as rule systems, games are particularly ripe for subversive practices. A hallmark of games is that they are structured by their rule sets, and every game has its "cheats"—even play itself, pushing at the boundaries of a game system, could be said to involve a kind of subversion.*   M. Flanagan, 2009, p.11

It's only by highlighting a design approach focused on playing *with* the rules, and not only *by* the rules, that such diverse perspectives can fully be taken into account and, drawing on the larger design studies literature (see Rittel & Webber, 1973, Krippendorff, 1995), be woven together to propose a further, wider, "lens" for game design, which tries to take into account the diversity, the common motives and the interfaces between all the above mentioned aspects. As indeed any kind of differentiation requires theoretical and epistemological competences, but also ethical and esthetical ones, to design is, in the word's most general sense, to **Make Meaning** (Krippendorf, 1995; Krippedorff 2005) and, tracing the term's etymology it could be said that, literally, to design simply pertains to "*drawing a distinction*" (see Brown, 1969; Von Foerster, 1971; Bateson, 1972).

Having defined these premises as the possible foundations of an expanded perspective of what might constitute "game design", and evidencing its specificities in respect to design practices in general, I will therefore start once again from Salen & Zimmerman's definition of a play, which I choose, among all the others I proposed, for its resonance with my personal systemic background, for its implicit political value and for its grounding in a contraddiction-solving, dynamic equilibrium: **play is free movement within a more rigid structure.** And now I will use the rest of this chapter to tackle this particular playful design perspective in all its depth, exploring the multi-layered implications and the aesthetic significance of a wide array of phenomena that create both free movements and a variety of rigid structures, to ultimately reach a tentative, generalised re-definition of what game design is. In doing this, it is necessary to first take note that, according to this definiton, play in itself is not "the rigid structure", but, instead, lies in the "free movement", while, still, structure is needed to make it play proper. If so, and accepting Bateson's premise on the essential mingling of playfulness and game-creation, even the game of making and re-making games has indeed to take create and dynamically re-create more rigid structures, as rules can be created and changed only from outside the game, but only on the basis of what happens within, thus somewhat blurring the boundary of the "magic circle (see Bateson, 1972).

It is possible, in daily cultural experience of games, to observe this making and re-making happen at

a multiplicity of levels, sometimes through processes which are themselves highly regulated, as consensus on the rules must be complete (or at least ostensibly so) to sustain play. Examples in the public sphere are sport rulings, or video game "patches", all made to keep the game functional or make it more competitively interesting, that is to say both more meaningful and more uncertain (see Dovey & Kennedy, 2008, Blackshaw, 2009, and Despain, 2013). But even speaking of the "simplest" ball game among children, everyone can know by personal experience that "rulings" as apparently straightforward as the definition of a goal area can kickstart a laborious, iterative negotiation process to achieve a consensus on a shared "rigid structure" and, lacking it, the "magic circle" can easily dissolve into a mere squabble (Pellegrini & Smith, 2005): "Higher Level Rigidity" in individual participants can make impossible to establish a shared rigid structure, the context of meanings, hence the uncertainty and connecting patterns that allow play to exist (Bateson, 1972).

Moreover, as Bateson (1972; see also Sutton-Smith, 1997) argued, play entails a necessary component of improvisation, leveraging aspects which are undefined within the formal, logical systems that constitute the rules of any game (and I'll just briefly mention here how any formal system, as demonstrated by Austrian mathematician Kurt Gödel, always has "leeways" and workarounds, being necessarily incomplete OR incoherent), giving space to personal initiative and emergent dynamics toward the constituted rule system, or, being these unsustainable, making it fall apart. Games are, in this perspective, systems that, through their very bounded and rule-based nature, allow the emergence of unbounded, meaningful novelty, systems where by necessity non-necessity can be born. But what are the extents of playful creativity, of game design?

A non-definitory approach to game design: of play, playfulness, games and not

All of the above mentioned manifestations of play (and related literature) are, however, of a "high order", pertaining what Huizinga (1949) would call "play proper". To fully explore the reach and the implications of play as ontology and as epistemological lens I will have to go much deeper, using the above evidenced elements of **context-sensitivity, meaning-making, iteration** and **novelty** as steps of a tentative ladder toward a generalised definition of game design itself, as one of this Chapter's main objectives is, indeed, to traverse a wide variety of disciplinary fields, highlighting its role during the whole of evolutionary history.

It's often very hard to disentangle "proper" and metaphorical uses of such words as "play" and "games", so closely weaved they are with the roots of culture and language themselves, and it might not even be a conducive effort (see again Huizinga, 1949, Bateson, 1972, and Sutton-Smith, 1997). Theologian J.P. Carse (whom I quoted in the Introduction for his advice about the importance of

offering vision, instead of than stringent, logical causal chains) even if obviously using the allegorical language of his discipline, wrote of the "Infinite Game", played with the purpose of continuing play itself, or, as he further defines it, the joyfulness we find in learning to start what we can't finish, the pleasure in generating something that can't be fully predicted (Carse, 1987). But even if, as shown above, games have to conform to this character of creative unpredictability to be actually playable, is Carse still *really* talking about *games*? Or is it *just a metaphor* for Life? Despite all the definitions expounded in Chapter I and further discussed and explored in this Chapter, the concept of Game seems, once again, to be too elusive to truly define, and, as Espen Aarseth still very recently suggested (Aarseth, 2014), it is possible that games can only be under-or-over defined, and that the category of "games" might not be, in itself, an analytically useful one.

In tracing the roots of this particular non-definitory approach, I will, in preparing for the full force of a transdisciplinary widening of focus in my "quest for game design", finally tackle Wittgenstein's approach to games: the austrian philosopher, after having sought for many years a system which would make for an objective foundation of knowledge (a research which would be his only work to be published during his lifetime, the *Tractatus Logico-Philosophicus,* 1922) took a quite different turn in the second part of his life, effectively discarding or contraddicting most of his foundationally inclined former work. In his posthumously published *Philosophical Investigations,* Wittgenstein writes of "language-games", defined as rule-governed activities which are based on the simplification and generalization of an underlying complexity (Wittgenstein, 1958; see also Mäyrä , 2008, for a discussion of Wittgenstein's work as specifically pertaining game studies), a plurality of "complete primitive languages" which refer to specific contexts and relationships, ultimately arguing that concepts can not and do not need to be fully and univocally defined to be meaningful, discussable and usable in practical, bounded contexts (that is: any "real" situation). This is an epistemological and pragmatic approach which runs contrary to most present academic approaches, still rooted in an object-based, neo-positivist and universalist approach to definitory practices.

The Viennese philosopher chose in fact to use the term "games" not to demean the "seriousness" of the problems of language and communication, but, on the contrary, to refer to games as a key paradigm for the understanding of human communication, and at the same time a poignant example of the non-definite character of language. Considering a wider variety of playful practices, among which card games, ball games and children games, Wittgenstein (1958) writes that:

> *...we can go through the many, many other groups of games in the same way; we can*
> *see how similarities crop up and disappear. And the result of this examination is: we see*
> *a complicated network of similarities overlapping and criss-crossing: sometimes*

overall similarities.[...] And this is how we do use the word "game". For how is the concept of a game bounded? What still counts as a game and what no longer does? Can you give the boundary? No. You can draw one; for none has so far been drawn. (But that never troubled you before when you used the word "game".)

<div align="right">L. Wittgenstein, 1958, pp. 31-32</div>

This is what the author calls a "family resemblance", *"a complicated network of similarities overlapping and criss-crossing"* (and it could be playfully suggested, at this point, that if Costikyan's "network of paths" does not come straight from a deep reading of Wittgenstein, I must really be onto a quite interesting evolutive convergence) that do not de-fine with exactitude, but entail a vaguely bounded area of meaning, just like a "game".

Having much discussed, both in this Chapter and in the one preceeding it, of play's bounded character, in seeking to open a transdisciplinary discussion of game design from a general evolutive perspective, and therefore intending to explore its historical dimension, I will start by discussing temporal boundedness: if we had to find a common unifying character in the design of games, especially among the ones most culturally relevant and socially acceptable in the current socio-historical conjuncture (among which, to Huizinga's chagrin, we would have to include professional sports), it would be that they are most often designed to have a clear conclusion (see DeKoven, 1978). The objective of most of games seems, indeed, to come to an end <u>and</u> have a winner, to dissolve the magic circle and, with it, themselves, most often conferring an univocal title to the victor, in the dynamic that Carse (1986) calls "Finite Game", playing to end the game itself.

But, as I will discuss throughout this Chapter, this is only one of the possible forms of game design, if one that has become dominant and which, in return, has shaped culture itself (see, of course, Huizinga, 1948, but also DeKoven, 1978, Sutton-Smith, 1997, Flanagan, 2009, Perron & Wolf, 2009) : a form of game design that keeps creativity and unexpectedness well bounded within the temporal and spatial enclosure of the "Magic Circle" itself, a form of playfulness that keeps itself under control, and gives greater emphasis to its "rigid structure" than to freedom. However, other possible "playful practices" exist, which question the enclosure, quantifiability and finitude of the "Magic Circle", as well as the players' "titles". To give just a few examples of this dynamic expansion: role playing, open ended simulations and virtual worlds (all of which are still considered "games" in everyday language, if often with a much less acceptable connotation, leading to stigma and social exclusion; see Nugent, 2008, and Ewalt, 2014, on the social consequences of such non-conformative playful practices) are what could be called, playing with mathematical lexicon, "Transfinite Games", systems that allow within them an infinite number of "Finite Games" (see, for

<div align="center">53</div>

a tractation of finitude as pertaining to the epistemology of human sciences, Arpaia, 2006). Still, these Transfinite forms are not yet Carse's Infinite Game, which goes much further beyond "play proper".

To discuss this spectrum of liminoid practices (see Turner, 1975, for a discussion of the distinctions between the differently playful forms of ritual, theatre, role-play and play proper) leads me back to Aarseth's non-definitory approach, now adding that the conclusions of his arguments are fully Wittgensteinian (at least as referring to the "second Wittgenstein"): he does not suggest that "we should not speak" of games if we are unable to define them, but only that we, as supposed knowledge-workers, should be vigilant so to avoid "academic violence" in delimitating the field of game studies according to more or less arbitrary categorizations. But: what is this "academic violence"? The separation of fields, as Aarseth explains (2014), and most paradoxically in the case of the "unserious" discipline of Game Studies, is based on a particular, if pragmatic, kind of monopoly of violence, (meant in Weberian sense; see Weber, 1919; also, Chapter III), that of the distribution of academic spaces and resources, a disciplinary war over scarce resources.

Modern philosophy of science itself has often been indeed quite fond of using the game metaphor in criticizing the arbitrariness of these "politics of boundaries", and in evidencing the "fixed game" character of power structures within the academia: Thomas Kuhn, in his seminal *The Structure of Scientific Revolutions* (1962) describes normal science as a game whose rules are not completely immutable, but are effectively witheld by members of the scientific community, who, by virtue of their common training and experience, of their common patterns of "game design", deem themselves the sole possessors of such rules, making any criticism toward such set of rules a risky endeavour that can mean exclusion from the "game of science", not differently from exclusion from a soccer match (see also Popper, 1934, for similar remarks on this referee-like expulsive power). "Epistemological anarchist" Paul Feyerabend goes even further, but, while keeping strong his criticism of disciplinary power in the academia, offers a much more optimistic portrayal, rejecting Kuhn's theoretical monism and implicitly proposing a parallelism between the daily practices of scientific production and the polymorphous character of children's play (Feyerabend, 1975), a metaphor on which my work will return when much more extensively discussing methodology in Chapter IV:

> *"It is a bricolage of experimentation [...] New scientific practice needs time to develop its conceptual tools and its empirical data by playing with them, that is, by constantly repeating and combining them until the become common usage or reality"*
>
> P.K. Feyerabend, 1975. p.295

In my endeavour to try and challenge some of the rules of mainstream academic games, to promote a more child-like, playful experimentation and to contrast the above mentioned violence through the unifying means of a playful transdisciplinarity, I'll hereby push the limits of a specific "family resemblance", confronting the theme of game design from the widest possible perspective, going far beyond "play related" literature, to try and approach an hypothesis pertaining the radical quality of game design itself, and of the processes thereof. I will start this voyage by reversing the quote that opened this chapter, pertaining the necessity of a creative component to any form of play. Could it be that the creative and the unexpected are only conceiveable as long as they retain the above mentioned elements of game design, of **context-sensitivity** and **meaning-making**, **novelty** and **iteration**? This, in a way, begs a "chicken-and-egg" question: when did play originate, back in the universe evolutionary history? And what kind of "design" might account for it?

The playfulness of the cosmos: of chaos, rules and ordering

I'll start, mostly as an excuse for further explorations, by briefly tackling a particular approach to origin problems, and at the same time a near-theological issue, that of so-called "Intelligent Design" i.e. the view according to which the apparent orderly character of the universe, and particularly of living systems, is best explained by assuming an intelligent cause or agent, a "Designer". While Intelligent Design is rightfully held as pseudoscientific by the scientific community at large (see Richard Dawkins's *Blind Watchmaker*, 1986, for an in depth discussion and debunking), it serves to begin my discussion of the "family resemblance" of game design by highlighting a deep and frequent epistemological error of Western culture, all too often convinced that order comes from order only. On the contrary, "Order from Noise", a mainstay of cybernetician Heinz Von Foerster (see, among other works, *Understanding Understanding*, 2002) will constitute a *fil rouge* for the rest of this dissertation (and isn't play often a bit noisy?). Indeed, a closer look at the mythological representations of playfulness illustrated in Chapter I, will show that they are not really about "design", in the structured, teleological meaning it has in common sense discourse (Krippendorff, 2005), as they are not about order or natural laws: *Lila* and the *Aeon*'s play are not about establishing and following rules, but, as discussed above, they are mainly about freedom and emergence, meaning and fun. Does it mean that no "design" is there? Is this kind of play pure, unbridled chaos? This perspective would not be correct either. In a way, play, starting from its mythological conceptions, seems to stand opposed both to chaos and rigidity, it "pushes" against the rules while still generating ordered and meaningful patterns. It stands, to follow the lexicon of

physicist Norman Packard (1988), on "the edge of chaos": a region in the possibility space of physical, biological, and social processes where complexity is maximal, a region where, as Heinz Von Foerster would say, our descriptions are at their longest (Von Foerster, 1978), recursive, as they are, even at their simplest, constituted by playing the game in itself.

Still, as discussed above and in Chapter I, and also as anyone who ever played knows by experience, play exists only in presence of regularities of some kind, be them the rules of poker or a ball's elastic coefficient, regularities that allow re-playability. Regularities allow iteration, which in turn allows a "fine tuning" of any game's characteristics. Play, however, is obviously not simply the aforementioned elastic coefficient, nor simple iteration, but something that is, in a way, opposed to regularity and rules: being playful, echoing both Carse and Suits, means using existing, and limiting, structures to invent new forms of expression, forms that can even transcend their initial, rigid structure and give rise to unpredictable results. Play, by this account, is wherever the unforeseen (and unforeseeable) can happen, which in turn entails a foreseen frame. Games are all, in a way, characterized by what Roger Callois (1958) calls *Ilinx* (vertigo), in that by necessity they are highly unstable, unpredictable, and far-from-equilibrium systems, else they would not be games at all, as, as John Von Neumann (1928) demonstrated, reaching a permanently stable equilibrium by itself ends any game.

Going beyond mechanistic conceptions of the Cosmic Play based on "laws" and "rules", a possible alternative can be found in approaching the "design" theme from a different perspective. But, if so, what are the "rules of the game", the so-called laws of nature, in this perspective? Even at the most basic level of biophysical phenomena, it is possible to find, in the modern history of knowledge, fully scientific accounts of the very emergence of structure and complexity in nature which still retain in themselves the character of playfulness which characterized ancient myths: among others, it is probably most relevant to quote biophysical chemist and Nobel Laureate Manfred Eigen who, in his appropriately titled *Laws of The Game* (Eigen & Winkler, 1983)*,* uses ludic modelizations to progressively expound on how chemical systems, through the emergence of structure and its interplay with randomness, achieved the titanic feat of "taming chaos":

> *Everything that happens in our world resembles a vast game in which nothing is determined in advance but the rules, and only the rules are open to objective understanding. [...] Once begun by elementary particles, atoms, molecules, play is carried on by our brain cells. Man did not invent play. But it's play and only play that makes man complete.*   Eigen & Winkler, 1983. Foreword.

Following a similar line of thought, biologist and systems scientist Peter Corning also points out that natural processes cannot be reduced to underlying laws, just as games can't be reduced to the mere formal system of their rules, to propose a quite interesting, and absolutely non-deterministic, position on "natural law" :

> *Rules, or laws, <u>have no causal efficacy </u>*(emphasis mine)*; they do not in fact "generate" anything. They serve merely to describe regularities and consistent relationships in nature. [...] The game of chess illustrates why any laws or rules of emergence and evolution are insufficient. Why? Because the "system" involves more than the rules of the game. [...]The game of chess is inescapably historical.*   Corning, 2005. p. 18

"Play", as meant in these closely related examples, signifies a weaving of **historicity** and **contingency**, underlaying the dynamic coherence of non-equilibrium systems, which of course include many kinds of chemical reactions, but also living systems as a whole. Another Nobel laureate, physical chemist Ilya Prigogine and Belgian philosopher Isabelle Stengers, in their *The End of Certainty* (1997) go even further, writing that:

> *...Nonequilibrium allows for a new coherence. We now recognize that equilibrium physics gave us a false image of matter. Once again we are faced with the fact that matter in equilibrium is 'blind', while in nonequilibrium it begins to 'see'.*
>
> Prigogine & Stengers, 1997 p. 127

In talking of how matter "sees" Prigogine's and Stenger's intent is not, of course, to reintroduce a kind of Bergsonian vitalism (Bergson, 1907), nor a form of new-ageish panpsychism where every part of nature is alive and thinking in a full sense, but he is using metaphorical language to explain how, while near to equilibrium laws of nature, the "rules of the game" are universal, far from equilibrium those same "rules" appear to become **mechanism-**(and therefore context)**-sensitive**, allowing for increases in the variety of chemical processes in parallel with the variety of their different, historical, contingent contexts (Prigogine & Stengers, 1997).

Still, at these lowest orders of organization, it would not be intellectually honest to say that self-organizing matter makes conscious choices in any sense. The radical entangling of freedom and structure that constitutes the core of play is appreciable, but it would not be appropriate to say that complex chemical processes are, in themselves, "free" in their action, nor that molecules "play" in any cultural sense. Still yet, play seems to lurk even in the dance of molecules, in the freedom of

chemical systems to organize in unnecessary ways. But indeed, and to fully confront the other of the two "horns" of Salen & Zimmerman's recursive definition of play, what is "freedom"?

While I will playfully quip that defining freedom is, in itself, quite an unfreeing activity, I nevertheless should not allow myself to get stuck in categories which approach the (first) Wittgenstein's *"wherefore one cannot speak"* (1922). To meaningfully approach, if only by opposition, this evasive theme, I will therefore refer to a specific branch of scientific literature, which constitutes, as discussed in the Introduction, both a mainstay of my personal epistemology and education, and a scarcely discussed root of modern ludic culture: the so called "science of control", cybernetics, which I will outline briefly, starting from its historical roots, to better contextualize its role both as a key meta-paradigmatic turning point both in the recent history of science and in present game cultures, characterized by the explosive rise of electronic games.

The Play of Information: or of freedom, control, variety and evolution

The historical roots of the cybernetic perspective might look definitely unplayful: during World War II, mathematician Norbert Wiener worked for the US Army in the automation of anti-air guns (which needed to be able to predict the position of their targets to be effective; they needed, in fact, to be "seeing", as Prigogine would say) , and in the process formalised the notion of feedback in control systems, immediately extending its relevance to all living systems (see Wiener, 1948), thus founding the field of "cybernetics" as "the science of control and communication in the animal and the machine" or literally "the art of the helmsman", from the greek root κυβερνήτης (Wiener, 1948). After witnessing what science subserved to military intents had wrought upon Hiroshima, Wiener refused to cooperate with the Army anymore and took to heart that this "control science" would not become an exclusive tool of the elites; fearing that a few huge, state-controlled computers could have controlled the fates of humanity he moved the first steps toward the diffusion, privatisation and democratisation of information and communication technologies that, from their begininnings into the 21ˢᵗ century, deeply shape our life, through the networked feedback structures that will constitute one of the main foci of Chapter III (for a full chronicle of a very interesting life, see Conway & Siegelman's biography of Wiener, *Dark Hero of The Information Age,* 2009).

The cybernetic perspective rapidly kickstarted a paradigmatic shift in the inquiries towards the roots of cognition and of life itself, a shift which finds its most relevant expression in Ludwig Von Bertalanffy's *General Systems Theory* (1974; see also, among many others Waddington, 1968), making the constructs of feedback and homeostasis among the most central for the examination of living systems at all levels of complexity. However, extensions of these same dynamics can be

found also within "play proper", especially in its most recent, technologically supported, expressions: among the countless achievements of Wiener's endeavours, and of the historical process which followed, modern digital games can most assuredly be elected as the quintessentially cybernetic medium, even having explicit "helms" in the variey of devices used to control avatars with which to fully "immerse" in electronic games' simulated worlds (see Gregersen & Grodal, 2009).

Both the concepts of immersiveness and simulation need to be closely focused, as to determine their relevance not only to the electronic games medium, but as regarding living systems in general. Immersiveness, as defined as "feeling within" a simulated world, is obviously strongly sought out by digital game designers. While the complicated implements and control systems of modern gaming technologies may seem to "get in the way" of this objective, empirical evidence (McMahan, 2003) points in a different direction: after a brief period of interaction with a new configuration the controls can be "overlearned" (Driskell et al., 1992; Rohrer & Taylor, 2006), thus becoming unconscious and automated, so that the player feels no more the individual button presses but instead acts directly within the game world. When this happens, the feedback from the game also becomes more deeply ingrained in the player, and this is evident when observing a strongly involved gamer playing through a frantic video game action sequence, as not only he or she will dodge and flinch following the avatar, but he or she might even vocalize pain and effort almost as physically experiencing them (Grodal, 2003; Gregersen & Grodal, 2009). I want, however video game oriented this detour might seem, to again strongly underline how the cybernetic character is not exclusive to digital games, as I intend use this dynamics as a paradigmatic example of how cybernetic processes of any kind seem to almost seamlessly integrate themselves in our "natural" feedback pathways, and highlighting this peculiar phenomenon I'll widen the focus once again beyond play proper: even if not fully automated, any rule system, whether it be a game or not, is in effect a description of feedback channels and their properties (see Wiener, 1948; Wiener, 1952; Ford & Lerner, 1992). So, why is this line of thought useful in furthering my inquiry into the roots of game design? It must be highlighted once again that Wiener applied his cybernetic model to "control in animals", and, indeed, if my objective is to inquire into the evolutionary value of play (and, going even further, into the playful character of evolution in itself) a good place to start looking for a possible theoretical answer is the "lineage" of the cyberneticians.

The english spychiatrist William Ross Ashby is among the first continuators of Wiener's work, and most known for his formalization of what would then be called "the first law of cybernetics": Y = F (G (X)). This formula, also known as "Law Of Requisite Variety" means that the element of a system with the highest number of available states has the most control of the system itself (Ashby,

1956) or, as most succinctly rephrased by management scholar Stafford Beer (1979), *"Only variety can absorb variety"*. This need for variety in the sustainance of complex systems leads us to another evident characteristic of games, their simulative character: through games users can interact with manifold complex "states", both fictional and realistic, that would never (or hardly) come within the "ordinary" scope of their experience, but that can be its functional isomorphs (Von Foerster, 2002). This dynamic of expansion of possible interactive contexts is not only about learning to come to terms with specific situations (as it is in the above mentioned "Serious Games" paradigm), but concerns a meta-level, "learning to learn point-blank" (Bateson, 1979) through the use and the design of flexible metaphors, or, most properly, of simulations.

Having defined design, at the beginning of this Chapter, as "drawing a distinction", it is necessary, at this point of my tractation, to refer to the "drawings" that, since the lowest orders of living organization, distinguish between individuals, allowing for both replication and change: DNA, our genetic material. Far from wanting to adopt a genetically determinist point of view (such as Dawkins, 1976), I want here to highlight how, seen through the playful design lens discussed in this Chapter, the shared, genetic memory of living systems themselves can be re-framed as a multi-functional process of structural pairing (novelty/iteration), contextually interfaced on manifold levels of learning as a generator of meaningful co-evolutive experiences (Fornasa & Morini, 2012). In this perspective*,* and echoing both Eigen's remarks and Carse's suggestions on the playful character of Nature and Life themselves, the single species, or even the whole *biota*, can be seen as an High Order Game, an "infinite game" whose procedural memories can "serendipitously sift through endless possibilities" (Noble, 2007), iterating through manifold contexts to construct meaningful and novel patterns. Or, in the words of Bateson (1978) engage in "The Great Stochastic Processes", in the iteration of change and replication that is core of the evolutionary processes. This is what Bateson meant when, as quoted in the preceding Chapter, he wrote that incapacity for play is to be deemed anti-biological, as in, antithetical to iterative, meaningful, contextual change. Writes Bateson, synthetising the omology of mind and life:

> *It is a general assumption of this book that both genetic change and the process called learning (including the somatic changes induced by habit and environment) are stochastic processes. In each case there is, I believe, a stream of events that is random in certain aspects and in each case there is a nonrandom selective process which causes certain of the random components to "survive" longer than others. Without the random, there can be no new thing.* Bateson, G. 1978. p.147

I am, at this point, confronting the very core of evolutionary dynamics, and even of the possibility of change and survival within living systems. It is most proper to dwell for a while on the implications of the above mentioned simulation metaphor, the proliferation of identities and situations that comes from it, its evolutive potential and its game-like character. Biologist, philosopher, epistemologist and neuroscientist Francisco Varela, while confronting this same proliferation (1995), comes to define this theme as

> *[the] only one question all my life. Why do emergent selves, virtual identities, pop up all over the place creating worlds, whether at the mind/body level, the cellular level, or the transorganism level? This phenomenon is something so productive that it doesn't cease creating entirely new realms: life, mind, and societies. Yet these emergent selves are based on processes so shifty, so ungrounded, that we have an apparent paradox between the solidity of what appears to show up and its groundlessness. That, to me, is a key and eternal question.* Varela, F. 1995. p.

Simulation is an approach most often used in its algorhytmic version (see, for a poignant example of a fully algorhytmic representation of emergence, John Conway's *Game of Life*), and connected to procedural, operative and dynamic aspects which are deemed central to some "reality" (Salen & Zimmerman, 2003). Simulation most often appears as quantitative and conventional construct, while it is, indeed, founded within an essentially qualitative perception: the metaphorical operation through which the "aspects which are deemed central". are chosen and represented. Etymologically it can be noted how "simulation" pertains to the semantic area of "similitude", and, ultimately, to the proto-indo-european root "sem", "together". Simulated is, therefore **"what a metaphor can keep together"** (Levy, 1995), and the narrative dimension of such a construct, simulation meant as the constitutive, historical processes of the "pattern which connects" (Bateson, 1979). This is iterative process allows for the emergence of simulations, each one a distinct space for the creation of manifold experiences, which can be recursively transposed in processes that, in the relationship between individuals and the contexts which they invent (Von Foerster, 1983), co-construct ways to violate, at least temporarily, the "rules of the game", most importatntly the Laws of Thermodynamics (Prigogine & Nicolis, 1977), seeming almost miracolously able to make reversible what is not (Bocchi, 2015, private communication), by creating spaces of relative meaning, of relative independence.

The key word here, however, is "relative": no system can consider itself completely independent, at least not without incurring very soon in the aforementioned Laws of Thermodynamics and being

overrun and disintegrated by entropy. Complex systems sustain their complexity, and living systems remain alive, only as they draw on their surroundings and operate far from thermodynamic equilibrium, with modalities Prigogine calls "dissipative" (1977). To mantain systemic coherence, complexity and equilibrium, a degree of autonomy is absolutely necessary: *auto-nomos*, following its greek root, is not what is detached by its context, but that which can give itself rules Using the language of biology, autonomous systems self-regulate in harmony with their environment, in a process both syncronic and diacronic (Corning, 1995). As evolutionary biologist Stuart Kauffman puts it, winners of "natural games" (as in distinct successful paths of the evolutionary process) are the most sophisticated Autonomous Agents (Kauffman, 2000). Those systems can, following our metaphor, **make their own games.** Living systems, and especially evolutionary successful ones are, in this perspective, first and foremost game designers. It can be therefore concluded that we humans, as living, knowing system, are not the result of an ordered, rule-founded design process, but contextualized, historicized, contingent and embodied co-constructors of our own emergence (see Dobzhansky, 1962; Maturana & Varela, 1990; Gould, 2007). Thus, in a way, we, as living, knowing systems, *are* free movement. In a way, we *are* play, and we are our own game's designers, pushing against the cosmos's very rules.

I can now get back to the "Intelligent Design" problem: evolutionary processes, as demonstrated since the inception of Darwin's theory (1859), do not necessitate a unique, all-encompassing Designer, as, similarly to "proper" game design's actual practice (which will be closely examined in Part III of this dissertation), they are not teleological (as naive approaches might suggest), but iterative, composed of endless, infinitesimal acts of design/distinction: they proceed by trial, tinkering, recycling and error, and only by these means make the accumulation of purpose possible (as biologist Haldane playfully quipped, *"Teleology is like a mistress to a biologist: he cannot live without her but he's unwilling to be seen with her in public"*; see Mayr, 1963, p. 63). The theory of exaptation in particular (see, among many of Stephen Jay Gould's playful writings, Gould & Vrba, 1982) gives us a core example of the relevance of this playful *bricolage* of evolutionary processes, where variation, rather than selection or adaptation, is the central drive of change, and allows for serendipitous, contingent shifts in function and meaning. Variety, according to modern evolutionary synthesis (Gould, 1977, 2002; Eldredge, 1992, 2002) propagates by three characteristics that, by this point should be recognizable as central features of play:

- **Latent potential**, as exploration and mastery of a large variety of situations and patterns, which might be useless at a point but vital later in evolutionary history, just as discussed above pertaining the variety encountered through games (Edelman, 1992).

- **Redundancy**, as the iterative, bounded character of different evolutionary paths, where a single "failure" does not compromise the wider pattern, just as a single loss in any game does not compromise the individual, and can indeed lead to the acquisition of new information (Kotulak, 1997).
- **Flexibility**, as the selection, in more complex animal forms, for longer and longer childhoods, which translate for higher and prolonged possible variation in learning patterns, just as games, and their endless variety of patterns, are characterized by an unavoidable, child-like character (Gould, 1996; Sutton-Smith, 1997).

In this perspective, any order of possible autonomy, and therefore any order of complexity that can generate further variety, among which fundamental steps of the evolutionary process such as the origin of life itself, sexual reproduction, multicellular life, consciousness and sociality (see Morin, 1973, Morin, 1977 and Benkirane, 2007, for a transdisciplinary outline of the present state of complexity sciences) can be conceptualized as possible orders of playfulness, orders of game design, thus expliciting a great, unifying pattern of matter, nature and mind.

The play of learning, or of the construction of "reality"

We have seen deep roots of game design in self-organization and evolutionary processes, and we are beginning to see how the world of mind (in a Batesonian sense) can be conceptualized as an emergent property of the world of playfulness, and its higher levels of organization. A key step in the history of life on earth is most assuredly that of animal play, which scientific literature usually confines to "higher animals", such as mammals and birds (Bateson, 1954; Fagen 1981), but has been proposed as an integral part of the behaviours of reptiles, fish and even invertebrates (Burghardt, 2005). Animal play constitutes a long standing problem of most strictly utilitaristic theories of evolution: how come such a useless, exhausting behaviour, such a *dissipation* of energy still persist in living systems, if evolution is really to optimize for maximum efficiency (see Smith, 1982)? Zoologist Robert Fagen proposes a categorization of animal play, covering a spectrum of complexity going from the solo play of *"brief, jerky movements"*, up to *"object construction"*, highlighting how higher levels of play show the basic features of culture. Fagen does not give direct indications of any adaptive roles of play, indeed emphasizing the tentative nature of any such correlations between play and efficiency oriented functions such as skill training (Fagen, 1981). The same author, however, in a later essay (1982) proposes a different interpretive lens for the evolution

of play, once again not that of precision, but that of variety and novelty:

> *Play generalizes skill by varying and recombining previously mastered behavioural routines in new contexts, freeing the animl from the unanticipated limitation of these routines.* Fagen, 1982, p.3

A similar line of thought is reprised many years later by English scholar Brian Boyd, who, while focusing in his *On The Origin of Stories* (2009) on the evolutive roles of art and narration, finds their roots in the opening of possibilities that is generated by play, proposing a possible meta-adaptive role for (the evolution of) play:

> *Play evolved through the advantages of flexibility; the amount of play in a species correlates with its flexibility of action. Behaviours like escape and pursuit, attack and defense, and social give-and-take can make life or death differences. Creatures with more motivation to practice such behaviours in situations of low urgency can fare better at moments of high urgency. Animals that play repeatedly and exhuberantly refine skills, extend repertoires, and sharpen sensitivities. Play therefore has evolved to be highly self rewarding.* Boyd, B. 2009. p. 14

Going beyond issues of mere "usefulness", Bateson's fundamental essay, *A Theory of Play and Fantasy*, dives deep into the issue of animal play-as-communication, and postulates it as the paradigm of meta-communication, as the first instance of a re-elaboration of messages. In describing how even animals of different species can "design" games to be played together (even if referring to "simple" catch-me-if-you can), Bateson remarks:

> *....these are evolutionary sequences , and it is important to see clearly just **what** is evolved .[...]Patterns of interaction have been generated or discovered, and these patterns have, at least briefly, endured. In other words, there has been a natural selection of patterns of interaction. Certain patterns survived longer than others. There has been an evolution of fitting together. [...] In ordinary parlance, "play" is not the name of an act or action; it is the name of a frame for action. We may expect, then, that play is not subject to the regular rules of reinforcement. Indeed, anybody who has tried to stop some children playing knows how it feels when his efforts simply get included in the shape of the game.* G. Bateson, 1979, p.154

With Bateson's mentioning of children, I now have finally reached "learning" as is recognizable in common discourse, and with it this discussion is indeed reaching our "highest orders" of playfulness as it approaches the development of relationships among individuals and with the environment. Through Bateson's last quote, it can also be seen how these orders are not simply hierarchical, but indeed they form a *tangled hierarchy* (Hofstadter, 2007), i.e. a system capable of generating strange loops within itself, and therefore capable of conscious self-examination.

Speaking of consciusness I have come at last, for a few pages, to talk of developmental psychology proper. It is, in doing this, only historically appropriate to start with Sigmund Freud's treatment of play, who, partially anticipating the aforementioned cybernetic approaches (and coming from an evolutionary, Darwinian perspective), mantained that play is a primary means for the child to achieve control, both of objects and of herself, and that play becomes, with age, more and more internalized, being slowly substituted which the more "refined" forms of wordplay, flirting, and such (Freud, 1922). According to later, correlate approaches, this kind of play is conceptualized as becoming more and more ritualized, that is, with a fully foreseeable ending, morphing into the "scripts" we live by (see, among others, Erikson, 1950, or, for an approach which is quite playful in itself, Eric Berne's *Games People Play*, 1964). These approaches seem to emphasizes control and rules over the creation of new meanings, even if recognizing its vital role in the sustanance of any resemblance of social order (see also recent studies which higlight the correlation of play and socially acceptable behaviours: Elias & Berk, 2002; Berk et al. 2006).

Still following the psychoanalytic tradition, an approach more inclined to recognize the vital nucleus of playful creativity within well-functioning individuals can be found within the works of Donald Winnicott. The british paediatrician and psychoanalyst is probably the author who most closely focused the theme of chidren's psychological development around play, theorizing around it the construction of both formal thought and fantasy (Winnicott, 1971). Winnicot postulates that, starting from their first moments of *auto-nomy*, their separation from the mother, children actively creates a "transitional space", slowly moving away from what is, at first, a fully subjective reality, characterized by hedonistic omnipotence, which however soon meets its limits in relation with the frustrations of "objective reality", the aforementioned intermediate phase. Within this "transitional space", upheld as a safe enough "Magic Circle" by caregivers and characterized by the author as first and foremost a creative space, the child can play on the edge of "reality", exploring his or her relationship with his or her physical and social environment. This space, as Winnicott strongly highlights, is not simply a "phase" of development to be overcome and outgrown, but human beings' potential area of creativity and reflexive autonomy for their whole life. This playfulness can

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end with the creation of a true self, or (when the caregivers can't uphold the above mentioned, safe, "Magic Circle") with the defensive construct of a false self, the first characterized by spontaneity and internal cohesion, and the second being passively adaptive. "*Only the true self can be creative, only the true self can feel real*" (Winnicott, ibid.), and it is not great stretch to say that, according to Winnicott, who only lacked the current vocabulary, and had different disciplinary inclinations, the true self's main capacity is that for the creation of distinct spaces of meaning making, for creating distinct spaces for that-which-is-not, and still retains meaning in itself; that is, according to our premises, among the first things that a child learns for caregivers is a capacity for game design.

In exploring Winnicott's creative perspective, I near, at last, a fundamental epistemological perspective for the understanding of a wider game design perspective, as indeed the poietic character of the transitional space has in itself hints of constructivism, whose "softer" strands focus on the social character of play and learning through play. This attention once again often emphasized the internalization of rules and control, if complexifying their emergence and upholding, as happens in the writings of Vygotsky:

> *One could go even further and propose that there is no such thing as play without rules. The imaginary situation of any form of play already contains rules of behavior, although it may not be a game with formulated rules laid down in advance. [...] Just as the imaginary situation has to contain rules of behavior, so every game with rules contains an imaginary situation. Just as the imaginary situation has to contain rules of behavior, so every game with rules contains an imaginary situation.*
>
> Vygotsky, L. 1927, p. 12

However, constructivist approaches also come to highlight the key role of social play in cognitive development, in the acquisition of new skills and in adjusting to the hardships of socialization, and create one's own role to play in the complex social games of both childhood and adulthood, as Bruner writes (1983):

> *Plainly, play with other children does have a therapeutic role or, in any case, an important role in helping children to take their place more easily in the stressful social activities of later life [...] Finally, play under the control of the player gives to the child his first and most crucial opportunity to have the courage to think to talk and perhaps even to be himself.*
>
> Bruner, J. 1983. p.62-63

The foundational core of constructivism, both as an epistemology and as a philosophy of education, finds however its roots in the writings of Jean Piaget who, having started his career as a biologist and coming to study intelligence and development in children as a "special case" of adaptation (see for example Piaget, 1926, and Piaget, 1936), offers us another example of a necessary, fundamental unity of biological evolution and psychological development through his Genetic Epistemology, an encompassing theory for the origin of adaptive change.

Piaget's explicit studies of "play proper" (Piaget, 1932; 1936; 1945) once again highlighted the theme of control, since he focused on the revelance of play for the internalization of rules and ethics, while not devaluating its exploratory role. However, the most relevant (to this work) parts of Piaget's theorization emphasized the theme of equilibration in relation with "reality" and the structures of knowledge, and the active role of children in achieving and structuring such control. Indeed, Piaget partially reversed the above discussed psychoanalitic perspectives, in that he drew a powerful distinction between society and family rules, which are supposedly universal and imposed from outside, and the peculiar character of games' rules. Even when speaking of the of "*the simplest social games",* wrote Piaget, *"we are in presence of games that are elaborated by the children alone",* socially, but without concern or even awareness for larger societal institutions. Children, through games, exercise their auto-nomy, by creating a separate, if permeable, social sphere, not ruled from outside, but procedurally co-constructed through an iterative process of regul-ation (Piaget, 1932).

Piaget's children, in this perspective, are not only "little scientists" (Piaget, 1954) but also "little game designers" (as became much more explicit in Seymour Papert's successive, "constructionist" revisitations of piagetian theories; see Papert, 1980). The iterative process of game design echoes Piaget's "increasing equilibration" in being not an end, but a perpetual process, which, while structuring the assimilation of information and the accomodation of mental schemas, also provides spaces for a construction of reality that allows for the unforeseeable emergence of novelty (Piaget, 1970):

> *Genetic Epistemology has been able to show that the initial forms of knowledge differ from the higher forms to a much greater extent than had been believed, and that consequently the construction of the latter had to follow a much longer, more difficult and more unpredictable path than one would have imagined.* Piaget, J. 1970, p. 93

Here the Swiss author is referring, even if using a different wording, to the historical, contingent character of any kind of learning, highlighting the role of "limitless possibility" in the expressions

of intelligence (Piaget 1979). The playful theme of widening possibilities, a central issue in the discussion of game design on any level, is also a key element of a related, later epistemological approach, radical constructivism, a term coined by Von Glasersfeld (1990) to define

...a theory of learning where not only learners actively construct their knowledge, but do so in a process of dynamic adaptation towards viable interpretations of experience. The knower does not necessarily construct knowledge of a "real" world. Von Glaserfeld, 1990, p.22

In renouncing an objective reality to let knowers create their own, Von Glasersfeld comes very close to our game design metaphor, proposing a perspective on knowledge-making which finds its climax in Heinz Von Foerster's (1983) definition of *environment as we perceive it as our invention*. And what is game design if not inventing one's own possible worlds? The Von Foersterian approach to constructivism is, indeed, founded in a preminency of the community of observers as active, creative subjects of the co-construction of their world(s), *"That is why his theory is",* quoting sociologist Dirk Baeker *"an observer-dependent theory, a systems theory, a theory of recursive play"* (Baeker, 2015). Von Foerster's "second order cybernetics", according to which

...a brain is required to write a theory of a brain. From this follows that a theory of the brain, that has any aspirations for completeness, has to account for the writing of this theory. And even more fascinating, the writer of this theory has to account for her or himself...
Von Foerster, H. 1991. p.2

is, effectively, a model of Higher Order Playfulness, where, to fully understand the orders of creativity constituted by Eigen's play of self-organization, Kauffman's play of evolution and Piaget's play of self-regulation, researchers are ultimately required to become game designers themselves.

The play of large scale networks: or, of systems and ecologies

This ever-widening amplitude of scopes has finally brought my line of examination to transcend the individual level, and even the organismic one, and, in trying to follow the playful elements of context-sensitivity, meaning, iteration and novelty, forces us to confront the social and global scales of such processes, as, quoting Bateson,

it appears that the idea of "logical typing ," when transplanted from the abstract realms inhabited by mathematicological philosophers to the hurly-burly of organisms, takes on a very different appearance. Instead of a hierarchy of classes, we face a hierarchy of orders of recursiveness. Bateson, G. 1979. p. 201

These "orders of recursiveness" are, at the same time, possible "orders of playfulness", and as I approach the last part of this Chapter and the end of the First Part of this dissertation, I will now confront the ecologies, or, literally, the *discourses on the dwellings*, the close weaving of meaning and context that can reach higher and higher orders through game design practices and their current dissemination in social and technological pathways.

Scholars of education and cooperation have, for the best part of the 20th century, challenged practitioners of human sciences not to content themselves with focusing on individuals, but instead on groups, systems and ecologies (see Lewin, 1936; Bronfenbrenner, 1979; Bronfenbrenner, 2005; Fornasa, 2014). Before focusing on thes ecologies of mind and information, which I have discussed as emerging from a common, playful, non-foundation, I will now briefly touch on ecology proper, a disciplinary field which is often, in common discourse, reduced to a crutch for environmentalist claims, while devaluing its roots as systemic discipline (see Bookchin, 1982, on the neutralization of the critical and political charge of ecological discourse at the hands of environmentalists themselves). Indeed, one of the most relevant ecological theorists, Howard Odum (1971), chooses to take a strong political an epistemological bent:

Bit by bit the machinery of the macroscope is evolving in various sciences and in the philosophical attitudes of students. [...] Whereas men used to search among the parts to find mechanistic explanations, the macroscopic view is the reverse. Men, already having a clear view of the parts in their fantastically complex detail, must somehow get away, rise above, step back, group parts, simplify concepts, interpose frosted glass, and thus somehow see the big patterns. Odum, H. 1971. p. 10

But why is the "macroscope", the capacity to perceive large patterns, evolving in"the philosophical attitude of students"? And what can we do, as educators, researchers, and learners ourselves, to further foster this? Odum did not offer hints at this process in his writings, offering the above lines mainly as suggestive imagery, so I am left with hypotheses and interpretations. While in 1971, of course, the famed "Ludic Century" (Zimmerman, 2013) was a long way to come, and those new "electronic games" were still in their embryonic phase, cybernetic technologies and systems

thinking were on the rise, if not in the halls of academia at least in the living rooms of many homes (see McLuhan, 1964; McLuhan & Fiore, 1967). It could be playfully noted that, maybe, it is not the scope of the students' exploration that is becoming wider, as much as the whole world is becoming smaller and smaller, through the influence of our media environment (McLuhan & Fiore, 1967).

In this apparent distancing of discourse from my main theme, once again I come to confront my introductory question: why did it have to be games? What are the present implications of the evolutive dynamics discussed throughout this Chapter, and what might be the next steps of these weaving paths, as the "external channels" of the mind (Bateson, 1972; McLuhan & Fiore, 1967) envelop the world? What is game design, at this scale and on this order of complexity? In taking a look at global ecologies of information, and going beyond separations of "nature" and "technology", I still have to consider the fundamental differences that intercure between living systems and machines, as Von Foerster (1983) warned:

> *we romanticize what appears to be the intellectual functions of the machines. We talk about their "memories," we say that these machines store and retrieve "information," they "solve problems," "prove theorems," etc. However, in the last decade or so something odd and distressing developed, namely, that not only the engineers who work with these systems gradually began to believe that those mental functions whose names were first metaphorically applied to some machine operations are indeed residing in these machines, but also some biologists—tempted by the absence of a comprehensive theory of mentation—began to believe that certain machine operations which unfortunately carried the names of some mental processes are indeed functional isomorphs of these operations*   H. Von Foerster, 1983, p. 172.

Indeed, even though machines can play many games (and as of today, can beat men consistently even at complex games such as chess; see, Newborn, 1987, and Thompson, 2014) they are still unable to design new ones. While the efficiency of computers in processing enormous quantities of information is unparalleled, their "thought processes" lie still on a lower order of playfulness than ours, and even of most other animals. Machines are still unable to draw playful distinctions.

As it as been expounded all games, within my chosen theoretical framework, can be conceptualized as distinction systems, implicitly training players to manage the concepts of meaning, interaction and emergence. Thus, dedicated gamers, such as the so-called "Digital Natives" (Prensky, 2001) of which we'll discuss in Chapter III, learn very readily to "see the big patterns" which are needed to proceed into games (see Squire, 2003; Jenkins, 2006, Zimmerman, 2008), and implicitly learn to

counter the reductionist approach which still dominates educational institutions. This emerging awareness can sometimes lead, even though at the cost of deep conflict within educational institutions, to a transition from the imposed linear curriculum to a freer and multi-branching "spiral curriculum" (Bruner, 1987; Squire, 2011) meant to allow learners to expand their interests both as individuals and as freely cooperating networks, as I will discuss within the next Chapter.

So, with the apparent emergence of these "new" human organisations, I have reached the end of this long historical and conceptual journey, but can I really say something about what game design is, in its most general sense? I have transversed billion of years, from the emergence of life to the construction of the Internet, and I will now attempt to formalize one, while keeping in mind that, ultimately, as Neil Postman suggested, a definition ought to be the start of a discussion, not its end (Postman, 1982).

Given this premise, and including the diverse approaches explored above, I came to the conclusion that what distinguishes *game* design in particular, its radical peculiarity, is its very character of "higher order" in incorporating the above discussed playful elements of **context-sensitivity, meaning-making, iteration and novelty.** Following a decidedly Batesonian approach , I will propose a working definition of game design as the higher order action **to iteratively punctuate contexts for the emergence of novel meaningful distinctions.** This means, as Heinz Von Foerster (1983) would put it, *acting so as to increase the number of possible choices.*

In fact, once again, what are games, if not possibility spaces? The relationship of game design with research and education, in this conceptual frame, becomes evident, since all of them are continual attempts to make and share sense of the world in novel ways. Similarly academia, as all spaces of learning, are (or should be) devoted to explore meaning making (Dewey, 1934, and Dewey, 1949), as the next Part of the dissertation will.

However, there is a risk in this definition: to just blur boundaries and say that "everything is play" would be a most dangerous trivialization. (Bogost, 1998; Flanagan, 2009). Therefore, the main use of this definition will be its critical potential, as, after having come to appreciate a substantial weaving of playfulness, ethics, and evolution, I will use it to make more visible the spaces and conditions where play can't happen, and endeavour to subvert them.

Starting from my working definiton of game design and following on the ontologies of game design that I have described in this Chapter, I can now pinpoint some elements that counter and disallow playfulness, by running contrary to the four "playful elements" I proposed in the first section of this Chapter as constitutive of play:

- **Mechanical repetition without change,** where novel distinctions can't emerge at all (see

Bateson, 1972).

- **Lack of context-sensitivity,** where emerging novel distinctions fail to take into account their contingent and historical character, and thus can't be properly punctuated (see Dobzhansky, 1962).

- **Lack of meaning-making,** where novel distinctions drawn by any subject(s) fail to feedback into the dynamics of larger systems, and thus dissolve again into noise (see Von Foerster, 1983).

-

By taking a close look at these "unplayful" criteria, and searching for organizational paradigms which may conform to them, it could be said that playfulness, ultimately, when in relation to power structures, can only break down or emerge as a challenge, which also gives us a new insight into their supposed seriousness (see de Certau, 1999; Flanagan, 2009; Montola, 2012), into the uses of "tamed" play put into act by ruling agencies (see the preceding Chapter, and also Azoy, 1982, Aercke, 1994) and into the inversion of institutionalized play forms as acts of resistance and subversion (see the following Chapters and also Babcock, 1978; Gruneau, 1983; McMahon & Sutton-Smith, 1995). While play is, in itself, a matter of balance of power and conflict, power cannot be overwhelming on a side, lest the game be completely unplayable (Von Neumann & Morgenstern, 1947; Rapoport, 1962). To playfully borrow a metaphor from etology, cats play with mice, not the reverse, and indeed, mice are, in a popular saying known to play on as cat's are away.

Ultimately, if most of what we constitutively do, as living, knowing systems, is being playful, and creating new games, any bit of game design literacy could just help us play (and make) better games, to bring our playfulness to a higher order, to help us enact more and more possible selves and possible worlds (Varela, Thompson and Rosch, 1992). An important distinction must at this point be drawn again between the mere consumption of finite, closed games and the possibility of opening games, once again reprising and furthering Carse's discourse: the kind of game that leads us to play to win and therefore end the game itself fully reveals itself, in this age of global networking, as a working metaphorical reason for many of our society's shortcomings, like excessive competition and short term thinking; on the contrary, opening games to the playfulness of networks means for the participants to play to continue playing, forcing even competitors to cooperate and continuously re-co-construct their relationships-within-their-ecologies, acquiring what could be called co-evolutive competence (Fornasa & Morini, 2012) and, ultimately, allowing for the emergence of new choices.

While all habitual players, as has been suggested here and will be further explored in its conditions

throughout the rest of this dissertation, can become adept at manipulating and analyzing complex cybernetic systems, creators of games can situate themselves at the highest orders of playfulness, and are therefore necessarily involved in the evolutive and creative paradigm expounded in this Chapter. As such they'll be the privileged focus of the fieldwork of my research, and for the next Part of this disseration, sociologically and methofologically oriented, . The manifold "metagames" that in current information ecologies contribute to this re-structuring process are therefore prime sites to be explored in search of criteria for the co-costruction and facilitation of participative, non-hierarchical learning communities, "creative commons" in which playfulness, systems literacy and design literacy (ways of constructing knowledge that are emerging as fundamental and necessary in our globalized, closely connected world) are cultivated and fostered (Squire, 2003; Perron & Wolf, 2008).

By exploring these contexts I will follow the traces of a burgeoning "higher order playfulness" and the expression of cross-boundary, inclusive, innovative social practices, criteria which are a central (if implicit) issue in each and every discussion of innovative educative systems and organizations (Lanzara, 1997; Christensen & Eyring, 2011). To conclude this Part of the dissertation, I will once again state the objectives of my endeavour, now made clearer through the distinctions drawn in this Chapter: to explore and foster game design, the co-construction of possible, co-habitable worlds, means to try and counter the worst of all ecological catastrophes: the consumption of possible futures brought on by productive and educational cultures too often based on mere efficiency, oversimplification and "seriousness" (Fornasa, 2012).

PART II

Mind The Channels:

Researching Participatory Cultures

Creative Commons, or:
How Networks are Taking Back the Means of (Cultural) Production

"All new media are first explored by the minorities and the marginalized"

- NullC -

"From each according to their imagination and to each according to their need"

- Eclipse Phase Player's Handbook -

"Geeks like to think that they can ignore politics.
You can leave politics alone, but politics won't leave you alone."

− Richard Stallman -

Summary

This Chapter will move from the transdiciplinary landscape proposed in the first Part of this dissertation to first explore the core elements of networking and of virtuality in any human endeavour, as in our finctional capacity to work with "what is not", and to relate it to others. Having built such philosophical and anthropological foundations, the Chapter will move to sociological considerations on cultural production, taste and labour, and on the disruption in such patterns which are brought on by the spreading of Information and Communication Technologies, particularly focusing on the role of new, emerging, deterritorialized communities and on the shift, in the construction of such communities, from the value of identities to that of fluid interests, and from hierarchies to ever-evolving networks. In its last part the Chapter will reconnect all of the above mentioned points to focus a network of concepts in a reframing of learning and research institutions, particularly accounting for the fatigue academias are experiencing in co-evolving in our new media ecology, to deconstruct the hierarchic foundations of learning environments and research

discourses, and therefore lay the foundations for the following, methodological Chapter.

The External Paths and the Extensions of Man

Beside the short narrative segment above, I think that the most proper and personal way to introduce this Second Part of the dissertation, and to highlight its deep meaning within my epistemological framework, is with a favorite batesonian quote of mine (taken from *Steps to an Ecology of Mind,* 1972), and one which strongly resonates with my autobiography, pertaining the confrontation with apparent, ultimate unplayfulness: the facts of death, and of whatever might survive it:

> *...But if mind is immanent not only in those pathways of information which are located inside the body but also in external pathways, then death takes on a different aspect. The individual nexus of pathways which I call "me" is no longer so precious because that nexus is only part of a larger mind.*   G. Bateson, 1972, p. 471

Most of my writings, on a deep level, spring indeed from a preoccupation with the playful diversification and expansion of "external" pathways, of meaningful information channel. However, a particular type of pathway has emerged as more and more relevant in the second part of the last century, one supported by the so-called "electric media" which are core to the works of Canadian sociologist and media critic Marshall McLuhan (see McLuhan, 1962; 1964; McLuhan & Fiore, 1967), and which, echoing both Norbert Wiener's cybernetic paradigm and Bateson's remark on "a larger mind", the "Father of the Global Village" deems to be integral extensions of the structure of living systems themselves (McLuhan, 1964).

In the following fragment, which once again highlights the diverse (but each day more and more converging and closely weaved) types of feedback systems that are core to this dissertation, be them games or communication networks, McLuhan goes on to specify how games are particularly preminent in their "prosthesic" (literally meaning addition, not replacement) function in regard to humanity, thus soldifying the conceptual link with the rest of my work:

> *Games, like institutions, are extension of social man and of the body politic, as technologies are extensions of the animal organism. [...] Any game, like any medium of information, is an extension is an extension of the individual or the group. Its effect on the group or individual is a reconfiguring of the parts of the group or individual that*

*are **not** so extended.*   McLuhan, 1964, p.208

Having once again pinpointed the key role of play in human individual and social development, this Chapter will, apparently, be the most distant from "play proper", as it will be focused on how the aforementioned technological pathways are key nodes and actors within contemporary social, cultural and economical processes.

And yet, despite this same key role, both the availability and the mastery of this particular "electric" pathways is, as of now, distributed in a patently uneven fashion among the world population. This "digital divide" is due to many reasons, among which extreme socio-economic disparities, infrastructural limitations (Flecha, 2015) and their explosive interweaving in any kind of structured communication (McLuhan, 1964; Hine, 2012). This "intrusion" works to disrupt and deconstruct not only wider established societal constructions (Rifkin, 2000; Serres, 2012), but also the fundamental canons of interpersonal communication and psychological development (as studied by a new whole emergent disciplinary field, that of so called "cyberpsychology"; see Gordo-Lopez & Parker, 1999, and Barak, 2008), reaching even the the most subjective, personal and embodied levels of experience, such as self-perception and gender roles (as examined in the works of Sherry Turkle, 1984; 1995; 2009).

The radicality of this disruption can probably be better understood from an evolutionary perspective: in an extremely brief time (on an evolutionary scale), we found ourselves, as human beings, moving from closed, nomadic groups composed of a few dozens, mostly homogeneous people to a whole world of networked, individualized, sedentary nodes of the wildest, manifold diversity (see McLuhan, 1964; Coupland, 1991; Pievani, 2014). While still relying mainly on our organic, mammalian senses and still struggling to find our footing and orientation in the "Global" dimension of our "Village" (McLuhan, 1964), we have also been "wired" with whole new "electric" senses and communication pathways (see Hayles, 1999; Longo, 2001). Information technologies have developed extremely rapidly, but this does not make it possible or reasonable to expel them from evolutive and historical dynamics; "singularities", points in history after which any prediction is impossible, are by definition only in the future (Kurzweil, 2008). Just as crisis is a synthesis of constraint and possibility (Ceruti, 1986), if we, as researchers and educators, wish inquire into the hidden possibilities of this critical threshold, and reconcile them with my personal history as a researcher, we re-discover ourselves to be "cyborgs".

This term, while evidently derived from Wiener's cybernetics, owes its modern use of "technologically modified individual" to the imaginations of neurophysiologist Manfred Clynes and psychopharmacologist Norman Kline, who examined the possibility of human survival in space

(that is, the possibility of new ecologies for human development) through heavy physiological and technological modification (Clynes & Kline, 1960). This perspective of a humanity provided with freely-self-modifying bodies inspired "cyberfeminist" Donna Haraway to formulate a "Cyborg Manifesto" (Haraway, 1985; see Yehya, 2001, for an historical perspective on "Cyborg Philosophies"), where the "cyborg", as neither human, nor animal, nor machine, worked as a strongly embodied metaphor for theoretical and identitary hybridity, not far from the imaginative stories of science fiction authors (see, among many others, Asimov, 1991, and Dick, 1995).

And yet, while fiction writers, philosophers and social theorists of technology have always tried to predict (often succesfully, just as often glaringly erring; see Kurzweil, 2005, and Kaku, 2011, for some recent endeavours in patterning the future impact of technology) technology's undeniable impact on our bodies and on our material ecologies (in their strict etymological sense, the discourses on the physical places we inhabit), few had imagined and extrapolated their even deeper influence in interpersonal relationships, wider societal structures, on the ecology of societies and on the ecology of mind in its most general sense (see, among many others, Gehlen, 1957, De Kerchove, 1991, Caronia, 2008, and Pievani, 2012, for a variety of critical observations on this new "extension" of the mind/body divide). Indeed, as British anthropologist Tim Ingold writes, technology has most often been displaced by the subdivision of disciplinary fields as something to be understood and examined as situated *outside* society and culture, and as such has been often rendered into something amenable to be ignored by anthopologists, sociologists and psychologists alike, and by them characterized with a relative triviality (Ingold, 2001).

It's only in most recent years, with the advent of the so called "Web 2.0" (as popularly defined by American enterpreneur Tim O'Reilly, 2004, as a network architecture which emphasizes user-generated contents; see also DiNucci, 1999, and Gehl, 2011) that the "electric" and "digital" technologies, having pervaded the whole of modern life (at least in developed countries) are beginning to truly become "our ecologies", at the same time more essential for everyday participation in social processes, more transparent to the everyday eye and more visible to sociological and anthropological perspectives, where the strict materiality of technology is at least partially subsumed by its networked patterning itself (Weinberger, 2012).

While it is true that the re-working of our bodies through prosthetic and biomanipulative technologies is advancing at a breakneck pace (Longo, 2012; Pievani, 2012), having a global network of "external pathways", eyes and hears which can reach distances before unthinkable, and having "external" memories which can (if sometimes haphazardly) hold endless libraries is much more disruptive to social hierarchies and institutions than mere bodily restructuration (Serres, 2012), suggesting a radically new perspective for humanity, that of so-called "posthumanism", a

new, emergent philosophical field of inquiry which aims at deconstructing the perceived rigidities of classical humanist philosophies born of Renaissance and Enlightenment (for a wide panorama of posthumanist perspectives see Ferrante, 2014). In this fragmented panorama of media perspectives, the one that more closely guides my inquiry is Neil Postman's, who, discussing the social role of technological advancements and unknowingly founding the discipline now known as "Media Ecology" writes:

> *Technological change is neither additive nor subtractive. It is ecological. I mean 'ecological' in the same sense as the word is used by environmental scientists. One significatnt change generates total change. [...] A technology does not add or subtract something. It changes everything. In the year 1500, fifty years after the printing press was invented, we did not have an Old Europe plus the printing press. We had a different Europe. After television, the United States was not America plus television; television gave a new coloration to every political campaign, to every home, to every school, to every church, to every industry. And that is why competition among the media is so fierce.*
>
> Postman, 1993. pp.18-19

This cursory examination of literature on "external pathways" brings us to point out some fundamental epistemological distinctions and go beyond the obvious recognition of the enormous relevance of technique as an engine of societal change, and the ecological and evolutive dynamics involved in it. In fact, we, as researchers and educators, focus on the technological component of networks, we run the risk of ignoring the origin of our metaphors.

"The Web", indeed, is certainly not a mere novelty of the Information age. Its current relevance for our times constitutes indeed a re-emergence of the ecogical and organic structure underlying technology in all times, as any type of information channel, thus questioning the rethorically influent but often distorting divide between technique and nature (Bateson, 1972; McLuhan & Fiore, 1967; Kelly, 1995), providing an epistemological lens for scholars in human sciences to reconnect the diverse field of their interests. Because indeed that's what networks do: connect what was separate.

In a last transdisciplinary foray into life sciences, I must once again underline how, as we have seen in the preceding Chapter, information carrying networks constitute a key feature of any living system. *"Wherever there is life, there are networks"* (Capra, 2006; see also Laszlo & Barabasi, 2002, for a tentative foundation of a transdisciplinary "network science"), and the networked pattern of mind and nature did not evade the observation of our ancestors, and is acknowledged in such

ancient texts as the Upanishads (fragment taken from Cook's translation, 1977):

...in the heavenly abode of the great god Indra, there is a wonderful, infinitely stretching net with a single glittering jewel in each "eye" of the net [...] If we now arbitrarily select one of these jewels we will discover that in its polished surface there are reflected all the other jewels in the net, infinite in number. Not only that, but each of the jewels reflected in this one jewel is also reflecting all the other jewels, so that there is an infinite reflecting...

This ancient theological fragment shows how network metaphors are deeply rooted in culture, far predating the development of information and communication technologies. Recovering the networked roots of alternative epistemologies allows us to better hypothesize and co-construct possible alternatives to the reductionistic approach which still dominates western positivistic science (see Bateson, 1979; Morin, 1999; Benkirane, 2002). This also means to go deeper than merely relying on technological infrastructures: our view will go beyond mere connectivity in its topological sense (Barabasi, Newman & Watts, 2006) to see the Web as recursion and representation, as each node holds in itself a hologram of other nodes and of the structure as a whole.

This recursive representation of the web is the root of another key term in the discussion of information and communication technologies: *virtuality.* In the language of Polish-American logician Alfred Korzybski (whose reflections on the relationship between world and representation, map and territory, science and sanity, will constitute a core section of the next, methodological chapter) virtuality is based on "space-binding" and "time-binding", the peculiar human capacity of working with what is not there in actuality (Korzybski, 1947; see also Morin, 2001; Levy, 2002). But how can we conceive the relationship between networks, virtuality and society? Is it a feature of our current, technologically pervasive age or, as I would state in the next paragraph, is it a fundamental character of humanity?

The virtues of virtuality

"Virtuality" is only apparently a "new" construct within the philosophical and scientific debate. Only in very recent years its usual contrapposition to "real" has been deconstructed, almost concurrently with the fall out of favor of this term from everyday language in the age of the ascent of Social Networks (indeed, we do not speak anymore, in everyday discourse of "virtual reality" or

"cyberspace"; see Tsou et al., 2014, for an analysis of the ongoing "despacialized" shift in the discourse of online communication).

In the last years of the last century the (nowadays somewhat out of fashion) oxymoronic locution "virtual reality" constituted a mainstay of future-oriented media theorizations (see Garb, 1987; Rheingold, 1992; Davis, 1998). As it already happened with other constructs, such as "cold war" and "clinical death", language games once again appear to us as vaguely bounded, especially when constructed around fields which are almost daily re-defined by technological innovation (Bateson, 1972). The term "virtual" has been most closely associated with specific applications of information technologies which allow multisensory interaction with "fictional" worlds through a technological interface, be it a "simple" console videogame, immersive experiments with visors and gloves or the first tentative forays into direct brain-computer interfacing (see Nicoleis, 2013, for most recent experimentations).

To distance ourselves for mere instrumentality and de-construct connections, connotations and meanings which are generally considered obvious, it is proper to resort to etymology: the term "virtual" comes from the latin word "virtus", power, leading to a possible translation of virtual as "potential" (see also Varela, 1995, for a similar interpretation), meant not only as statistical possibility, but as a creative space preceding actual "reality", and from which actuality proceeds.

Keeping strong with the evolutionary perspective adopted by this work, a most relevant perspective is that of "virtualization" as an exploration of our possibility space as evolving, living systems, as *"a prosecution of the homination process"*. This interpretation of creative technological spaces is advanced by French philosopher Pierre Levy, who, in his *Qu'est-ce que le virtuel?* (1998) writes that the process of virtualization is to be understood as a phenomenon which can tranform particular cases, as in actual reality, into generalized issues, thus freeing them from ontological bonds, or, using the lexicon of this dissertation, from their "more rigid structure". Virtualization, according to this point of view, does not solve problems, but transforms problems in other problems, creating a space where emergent dynamics can bring on unforeseeable configuration, or, as the author himself writes:

> *Virtualization makes institutional solutions much more fluid, increases degrees of freedom, creates a more wide mobility. It is one of the main vectors of reality creation.*
>
> Levy, 1998, p.116

The French philosopher's theorization, if somewhat outdated in its language, can still work as a useful unifying framework. Virtual activities of men, however greatly enabled by modern

technological advancement, are not to be considered strictly bound to it, but on the contrary are inherent to humanity's representational capacity and to the temporally disjoined consciousness flow of human beings. French philosopher Gilles Deleuze, echoing Proust's work (1927), defines this "radical virtuality" as:

> *Real without being actual, ideal without being abstracted. The condition of true experience, the internal difference in itself.*   Deleuze, 1966, p.43

According to this definition, the Virtual is the flow of difference which create differences, Bateson's definition of information itself (Bateson, 1972). An aspect of this flow is its immanence, its "being within", hence being at least partially unexplicitable, lest the system becoming something less complex. A measure of ignorance which is necessary to allow non-linear developmental opportunities (Bateson, 1972). Virtuality is what distinguishes "Creatura" from "Pleroma", as meant by Bateson: the necessary condition for the workings of any adaptive and evolutive system is the liminal condition of existance and non-existance of some of its parts.

Only this potential, "virtual", area, is able to throw a bridge between determinism and the world of perceptions and differences, categories which might be "non-existant" in a strict material sense, but are nonetheless unavoidable in confronting the complexities of human specificity (Serres, 2012).

Starting from this philosophical foundations, Levy offers a fourfold modelization of the virtualization processes:

- **language** as virtualization of presence, through which human beings can overcome boundaries of place and, most importantly, of time in the sharing of information;

- **technique** as virtualization of action, through which human beings can overcome boundaries of time, place and physiology in the shaping of contexts;

- **contract** as virtualization of violence, through which human beings can enforce boundaries on behaviour independently from fluctuations in power relationships;

- last but not least, **art** as virtualization of virtualization, through which human beings can overcome the boundaries of subjectivity itself.

                                                                        Levy, 1998, pp. 74-90

As discussed in Chapter II anything that through its "boundary-work" can create more "free movement" or "rigid structures" (as in, an expression of the capacity for game design) is to be considered relevant to this dissertation's themes, especially when it concerns the whole of the social system and the disruption of contexts of learning and production.

The thesis of this Chapter, i.e., how networks are changing the means of cultural production, is properly based on the contested relationship between virtuality and materiality proper, and its implications for productive processes and societal stratifications. In fact, it is a reformulation of the contested relationships between something-that-is-not, play, and its more serious surrondings, not only in the philiosophical and psychological terms that we explored in Chapter II, but pertaining relationships of power and production.

It is in this sense and with the intent of analyzing this contrasted dynamics that I draw on the works by French philosopher Jean Baudrillard, probably the first and most famous scholar to confront the themes of virtuality as related to culture, work and production as a whole, inteconnected system. In his *Simulacres et Simulation* (1981) Baudrillard theorizes the disappearance of the real, subsituted by the "hyperreal": this phenomenon, which he names "precession of simulacra", is described in terms of historical processes, starting from the evident symbolism of pre-modern ages and reaching the current blurring of images and reality due to the mass production processes of industrialization, as it is indeed the simulacra, within modern, industrial design process, which comes before the materiality of productive processes which, through the development of technologies such as 3D printing almost seem to disappear from the horizon of production, shifting material conflicts on a cultural ground. The french philosopher argues that, in postmodernity, the explosive proliferation of representations has brought to the disappearance of the real, which has been fully substituted by the simulacre:

> *The simulacre does not hide truth anymore, but it is truth itself that hides its own existance: the simulacre is true.*   Baudrillard, 1981, p. 99

In supporting his ontological argument Baudrillard highlights a conceptual distinction between virtual and simulated reality, a subtle transition which, according to the author, came to pass through the above mentioned socio-economical processes: while simulation tries to adhere to something with a supposed real content, "a nostalgic attempt to replicate actuality" (Baudrillard, 1981). Virtual, however, according to the philosopher, is a space of expression free from any material or conceptual constraints, and also a space of contested power relationships, as the owners

of the means of media production more and more come to decide not only the contents of their spectacles, but the contents of "hyperreality" itself (Baudrillard, 1981).

This dualistic position regarding reality and possibility reflects a strongly materialist epistemological orientation of the french philosopher, who implicitly regrets the loss of distinction between observer and observed, which he deems necessary for a form of knowledge with sound foundations (Baudrillard, 1987). Moreso, and more subtly, Baudrillard's position is also near platonic one: aesthetic action is considered as distracting from reality, hence dangerous for the survival of political life. While I have already evidenced my distance from such philosophical positions in Part I of my dissertation, still Baudrillard touches on a fundamental point to be discussed in any educational framework: the catastrophic (in its double meaning of danger and opportunity; see Bocchi & Ceruti, 2004) shift of focus from material production to cultural production and reproduction in our current economies, and the role of technological advancements in the redefinition of such contested fields.

Politics of cultural production

As touched on above, the networked shift in communicative practices, and its global dimension enabled by information and communication technologies, directly translates, by necessity, in a subtler and ongoing shifts in productive processes, both of material and cultural nature (Giddens, 2012). While the technological aspect is inherent (if often implicit) in theories of both labour and culture, if we consider the works of very different authors across the last three centuries (among which Smith, 1776; Marx, 1844; Taylor, 1911; Dewey, 1939; Gramsci, 1948; Rodari, 1973) we can glean how the relationship between cultural production (and the reproduction of culture in the guise of education) and separation of labour is a close one, if one that often goes underexamined if not obscured in most current treatments of both.

I am writing this dissertation in an historical conjuncture where a rethoric of "adapting to the requests of the market" has often taken root and has even been naturalized (Kincheloe, 2004; Giroux, 2011; Denzin, 2014). "Uselessness", which constitutes the core character of the study of play, but also, more in general, of aesthetic cultural production, is under siege by market forces, which try to "tame" both art and education to their ends.

However, leaving aside the educational implications of these processes, to be discussed more in depth in the last section of this Chapter, I will hereby start by focusing on the more general cultural aspects, especially on the shifts in power management dynamics that characterize the "new mode of production" examined in this dissertation, i.e., that of informal, amateur networks which, prompted

by the diffusion of networking technologies, actively take part in the "market of symbolic goods" (Bourdieu, 1971), be them movies, music, books, art, games, or the devices on which such goods come to fruition. The intent of this focus is to highlight how such processes allow for the possibility to disrupt basic assumptions of pyramidal, "one-to-many", distribution of power.

In discussing the relationship between the hierarchical structure of cultural markets and the networked structure of current communication technologies, it is an immediate necessity to confront a most common misconception, according to which its web-like pattern will, by necessity, translate to a more horizontal and heterarchical cultural production practices. A transition to heterarchy (as defined as a system of organization where the elements are unranked, or where they possess the potential to be ranked in a variety of different ways; see McCulloch, 1945; Bondarenko, 2007; Bruns, 2008) in the structure in production, in culture making processes, in political participation and, more closely relating to this dissertation's main focus, in learning contexts and institutions of any kind is not to be taken for granted at all.

In the key essay *The Social Life of Information* (2000) American media scholars John Brown and Paul Duguid denounced the overly optimistic perspective above as an expression of the so called "6-D vision" of information and communication technologies (the "6-Ds" being Demassification, Decentralization, Denationalization, Despacialization, Disintermediation, Disaggregation). They accused it of being the result of a collection of partial lenses, and indeed of running the risk of generating linear, simplifying descriptions of phenomena that seem to run in a completely different direction, and indeed in a chaos of manifold directions (Brown & Duguid, ibid.). As Bateson warned us, any simple description of complex phenomena, especially as pertaning advanced technologies, will almost often come back to bite us (Bateson, 1972).

In fact, institutions (both of corporative and State-based nature) still deeply shape networks both in their material infrastructure and accessibility, in such a way that they are far from being necessarily a "liberating technology" (I use this notion in the sense of Illich, 1973; Freire, 2000). The reticular character of present information and communication technologies can, in fact, also enable the "centers" of any kind of institution to implement a whole new level of panoptical power (see Foucault, 1975), and therefore a stronger, subtly authoritarian hold on the peripheries, be them literal or metaphorical.

A very strong (and popular) example of this dynamic as applied to the specific field of digital communication technologies is that of Apple Inc., a company that enacted a very centralized management and marketing strategy, bringing Belarusian media theorist Evgeny Morozov to critically remark how *"for much of the last decade, Apple was not just selling gadgets; it was also selling technologically mediated therapy"* (Morozov, 2012). This position can't be underestimated

or overlooked by any critical observer of social processes surrounding technology, or, indeed even by the everyday person who, looking around in any public transportation, can see a plethora of apple symbols branding a variety of devices, which have, beyond their networking value, a meaning as cultural symbols of technological engagement (see Naranjo, 2015, for an examination of consumer practices in relation to "latest technological offers").

On the opposite side of the resourceful diversity apparently brought on by the pervasiveness of media culture still lingers the ghost of an individuality-squashing unity, as embodied by monolithic, and monopolistic institutions, and their power for centralized replication and distribution of information. The analysis and dangers of a strictly industrialized approach to culture making was first pioneered by Adorno and Horkheimer, in their *Dialectic of Illuminism* (1944), who wrote of the rise (and coined the distinctive term) of cultural industry, proposing that the standardization and taylorization of cultural production has the specific objective of manipulating mass society into adopting a passive outlook toward culture, and a similarly submissive attitude toward social and political dynamics. An essay titled *Cultural Industry: Enlightenment as Mass Deception* constituted for many years a fundamental hub of debate for the embryonal studies of media, echoing the preceding works of German philosopher Walter Benjamin to provide a culturally divided (and divisive) model of "low" and "high culture", the latter providing an aesthetic and philosophical content, and the former structured around mere entertainment and economical gains, or even used as an instrument of social control (see also Gramsci, 1948, for a similar perspective).

This polarizing modelization is one that, while extremely relevant for subsequent studies, has been deeply criticized for elitist connotations (see Miklitsch, 2012) and has to be historically situated to be fully understood: both Adorno and Horkheimer were Jewish refugees, writing at the peak of World War II. They experienced firsthand the results of the mass-mediatic propaganda produced by the Nazi government, an unprecedented effort in cultural production and shaping. Even the infamous Joseph Goebbels, the Nazi Ministry of Propaganda, during a public speech in 1933, expressed satisfaction and recognition of the key role of radio propaganda in the rise to power of Hitler:

> *It would not have been possible for us to take power or to use it in the ways we have*
> *without the radio [...] Above all it is necessary to clearly centralize all radio activities,*
> *to provide a clear worldview.*

This ominous "single vision" of a unified "clear worldview", however truthful and worrysome for anyone who, such as me, appreciates and believes in the opportunities brought on by the deep

mediatization of society, must be considered in its entirety: Goebbels not only highlights the role of media contents in any concentration of power, but also evidences how this concentration must be accompanied by a centralization of technological competences and, through it, of content production, thus running to the opposite of the networked, "grassroots" approach advocated and illustrated in this dissertation.

Given this bleak outlook on the perspectives of the industrialization of cultural production, is there any hope? Neil Postman, in his *Technopoly: The Surrender of Culture to Technology* (1993) indeed warned against a culture which *"...seeks its authorisation in technology, finds its satisfactions in technology, and takes its orders from technology..."*. However he also offered some pointers for alternative paths. To resist this "technopoly" means, for Postman, to acquire competence in the inner workings of technology, so as to disrupt the "knowledge monopoly" of media makers. As an example he draws a relevant historical episode of media appropriation, the events of the Reformation:

> *Unforeseen consequences stand in the way of all those who think they can see clearly the direction in which a new technology will take us. Not even those who invent a technology can be assumed to ber reliable prophets [...]. Gutenberg was, by all accounts, a devout Catholic who would have been horrified to hear that accursed heretic Luther describe printing as 'God's highest act of grace, whereby the business of the Gospel is driven forward.' Luther understood, as Gutenberg did not, that the mass-produced book, by placing the Word of God on every kitchen table, makes each Christian his own pope.*   N. Postman, 1993, p.15

Unforeseeability in the cultural uses and evolution of media is inherent to Postman's ecological perspective, which complexifies and questions monolithic, hierarchical perspectives on cultural production, hence challenging a common framing of consumers and users of a new technology as completely subordinate and passive in its respects.

Another scholar who takes a critical position toward such linear representations of cultural industry is Pierre Bourdieu, probably the first scholar to fully explore the conflictual conundrum of consumption and production, Bordieu's integrated model of cultural dynamics highlights the active role of consumers and lower classes in shaping culture:

> *Each and every cultural act, be it production or consumption, implies the affirmation of a right to legitimate expression, and therefore involves the positioning of the subject in*

regard to the intellectual field and the kind of expression he or she claims.

Bourdieu, 1979, pp. 888

In this quotation from his most famous work, *Distinction: A Social Critique of Judgment* (1979), the french author illustrates the complex political implications of any aesthetical proposition. In the remainder of the essay he illustratates at length the difficulty in holding such positionings. Besides, he discusses in depth the socialized nature of taste, by addressing the hierarchical forces which shift the politics of legitimization (see Habermas, 1972, for an in-depth examination of the so-called "legitimization crisis", as defined as a loss of confidence in administrative institutions, often brought on by changes in media landscapes).

Using both his own former theorization of cultural capital (i.e., the non-financial social assets which a subject can mobilize to achieve social mobility, see Bourdieu & Passeron, 1973) and empirical data obtained through surveys and observation, the French scholar analyzes how those who hold the more overall capital (be it material, social or cultural) are able to shape both forms of expression and its restraints, thus perpetuating a form of symbolic violence through the naturalization of the distinctions of "high" and "popular" culture. Working against Kantian considerations of "pure aesthetics" (Kant, 1790), Bourdieu in *Distinction* finalizes a longstanding argument of his: ultimately, the legitimate tastes are those of the ruling classes (Bourdieu & Passeron, 1973).

Bourdieu, however, is also the first scholar to notice subtle shifts in the loci and ownership of the means of cultural production. This is due both to the above discussed technological advancements and to the spreading of capitalist economy itself, which, starting with Ford, aimed at selling to the workers the products of their own labour (see Zeitlin, 1987).

This peculiarity of capitalist economy, which aims to increase capital, also partially deprives the owners of the means of production of their exclusive "technopoly", to use Postman's lexicon. Bourdieu highlighs this shift in ownership of technology as a possible field of resistance to symbolic violence. Case in point, when the advances in photographic technology allowed for a wide diffusion of cheaper means of documentation (see Bonanos's *Story of Polaroid,* 2012, for a paradigmatic example of such processes), the lower classes enjoyed the possibility to become producers of both factual documentation and aesthetic artifacts. This brought to at least partially democratizing the production and reproduction of images, and furthering a more organic and non-hierarchical integration of production and consumption (Bourdieu, 1965).

The technological and economic processes which enable the so called "amateurs" (Bourdieu, 1965; Ito, 2010; Hunter, Lobato & Richardson, 2012) to self-produce and crowd-fund (that is, in bourdieusian language, to mobilize social and cultural capital to obtain financial capital, which, as

of today, is most often obtained through social networking campaigns; see Brabham, 2013) music, films and games of both digital and physical nature, are not of a different quality from the emergence of "lower class photography"; they are just much more deterritorialized and in a quite different relationship with materialities, since they rely on the networked infrastructure of "digital distribution" and on the infinite replicability of software, so as to further bypass established corporative technological monopolies.

As we reach the 21st century and with it the aforementioned "integration" of networked media in everyday life, American media scholar Mark Deuze (2009) once again highlights the opposing and reinforcing tensions between aesthetic creation and market dynamics. Any discourse about the consumerization of culture, argues the author, is glaringly incomplete if it does not take into account a necessary feedback loop, that is, the culturalization of economy. These tensions, coupled with the aestheticization of everyday life brought on by the growing flow of aesthetic and narrative contents to which human beings are exposed in information economies (Longhurst, 2012) have produced a consumer population that is increasingly willing and, most relevantly, able to modify, design and innovate products herself. This willingness is not devoid of problematicity, and it could even be considered as a new typology of consensual exploitation, with *"consumers providing free labour for the New Media Industry"* (Terranova, 2000, p. 33). What I want to stress here is the potential to create an explicit, public space of discussion about the places and displacements of creativity and management thereof or, as Polish sociologist Zygmunt Bauman puts it, *"management's plot against the endemic freedom of culture is a perpetual casus belli"* (Bauman, 2005, p. 55).

These tensions are manifest not only in such "amateur" endeavours, but also within the corporative structure of "media work". According to Deuze, this is characterized by two polarizations, due to the necessity to interface with the "active public": i.e., of **Content vs Connectivity,** and **Creativity vs Commerce.** In fact, media industries must both create content and the platforms through which to disseminate it (and harvest "free labor"), while they mantain a free, participative climate of culture creation, and sustain themselves through their placement within explicitly hierarchical economic infrastructure. In this particular historical and structural conjuncture, and prompted by such tensions, The Customer, in current media ecologies and economies, is considered increasingly as co-creator, not just in a bourdieusian socio-constructivist sense, but in a more literal, material sense. In fact, the consumer and the amateur have become "pro-sumer" and "am-pro" (portemanteaus of the world "professional" with "consumer" or "amateur", newly emerging terms which highlight the hybrid and "liquid" nature of today's professionalism in media production; see Tapscott & Williams, 2011). What are the cultural and social outcomes of such shifts? And which cultural products emerge from these "grassroots"?

Participatory cultures: boards, communities and commons

In our age of networked reputation and contribution systems (see Glucker, 2003), the increasing willingness to contribute to cultural production leads to the emergence of projects which can't be trivially attributed to any single person, and not even to easily identifiable groups. This is an expression of what Pierre Levy calls "collective intelligence" (a somewhat bland and generalized definition which Belgian sociologist Derrick DeKerchove, as pertaining to its technologically mediated expressions, playfully corrects and integrates in "connective intelligence"; see DeKerchove, 1997):

> *It is a form of universally distributed intelligence, constantly enhanced, coordinated in real time, and resulting in the effective mobilization of skills. I'll add the following indispensable characteristic to this definition: The basis and goal of collective intelligence is mutual recognition and enrichment of individuals rather than the cult of fetishized or hypostatized communities.*   P. Levy, 1994, p.13

This quotation marks a key turning point in my research, with the hypothetic introduction of a new type of human community. As American social critic and educator Howard Rheingold notes in his pioneering study of "virtual communities" (Rheingold, 1992), *"more people pooling resources in new ways is the history of civilization in seven words",* and this communities are not founded on "fetishized" or "hypostatized" territorialized identities like modern nation-states, nor on issues of material survival like prehistoric tribal gatherings.

They are "Virtual" in the sense discussed above, thus based on a shared, networked potential (Rheingold, 1992; 2002), "Smart Mobs" which constitute a completely new form of social organization, both of interest and labour. While this dynamics echo the communities of practice theorized and explored by cognitive anthropologists Jean Lave and Etienne Wenger (1991), their virtual character marks some fundamental distinction from any other kind of territorialized endeavour (Wenger, White & Smith, 2009), particularly in the level of expertise and involvement required to take part in such a community (Kimble, 2012).

While the specific inner workings of (a specific kind of) online communities will be explored in more depth in Part III of this dissertation, it is useful, to achieve a basic understanding of such dynamics, to adopt an historical approach, following the first person account of Rheingold (1992): although internet technologies developed at the beginning of the seventies within a branch of the

American Department of Defense (as ARPANET), their use became soon quite "unserious", as BBS (Bulletin Board Systems, servers which worked as the near-identical digital equivalent of physical boards) discussion themes shifted from technical discussion to cover almost every hobby or interest, with the first non-technical community hosting such diverse discussions, THE WELL, being established in 1985. Even if technology at the time was very limited, this did not stop users from experimenting with the extremely simple graphical options to give the illusion of being somewhere else, such as a fantasy environment, a pirate ship or a sanatorium (Rheingold, 1992).

As technology advanced, public use shifted from BBSes to the so-called Usenet, a worldwide, distributed discussion system, and the true precursor of current Internet Forums, superficially resembling a hybrid between now current newsletters and them. The main difference between BBS and usenet was the decentralized nature of the latter: no more rooted on single servers, Usenet allowed for a large, continously changing aggregation of participants. Despite this fluid and distributed construction, traffic on the Internet was then still very limited, its massification having yet to come. Internet as we know it today came in two successive steps, when in 1991 the Swiss research center CERN released the "World Wide Web", the hypertextual system which can seamlessly connect each and every web page, and in september 1993 (which would then be called "The Eternal September" for its lasting impact on internet culture; Quaranta & Tanni, 2014) America Online (AOL) began offering Usenet services to its hundreds of thousands users, forever changing the then insular culture of the Internet with the sudden intrusion of millions of new "immigrants", ignorants of the implicit social norms of such communities. This is to say, introducing here an ethnological perspective, that cultures strongly clashed even in those disembodied and "low-intensity" spaces, highlighting how "navigation" is not simply connected to a technical competence, but pertains unwritten relational and ethical codes, such as the so called "netiquette" (Langford, 2003), or memetically codified loose guidelines (at their most basic level pertaining the very often quoted "Wheaton's Law", which amounts to "Don't Be a Dick"; see Mossberger, 2009, on canons of social acceptability in online environments). The new population which came online in 1991 did not share the similarity of experiences and technical competences of earlier, technologically savvy users, nor its ethical standards in networked communication. However, it was extremely eager to share information on an enormous variety of themes of interests, and to extend contact with both fellow users and with institutions. This brought to create so-called "third places" (as in, neither work nor home) in which to freely discuss, create and share content (see Preece & Maloney-Krichmar, 2003, for a brief story of internet communities).

Indeed, to further deepen this historical examination, it is possible to trace the cultural roots of these creative communities well before their emergence with the Internet, and far from the most

institutionalized spaces of culture making, often in marginalized subcultures. Pioneer of "fan cultures studies" and media scholar Henry Jenkins begun his exploration of the re-appropriation of the means of cultural production within stereotypically "nerdy" communities and spaces, culturally marginalized, if mostly middle-class, segments of American population, such as Star Trek fan conventions (see Jenkins, 1988). His interest was initially focused on how television series fans (followers of very "low culture" narratives, by then hegemonic academic standards) read, appropriated (or, in a peculiar lexicon borrowed from De Certau, 1984, "poached") and rewrote the tales of their heroes, hence offering innovative perspective on popular texts, and sharing these re-tellings through a wide variety of media: self-published fanzines, "fan films" and, when they finally became available and widespread, internet message boards.

In this "convergence" of media, which in just a few years widened from such above mentioned "geek subcultures" to embrace almost the whole of cultural production (Jenkins, 2006), new forms of cultural organization emerge, which the author calls "participatory cultures", in reference and contrapposition with consumer cultures which, according to the authors, characterized the middle part of the 20th century. In a collaborative Open Access White Paper, *Confronting The Challenges of Participatory Culture* (2003), Jenkins and his co-authors propose a number of definitory criteria for the identification (and the fostering) of a true participatory culture:

1. Relatively low barriers to artistic expression and civic engagement.

2. Strong support for creating and sharing one's creations with others.

3. Some type of informal mentorship whereby what is known by the most experienced is passed along to novices.

4. Members believe that their contributions matter.

5. Members feel some degree of social connection with one another (at the least they care what other people think about what they have created).

The members of participatory cultures, variously called Produser (producer + user, Bruns, 2007) or Prosumers (producer + consumer, Toffler, 1980) engage in circulation discussion and production of "remixed" or completely innovative content on an informal basis. They are voluntary associations founded in an affinity of interests or narratives, associations which share both skills and resources. That is to say, "communities" or, to emphasize the political value of such associations, "commons". And so I have, at last, reached the title of this Chapter, which I will now explain in its double meaning: a great part of the above mentioned material is published and shared routing "around" the

normal constructs of property and authorship rights, if not in contrast with such legal constructs (See Laniado & Tasso, 2011). Among the most widespread, structured legal frameworks for such shared endeavours are the so called Creative Commons, appellative which refers both to a collection of public copyright licenses and to the non-profit organization (founded by Lawrence Lessig, Hal Abelson and Eric Eldred) which endeavours to promote such a legal framework and expand the range of creative works available for others to legally share and build upon (Creative Commons FAQ, 2011).

The Creative Commons are, however, also a key metaphor of my work, intended to underline both the risks and the utopian potential of these emerging organizations: is the "tragedy of the commons", as in the tendence of individuals to overdraw from a common, freely available resource (Hardin, 1968) possible in an economy which, at least in some of its segments, appears to be moving toward post-scarcity (Bookchin, 1971) and is characterized by almost indefinite replicability of its main products, that is, information and methods to manage it? Are these the first, tentative steps toward an utopia of accessibility (Rifkin, 2000)? Or are these social experiments devaluing authority and true professional skills (see Carr, 2011, and Keen, 2012) ? Most internet scholars seem to have adopted an undeniably optimistic, if often unrealistic, position: leading many just as optimist colleagues, Israeli-American Law Scholar Yochai Benkler, in his *Wealth of Networks* stated that:

> *...better access to knowledge and the emergence of less capital-dependent forms of productive social organization offer the possibility that the emergence of the networked information economy will offer up opportunities for improvement in economic justice, on scales both global and local.*   Y. Benkler, 2006, p.131

Such paradigmatic example of utmost trust in the power of "community based peer production" (Benkler, 2006) and learning elicited an equally paradigmatic response by reviewer Derek Belt:

> "[Benkler's] *unwavering belief in the greater good offers hope for the future but fails to adequately address the present, leaving readers to wonder what he would have said about the prospects of another decade in which the industrial information economy, backed by powerful lobbyists and defiant legislative activity, holds all of the cards. Would our future look so cheery then?*   Belt, 2009, online review

While the debates, and the experimentations, continue, such shifts in production, and their political

implications, have indeed yet to be fully acknowledged by public institutions, and especially by those explicitly devoted to knowledge production and reproduction, that is to say, educational and research infrastructures.

At the same time, it is undeniable that whole new patterns and institutions devoted to networked knowledge building, of both formal and informal nature, are growing up all around the planet, deterritorialized, and not bound to fixed programs, not even to regular politics of funding (be it corporate or state-based), being founded on their very voluntary basis (see Crabill & Butin, 2014). Indeed, while this communities appear to be eminently fluid and deterritorialized they are often characterized by a strong commitment to civic participation and knowledge production.

It is something of a joke, in internet communities, to discuss this notorious, historical scenario: if you were in 1999 and you had to bet on who would build the greatest repository of human knowledge ever, would you put your money on the richest man in the world or on a voluntary, "Creative Commons" enterprise? Still Encarta, the Microsoft founded encyclopedia closed in 2009, while Wikipedia thrives and still steadily grows (see Zlatic & Stefancic, 2011).

What are the deeper implications of such open, co-constructive, heterarchical (McCulloch, 1945; Von Foerster, 1983; Bookchin, 1983; Bondarenko, 2007; Bruns, 2008; Grimaldi, 2011) models of knowledge? And how are universities and schools coping with such a "mutation"? Indeed, are they? And most generally, how is the "teaching" generation relating to the "learning" one? How are these (literally) hierarchical categories holding up in our networked present? Or, if I can playfully ask the rethorical question, what does all this Chapter (and this dissertation) have to do with education?

The Wiki and the Cathedra

In a famous paper, *"Digital Natives, Digital Immigrants"* (2001), American educator Marc Prensky draws on his everyday experience within schools and with teenagers to dramatically pose the issue of a substantial epistemological discontinuity between those who were born in the "Information Society" and those who grew up before it, concluding with this passage:

> *It is now clear that as a result of this ubiquitous environment and the sheer volume of their interaction with it, today's students think and process information fundamentally differently from their predecessors. These differences go far further and deeper than most educators suspect or realize.*   M. Prensky, 2001, p.3

When, almost ten years ago, I read his words for the first time, they struck me deeply: my interest

for digital media, developed early in my life, allowed me to feel this "differences" on a personal level: cathedratic authority and disciplinary subdivisions always felt to me much more artificial than the freely shared and discussed knowledge of the World Wide Web.

As I learned much later, my approach was not, however, necessarily connected with technological advancements, but was of a political nature, in that it echoed most closely (if in a quite different social and medial context) the pedagogy of Paulo Freire, who opposed what he refers to as the "banking concept of education" (1970), whereby students are seen as passive and submissive learners, merely taking in information that is deposited into their brains by teachers. Freire asserted that education is a dangerously powerful tool for instructors to "fill students with information", and creating a disempowering environment where submissiveness is implicitly taught and learned. The Brasilian "pedagogist of the oppressed" further expounded how the ritualized forms of schooling promoted a culture defined by silence and manipulation, conforming to the agendas of the power elite (Freire, 2000; see also Haworth, 2012, for a recent review of freireian approaches).

Further nailing the point of the link between the structure of educational institutions and patterns of labour and social inequality, critical pedagogist Joe Kincheloe (2011), echoing Althusser (1970), directly denounces the authoritative structure of schools:

> *Men and women are students before they are workers. Workers who give up their control of the planning and direction of the activities which comprise their jobs, first surrender their autonomy to a teacher. This teacher plays the role of the boss, granting rewards and assessing penalties. As far as discipline is concerned, the schools succeed in preparing the future worker for the requirements of the dehumanized, bureaucratic workplace.*
>
> <div align="right">J. Kincheloe, 2011, p.4</div>

While, as I pointed out above, my personal positionings on education are not determined by my experience as a digital native, still the technological lens offers us a favorable point of view in advancing a thorough examination of educational infrastructure, and spaces in which to experiment possible alternative organizations of learning.

Drawing both on the Freirian lesson and on a technologically savvy reading of innovations in collaborative knowledge construction, Finnish pedagogists Juha Suoranta and Tere Vaden offer in their *Wikiworld* (2010) a poignant contrast between such maybe unhealably different organizations of learning, while not being blind to potential pitfalls of both, and try to dispel illusions and rethorics of complete freedom that often accompany a merely instrumental, "wikified" approach to knowledge construction and sharing:

In a fundamental sense, the social and digital collaborative sphere, the Wikiworld, is anarchistic in its very nature. This means that we cannot channel, control or predict the future of the Wikiworld in advance. But we can offer and share insights, ideas and collaborative productions which at best can free our minds from the restrictions of the closed system logics. To say that the Wikiworld is anarchistic is not to deny that it is also overdetermined, that is, its development is caused by the multiple actions of the multiple actors.   J. Suoranta, 2010, p.4

In comparing Suoranta, Kincheloe and Freire's positions my aim is to take a distance from a new , "2.0", reproposition under a polished guise of Austrian philosopher Ivan Illich's rethoric of deschooling (Illich, 1971). Illich pinpoints the deep troubles, paradoxes and conflicts within state-sanctioned and funded education, and critically analyzes the possibilities generated by the advance of technology to create means to substitute the "funnels" of traditional schools with "convivial networks" of learners. However, he also opts for a complete refusal and abandonment of the public spaces of schooling, thus running the very concrete risk of leaving the disenfranchised even more deprived of cultural capital (see Laeng, 1973, for a collection of both critical and favorable approaches toward deschooling).

To clarify my positioning, and thus the underlying educational direction of this work, I will draw further distinctions from established literature: despite sharing Freire's opposition to passivity, Kincheloe's preoccupation with autonomy and Suoranta's appreciation for the unpredictability brought to the educational field by networking technologies, I can't punctuate such differences between me, the "2.0" generation, and the structure of learning institutions as unhealable, starting with the "native/immigrant" distinction itself.

Indeed, I can be considered to be just a bit too old consider myself a true "native", having touched my first computer around the age of five. My place was always on a bridge between those two "countries" and cultures of "apocalyptics" and "integrated" (Eco, 1964), and maybe, as I came to think later, maybe <u>as</u> a bridge. My personal position, even before having the opportunity to work specifically on these themes from a scientific point of view, was not marked by the almost ontological, divide between so called "Natives" and "Immigrants", but by fragmented, socially constructed historical threshold, a space of unnecessary conflict enacted by subtle shifts in languages and relationships, especially as pertaining knowledge and hierarchy (as in, I rehiterate the etymology, "the government of the elders"), where suddenly the younger generation demonstrates, for the first time in history, greater (if often uncritical and unreflected) technical mastery in the use

of key pathways of communication (and economic exchange) than their parents and employers (Herring, 2008).

As "the mind organizes itself by organizing the world" (Piaget, 1973), for a so-called "Digital Native" the above discussed experience of interconnected knowledge directly translates into an interconnected vision of the world: no more a mosaic of isolated pieces, but a web in which each node is sensitive to the whole structure (Morin, 1999). This idea of knowledge, similar to the "rhizome" proposed by Deleuze and Guattari (1980), permits a non-hierarchical multiplicity of approaches to the gathering and interpretation of "data", and even a deconstruction of the concept of data itself (as will be discussed within the next Chapter). It has a wholly different fundation from the traditional, western criteria of "scientificity" (Deleuze & Guattari, 1980). The distrust of the Academia toward shared knowledge experiments (see, for a paradigmatic example, Jemielniak, 2014) could therefore be due to radical epistemological divergences, as illustrated in a famous "aphorism" by Wikipedia founder Jimmy Wales: *It turns out a lot of people don't get it. Wikipedia is like rock'n'roll; it's a cultural shift.* (Wales, 2006).

Metaphors like this, however colorful and expressive, run the risk of once again displacing the debate about education and the so-called "new media" into a new "clash of generations", built around the rigid, identitarian dualism "tradition vs innovation" (Longo, 2001). It is more useful to recontextualize the two categories divided by Prensky in a processual dimension: information tecnologies, however pervasive and explosively developing, are not excisable from historical and developmental processes. In fact, the dynamics of production and the dynamics of learning are entailed by both categories (see Bennet, Maton & Kervin, 2008, for an in depth, critical review of any "evidence" pertaining so called "Digital Natives"). The "people who don't get it" are not structurally and invevitably such, but find themselves in the inherent condition of any historical threshold, that of an exasperation of differences (McLuhan, 1964; Ceruti, 1986; DeLanda, 1997), differences which, however, are necessary for any process, be it merely thermodynamic or fully evolutive (Ceruti, ibid.).

Having expounded at length my reservations on Prensky's categorization, I can't however undervalue the distinctive and explicative power of the native and immigrant metaphors, and in doing this I'm getting close to the conclusion of this Chapter, and introducing the epistemological and methodological quandaries which will be discussed during the next. As anyone coming in contact with different cultures, and as I wrote about the "eternal september" incident, "Digital immigrants" can unadvertently violate norms which are held as "obvious" by any "native", hence the lack of reciprocal inclusion due to the above mentioned rigid identities and innovation/tradition dualism, can generate disfunctional power dynamics (Bayne & Ross, 2007). As cultural hegemony

shifts, knowledge building institutions still cling to an "old" paradigm, devaluing new cultural forms or in some cases exploiting them in a form of "cybercolonialism" (Boelstorff, 2009), an imposition of corporative and nationalized values into the deterritorialized spaces of virtuality.

For the "Native" generation, now fully grown up and not simply subjectable to be labeled as a juvenile phenomenon, the web is also a channel through which to make one's own voice heard, not least on scientific matters and issues. This channel often conflicts with "official", institutionalized academic channels, which has written so much on this phenomena n recent years. The new places (and displacements) of knowledge discourses, and the pertinence of the Migrant metaphor are highlighted by feminist anthropologist Margery Wolf, who wrote in her *A Thrice-Told Tale: Feminism, Postmodernism, and Ethnographic Responsibility*:

> *We can't presume anymore that an isolated village won't enter in an incredibly short time a circuit of rapid social and economical change. A barefoot kid who followed us around will, one day, be at your door with an Oxford degree and a copy of your book in hand.*   M. Wolf, 1992, p.62

A bit more than 20 years later, that kid will not even need to "be at your door", he can just send you an email pointing out the faults in your examination of his culture. Globalization, and especially the most tight web which envelopes much of the planet therefore bring on, on parallel but closely connected paths, the deep socio-economical and epistemological mutations, once again highlighting formal knowledge institutions' entanglement with cultures and power structure (Foucault, 1975), and how their further extensions in the age of global communication enact yet another version of the Weberian monopoly of violence, which constructs meaning by disciplinary discourses, "*shaping cultural production according to will, values and interests of corporate owners and their sponsors"* (Castells, 2011).

It is possible to glean, through the privileged point of view of the "Wikiworld", how the structure of the scientific community is not analogous to the structure of knowledge itself. In fact, the management of knowledge as a form of power and tool for the "objectivation" (see Foucault, 1975) of the world in respect of scholarly subjects, or, better yet, of a limited circle of scholars which can define the boundaries of "normal science", the rules of this particular game. It is however important to highlight how, even in the event of a "paradigm shift", this revolution would not do anything other that subverting hierarchical orders, substituting a paradigmatic (and politcal) hierarchy with another. Hierarchical dynamics of knowledge, as discussed throughout this Chapter, are today partially deconstructed by the web. They begin to show a shift away from the classic dualist

paradigm scholar vs. object of research, and more generally in any kind of observer/observed dynamics. Notwithstanding the "digital divide", in fact billions of people tell their (and others') stories on the Internet every day through a wide multiplicity of media, be it a blog, a Facebook page, a Wikipedia "edit", or they can act out new stories in virtual worlds. They can even *make* worlds for other people to enact their stories in.

In this virtualized, networked, participatory world of world makers (Postman, 1995), deep epistemological and social mutations still struggle to find a correspondence in current developments of human sciences. Information technologies, integral part of the Mind as meant by Bateson, can offer, besides infinite new spaces for inquiry, education and intervention, new, more inclusive interpretive frames, in spaces that are not necessarily created by "scholars" (albeit *"nothing is more virtual than an experimental laboratory"*, De Landa, 2006), but resemble more Foucault's "heterotopias", i.e. spaces which work under non-hegemonic conditions, spaces of *otherness* which allow us, as researchers and educators, to expose the paradoxes and issues of our material world (Foucault, 1986).

Can such plural, makeshift and "messy" worlds survive scientific inquiry? Can virtuality be objectivated as "data"? Will the "politics of evidence" (Denzin & Giardina, 2008) subjugate such anarchistic communities, or will these new expressive spaces constitute a possible space of resistance? It is with these questions in mind that we now move to the next, methodological Chapter.

Punk Methodologies:

Sketching Politics, Quality and Representation in Messy Networks

"And I don't wanna be learned/
And I don't wanna be tamed"
- The Ramones -

"It was the most interesting conference I've ever been in,
because nobody knew how to manage these things yet."
- Gregory Bateson -

"Ignore All Rules"
- Wikipedia's Fifth Pillar -

Summary

This epistemologically and methodologically oriented Chapter will, at first, continue to examine the deeper consequences of a networked structure of knowledge onto the discourses and practices of research, as pertaining the observation and the translation of cultures construed in such different spaces as online communities, the case-based nature of my inquiry into such distributed realities and some possible guiding criteria for fieldwork into the fragmented, heterarchical spaces of postmodernity. A Punk metaphor of research will be articulated in its cultural background and employed to convey the conflicting positions of different social actors implied in communities which are both fragmented and deeply networked I will argue that any methodology which seeks to convey the richness of such new, emerging learning ecologies needs to work as a patchworking to avoud "taming" them to the implicit limitations of academic discourse. The Chapter will then go on to examine the epistemological consequences of such apparent despacialization as troubling the representation of experienced fieldwork. The pertinence of mainstays of western epistemology such as the map metaphor will be challenged and complexified, and alternative interpretations proposed as relevant in deconstructing, disrupting, and promoting a refreshed view of, current inquiry practices.

The global networks and the ivory towers: a qualitative choice

I have closed the preceding Chapter by touching on the proliferation of narratives brought on by the global reach of information and communication technologies, and discussing how these socio-technical phenomena deeply impact the configurations of the spaces of learning and knowledge reproduction, that is, the spaces of institutionalized learning. In doing this, as I have hinted, the spread of these technologies does not only impact institutional spaces of learning, as in the hierarchical disposition (and I use this word echoing Foucaultian theories of *dispositif,* as in the material and symbolic apparatus which shapes governing and disciplining; see Foucault, 1975; Massa, 1987) of teachers and learners in formal settings, but it also produces a particular kind of learners, those who are supposed to not only rehiterate and transmit, across generations, established knowledge, but to produce, share and promote fully original one: scholars and researchers.

While the closing part of Chapter III was preoccupied with large scale practices and politics of knowledge, this Chapter will be focused on methodological issues, more contexualized practices and politics of research, fieldwork and representation. To do this I will use many times the pronoun "we"; this choice is meant to address my fellow researchers, and to convey a strong sense of belonging to a research community, a community which, in its practices, institutions, organizational hierarchies and membership structures, is, understandably, quite different from those I study in this dissertation (a difference which led to difficulties in fieldwork which will be discussed later in this Chapter and, in detail, in Case I).

Almost forty years after the so-called "Narrative Turn", which showed the fundamental character of subjectivity inherent even in the work of hard sciences (Woolgar & Latour, 1979; Knorr-Cetina, 1981), issues of unacknowledged incommensurabilty, dis-connection and lack of communication plague and fracture the scientific community, leaving it deeply divided, as neopositivist epistemology still constitutes a persistent cultural hegemony which progressively falls short in tackling the loss of omnicomprensive forms of rationality due to the proliferation of narratives. This "loss" lies at the root of the postmodernist perspective, the rise of *"polymorphous correlations in place of simple or complex causality"* (Harvey, 1990). Subsequently, innumerable "posts-" were raised, aptly reflecting the complexity and fragmentation of the present historical moment, but risking further incommunicability and divisions, or even becoming disjoined from the social world in their deconstruction-oriented, theoretically focused endeavours (Appadurai, 1990).

To further epistemological biodiversity and an actively engaged positioning, I will draw distinctions throughout this Chapter to clarify my epistemological stance, field of research and cultural milieu. My epistemological perspective and methodological approach will be referred to as "Punk", a

provocative metaphor based both on autobiographical experience and sociocultural representations. In this metaphor contested dynamics and paradigmatic controversies can take a new order of meaning, complexity and diversity, as well as new possible syntheses, within current media ecologies.

As shown in the last Chapter, each day more than yesterday humanity, through the ever-spreading connections generated by "Web 2.0", gives life and visibility to billions of points of view, billions of stories, a colossal narrative production which can not be undervalued as mere "entertainment", empty of any knowledge value, or even as meaningless "noise" for its "informal", playful nature (El Abaddi, Blackstrom & Chakrabarti, 2011). This production must be somehow taken into account, not least because it questions the core criteria of the hegemonic scientific thought: what is the "validity" of these points of view, dialogues and stories, from a scientific standpoint? Are they "verifiable" and "generalizable"? Do they constitute "evidence"? Do they effectively constitute "Data", or , better, are there procedures which can be employed to make them into "Data"? And even so, how can researchers in human and social sciences manage such an humongous amount of them?

So-called "Big Data" and "Data Mining" approaches (see Sharma et al., 2011 and Larose, 2014, for in-depth tractations) seek a quantitative and discrete ordering of such unprecedented orders of magnitude of content, although, at the same time, they also risk magnifying to an unprecedented order the problematic aspects inherent in quantitative approaches, eliciting a variety of connected and articulated criticisms, on pragmatic, epistemological and political grounds.

On a very pragmatic level, these machinized quantitative approaches constitute yet another instance of the above discussed "technopoly": as the means of knowledge production become more and more technical and automatized, and "data" are generated on such scale that can be processed only by machines (Longo, 2015), to adopt fully and unreflexively quantitative approaches in this age of "data overflow" means not only to expel subjectivity , but indeed to expel the human component from research itself, leaving the core of its practices fully in the hands of machinery (and of the extremely restricted technical elite which produces and markets such machines or softwares, a group of experts which are much closer to software engineering than to human sciences; see Ritchie et al., 2013, on the ascendance of Computer Assisted Data Analysis and its market oriented bias and problematic issues).

On a connected epistemological level, critics of "datafication" point out that quantitativization on such a global scale risks further magnifying the unavoidable simplification inherent to modelling (a problem on which Wiener, 1947, playfully quipped: *the best material model of a cat is another, or preferably the same cat"*), confusing mere informational mass with complexity: among others (see,

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Crawford, 2011, and Wang, 2013) American Anthropologist's chief editor Tom Boelstorff (2012) argues that qualitative inquiry, and especially ethnography, has always been about "Big Data", if by "Big" we mean complex and multilayered. There is a deep epistemological difference in what is considered the "stuff of inquiry" (Markham, 2013) by the two approaches, which, despite all efforts at "mixed methods", manifest a deep incommensurability which must be at least acknowledged to be made proficuous through possible, informed juxtapositions.

On a political level, these "massive data" approaches mark a further development toward an objectivist stance, rooted and legitimated by the sheer force of numbers, in a distorted, manipulated version of both rationalism and democracy. In fact those are not built on the dialectics of descriptions and plurality of discourses but on legitimation of centralized uniformity, a "mainstream" which most often conforms to the interests of neoliberist market economy and promotes taylorization of academia (see, Dominelli & Hoogwelt, 1996). These are what American Professor of Communication (and main editor of the bulwark of Qualitative Inquiry that is *The Sage Handbook of Qualitative Research*) Norman Denzin refers to as *"The Politics of Evidence"* :

> *Like an elephant in the living room, the evidence-based model is an intruder whose presence can no longer be ignored. Within the global audit culture* [see Habermas, 1972] *experimental methodologies, randomized controlled trials, quantitative metrics, citation analyses, shared data bases, journal impact factors, rigid notions of accountability, data transparency, warrantability, rigorous peer-review evaluation scales, and fixed formats for scientific articles now compete, fighting to gain ascendancy in the evidence-quality-standards discourse.*   N. Denzin, 2011, p. 645

Given this pragmatical and political relevance of methodological discourses, I want to highlight how, even having pinpointed some of their most critical pitfalls, I do not intend to suggest a complete refusal of quantitative methodologies, of any of the above mentioned methods of standardization, nor, most relevantly, an abjuration of rationality in favor of some vague and muddled "dabbling in emotions and hinting at implications" (Bateson, 1982).

I want instead to earnestly make visible my personal and political motivations for a strong choice in favor of qualitative methodologies, linked to how, in the age of networks, the epistemological quandaries and the socio-political consequences of the cultural hegemony of quantitative, neo-positivistic approaches to knowledge production have become more and more evident (pun intended) and socially divisive. The above mentioned "audit culture", the global apparatus of technologies and systems of accounting which measures outcomes and assesses "quality" in terms

of so-called objective criteria (Habermas, 1972; Denzin, 2005) clashes with the emergence of a polymorphous global individuality (see Popkewitz & Rizvi, 2009) conveyed by the networks, and the latter's implied qualitative sensibility, one that can preserve subjectivity, and an ethical and aesthetical sensibility among the encroaching machineries of efficiency. This contested dynamics might, if attended to, give way to re-structurations of our role as researchers within a networked society which envelopes us and brings us down from our teaching desks and out of our laboratories, which brings us as peer citizens among peer citizens of the "Global Village".

My choice of quality over quantity is therefore to be intended mainly as a preoccupation with the increasing marginality and distantiation of the roles and the places of knowledge production in society as a whole (see Lorenz, 2012, on neoliberalist surveillance and seclusion of universities), as academics face the choice between being perched on higher and higher Ivory Towers of specialization and theoretical self-referentiality (see Bok, 2009; DeCarlo Vanini & Perrin, 2014) or being trapped within private-funded, data-oriented Ivory Bubbles (paraphrasing Pariser, 2011, and his "Philter Bubbles", addressing the problem of self-confirmation inherent in being able to choose, if often unreflexively, among the current information overflow; see also Deuze, 2012).

As an alternative to both elitistic high culture and efficientized, market-oriented technocracy, perspectives sharing a foundation of objectivization and distantiation from the worlds we research into, we can use the opportunities offered to us by information and communication technologies to immerse ourselves deeply in the processes that we study. In fact these technologies can partially overcome barriers of space, time and culture, and enable us to offer our skills to create shareable narratives, not necessarily destructive, prejudiced or instrumentalized against the narratives of marginalized individuals and communities (Miller, 2012).

The strong heterarchical push of these technologies and the deep sociological and epistemological mutations they entail, could find recognition as a push for present and future developments in human and social sciences: the increased accessibility to narratives brought on by information technologies, which I discussed last Chapter as integral part of the Mind (Bateson (1972), offers manifold new fields of inquiry, education and intervention, as well as new points of view on the most classical themes of inquiry into cultural, social and psychological dynamics. The conflict between abstraction and objectification in current academic discourse and the overwhelming abundance of narrative and historical thought is what originally brought Austrian philosopher of science Paul Feyerabend to express what amounts probably to his most famous (and often decontextualized) statement, as contained in *Against Method* :

To those who look at the rich material provided by history, and who are not intent on

*impoverishing it in order to please their lower instincts, their craving for intellectual security in the form of clarity, precision, "objectivity", "truth", it will become clear that there is only one principle that can be defended under all circumstances and in all stages of human development. It is the principle: **anything goes.***

<div align="right">P.K. Feyerabend, 1975, p. 27-28</div>

The argument of the so-called "Father of Epistemological Anarchism", is, if taken at face value, impossible to support in its most extreme deconstructive consequences. However (as discussed by Smith & Hodkinson, 2005) the admittedly strongly relativist position that "anything goes" is not to be intended as tout-court, as a void of meaning, orientation and rigour: on the contrary, it is an appeal to honesty and respect toward the complexity of the world, it forces us to confront themes which have been expunged from scientific discourse by its current quantitative, objectivistic and Cartesian bent, such as quality, as well as aesthetics, ethics, politics and, maybe most importantly, choice and possibilities.

The fabrication of Facts and Worlds

As it is evident to each and every *subject* that not "anything goes", be it for personal, epistemological, political or ethical reasons (Smith & Hodkinson, 2008), it is therefore precisely in an explicit confrontation with the impossibility of omniscient eclecticism (see also Bourdieu, 1980) and with the ethical quandaries of relativism that the problem of *choice* in methodology can emerge in all its strength (Lincoln, Lynham & Guba, 2011). Indeed, critical researchers (among which Denzin & Giardina, 2009) have charged that research methods which lean toward positivism often ignored questions concerning *what should be*. The attempt to produce "facts" which are empirically verifiable takes precedence over the search for purpose, meaning, and ethical outcomes (see Guba & Lincoln, 1994).

My starting point, in highlighting the political stance of my choice of qualitative methodologies, is that there are many questions in human sciences - especially questions in the politically and ethically fundamental field of education - which do not lend themselves to simple quantification, to objectification, to management-oriented modelization. Any attempt to simplify these issues will result in a violation of their fundamental character of complexity, a violation which, due to the diachronic character of educational institutions, will have the widest impact on the variety of possible futures (see Fornasa & Morini, 2012).

In the critical exploration of such contested and politically relevant epistemological fields, the

current socio-technological environment can indeed provide us with useful lenses to highlight how science can embrace the complexity and plurality of voices and even their incommensurability and incoherence to keep talking of and to the world. It is necessary to remember, as Heinz Von Foerster did in *Observing Systems* (1983), that "computation", the core activity of current electronic extension of man, originally means "putting together". I would of course not be the first to suggest how technological advancement and epistemological examinations are closely weaved, as, starting at least from Galileo's technologically mediated observations, "*the objects of science are immanent in technical procedures which construct them, and in the collectivities which circulate them*" (Levy, 1995 pp. 120; see also Harper, 2000). Among the most relevant discussions of such weaving, French philosopher, anthropologist and sociologist of science Bruno Latour, founder of the disciplinary field of Science, Technology and Society, evidences the role of technology as embedded in any kind of scientific reading, and in the political discourses which shape the limits of knowledge-making practices. While referring (as much of Latour's research) specifically to the practices of hard sciences, a paradigmatic example of this perspective can be found in the subsequent fragment, which discusses Anglo-Irish physicist Robert Boyle's first public experiments with a void pump during the seventeenth century:

> *Instead of seeking to ground his work in logic, mathematics or rhetoric, Boyle relied on a parajuridical metaphor: credible, trustworthy, well-to-do witnesses gathered at the scene of the action can attest to the existence of a fact, the matter of fact, even if they do not know its true nature. So he invented the empirical style that we still use today. Boyle did not seek these gentlement's opinion, but rather their observation of a phenomenon artificially in the closed and protected space of a laboratory. Ironically, the key question of the constructivists– are facts thoroughly constructed in the laboratory?– is precisely the question that Boyle raised and resolved. Yes, the facts are indeed constructed in the new installation of the laboratory and through the artificial intermediary of the air pump. [...]* **'Les faits son faits': 'Facts are fabricated'**, *as Gaston Bachelard would say.*
>
> <div align="right">B. Latour, 1991, p. 18</div>

I have discussed at length the influence of technological innovation on the dynamics of cultural production in Chapter III, so it should not take the reader by surprise that I now discuss the technological apparatuses that enable novel pathways and patterns in the production (or fabrication) of facts. By "fabrication" I do not intend to imply any deceptive character, but I instead want to

underline the contextualized, technologically mediated co-construction of "scientific facts". Such conflicts on "facticity" (Meilassoux, 2008) rage on to today, made worse by our technologically enabled fabrication capacity: while, during the 17th century the construction of a void pump constituted a remarkable technological effort, today the creation of whole worlds is par for the course, in that whole worlds are digitally simulated in the effort to test or disprove hypotheses (Longo, 2010). And new, whole worlds are also created just to play within and with them, I will add.

We shouldn't be, however, confounded by any supposed special character of these practices as technologically mediated: this same character of fabrication pertains to each and every human endeavour, at least since the inception of language (see Ong, 1982, on the "natural artificiality" of humans; also Boyd, 2009), but today this happens more globally and more visibly, and thus more open to discussion and reflection. I have hinted in the last part of Chapter III how the claims for legitimation of "one's own story" could in fact bring on something much more revolutionary than a "paradigm shift", i.e. a move toward "syntagmatic thought" and even beyond the divide of thought and materiality in itself, to accept the com-presence of heterogeneous and incommensurable elements in a disomogeneous relational universe (Carmagnola, 2003).

And yet, in this fragmented and overflown age of networks, the classic, positivist scientific method is still usually understood as a set of procedures through which to fully transcribe "reality" as in a mirror (Rorty, 1979), making it accessible, verifiable and reproducible. However the metaphors of transcription and reproduction of scientific data are in themselves deeply gutenbergian, in that they entail a technopolistic system of reproduction and distribution of knowledge which strongly favors the written word, and its organization in a linear, categorizing, hierarchical and finite fashioning. Much of our scientific reasoning is, indeed, marked by the gutenbergian technopoly at its core, as Postman, echoing McLuhan, writes:

> *It is as if nouns battle verbs for dominance as our seminal metaphors. The nouns mostly win or have won, up to now. Marshall McLuhan implies that the dominance of the noun metaphor is, to a considerable extent, a function of an ABC-minded, alphabetic-writing, and print-oriented culture. With the advent of electricity and electronic media, process metaphors seem to be increasing in currency and may, in the end, prevail.*
>
> N. Postman, 1969, p.72

These shifts in the patterns of written word from nouns to processes pertain my work itself: as I am writing this dissertation, my advisor helps me to reflect on my writing, noting how it is too often

meta textual, in that it contains self-reference and contextualizations (just as I am doing now), in a fashion which is closely echoing (if limited by the required linearity of academic writing) the language of coders (see Murray, 1998, on the similarities, distinctions and intersection between the language of narrative and that of information sciences). My writing, I realized, is also nearly hypertextual, in that it often favors links and quick references instead of depth, similar to the "anarchistic, wikified" knowledge I discussed above (Suoranta & Vaden, 2010). My writing is messy as I write of messy themes, and wouldn't feel adequate any other way. Are we, as researchers, really reaching a critical threshold in the elaboration of the methodological discourse? Has the messy character of our world finally entered, through "electric media", the orderly, neat and hierarchical world of the academia? And, as a subject, what is my positioning in regard to this mess?

A Punk attitutude for research, or of values and mess in a crumbling academia

In confronting the complexity, diffusion and messiness of the present age, British sociologist of science John Law, member of the Latourian school of Sociology of Science, in his *After Method: Mess in Social Science Research* puts forward a very strong, if problematic, position: being the social world such a messy place would anything less messy make a mess of describing it? Or, to quote him more at length:

> *I'm interested in the politics of mess. I'm interested in the process of knowing mess. I'm interested, in particular, in methodologies for knowing mess. My intuition, to say it quickly, is that the world is largely messy. It is also that contemporary social science methods are hopelessly bad at knowing that mess. Indeed it is that dominant approaches to method work with some success to repress the very possibility of mess. They cannot know mess, except in their aporias, as they try to make the world clean and neat. So it is my concern to broaden method. To imagine it more imaginatively. To imagine what method – and its politics – might be if it were not caught in an obsession with clarity, with specificity, and with the definite.*   J. Law, 2011, p.6

Law's argumentations once again push toward the issue of choice in methodology, acknowledging it as a possible antidote to our "methodological instincts" that is, the tautological explicatory principles (Bateson, 1972) that put boundaries on discourses pertaining our research practices, the disciplinary push to clean up complexity and tell linear stories, stories that are **manageable**, that is,

open to be made into objects.

In focusing the core of Law's critique, it is important to notice that its first point of interest is about the **politics** of mess: it's not any inherent truth-value which should guide us in seeking to embrace and allow for mess (and indeed, Foucault warns us against any truth-regime; Foucault, 1980), but a preoccupation with the political consequences of the expunction of mess. In discussing those consequences, and in accordance with a Batesonian perspective, I do not intend to promote "muddled" thought, quite the contrary: my preoccupation is with clearly pinpointing emerging contexts and patterns of knowledge production which, by virtue of their messiness and living character, are inherently **not manageable** by institutionalized knowledge production practices, lest they lose their creative potential. Such unmanageability will be addressed through the metaphor of that of "Punk Methodologies".

Punk methodologies do not imply pre-determined procedures, since methodologies are discourses on and of method that offer political and ethical grounding to polymorphous and hybrid practices. Before expounding the diverse academic precursors of such a perspective, I will take a short autobiographical detour, to explore the definite, personal legitimation in my use of the punk metaphor. This discursive possibility first came into my mind as a realization, as I watched Nora Bateson's documentary on her father's work, *"An Ecology of Mind"* (2010), and I heard the author discussing the possible implications of her father's thought for societal restructuration:

> *Blake said 'if a fool should persist in his folly, he would become wise'...Are we there yet? What's on the other side of the garden door is total obsolescence...and freedom, and maybe another sort of democracy. It's christian, it's buddhist, muslim, pagan, it's jewish, and radical, and conservative...It's **totally punk rock.** It's authentic, and it questions authority, questions it 'til it bleeds with the authenticity of the unseparated.*
>
> <div align="right">N. Bateson, 2010.</div>

This metaphor struck me like a revelation, touching aesthetical and political threads of my personal experience as a teenager, characterized by an undercurrent of explosive intolerance, a (most often quiet, sometimes self-destructive) rage against the mortifying rigidity and deathly seriousness of school and government. Most of all, against their all-too-many answers, as opposed to their lack of questioning.

During a visit of Nora Bateson at the University of Milano-Bicocca, I had the opportunity to discuss this metaphor face-to-face after a screening of the documentary: we discussed how the scripts of power, those relational patterns employed by the physician, the politician, the therapist, the

educator, the researcher to be invested with prescriptive authority are those same patterns which, on the contrary, deprive them of credibility and sensitivity. We discussed how renouncing naming (and thus labeling) does not necessarily lead to confusion, but can also leave spaces open to meaning making. We discussed how "poetic disobedience" can be employed in an effort to disrupt and disengage from older ways of thinking.

We discussed this while in a conference room, but when, a couple hours later, we had the opportunity to continue our chat at a pub, the quality of our discourse was different, deeper, freer and more critically poignant, echoing another informal, personal communication I had with Canadian sociologist Bart Simon: "*True critical evaluation happens at the pub".* While this, apparently quite unserious, notation might look out of place in a dissertation, it is actually a key point to my argumentations, highlighting how the spaces of conviviality, freeform creativity, the spaces of true playfulness, are, most often, pushed to the fringes of the academia, inhabited by the very same people that work in it, but in different contexts and (therefore) with different modalities.

Part III of the dissertation will explore this very issue through different perspectives in Case II and in the first section of Case III.

To give these fringe, informal spaces their due relevance, I ultimately chose to resort to a punk attitude in my epistemological framing, fieldwork practices and representation strategies, where by "punk" I mean, at least at this introductory point of the discussion (and using Wikipedia's definition) *"anti-authoritarianism, a Do-It-Yourself ethic, non-conformity, direct action, not selling out, and a strong value posed on upfrontness and authenticity*". The roots of this metaphor are artistic: Punk , as a musical and aesthetical subculture, originated from another wave of "electric" cultural appropriation.

In fact, as electrical musical instruments and recording implements became available to wider audiences during the Sixties, so called "garage-rock" bands emerged, ensembles whose young members received little if any formal training in musicianship, and whose performances, often intentionally raw and crude, often revolved around the traumas experienced within institutionalized learning spaces, or the arbitrary character of social mores (see Widdicombe & Woofit, 1995, for a much more articulated historical perspective on punk cultures, which is beside the intended scope of this segment). Inherently (and intentionally) fragmented and marginalized, punk cultures adopted an adaptable, patchwork, "make-up-as-you-go" attitude, a "stylistic bricolage" (Shuker, 1988) which manages to incorporate and criticize elements of the hegemonic culture to refigurate their uses and meanings, in a re-compositional practice of cultural exaptation (Gould & Vrba, 1982; Brown, 2009; Pievani, 2014).

This adaptability of punk cultures soon manifested its polymorphous influence on a wide variety of

post-modern, politically charged low-culture narratives. In 1984 American science fiction editor Gardner Dozois uses the word "Cyberpunk" (itself appropriated from a short story by Brian Bethke, 1983) to describe a then emerging meta-narrative in science fiction stories, one which closely connected the emergence of cybernetic technologies and "cyborg" discourses with a widespread breakdown of the established societal order (among others see the works of William Gibson, Bruce Sterling and Neal Stephenson; see also Novotny, 1997, for a review of the history of the genre). In just a few years the suffix "-punk" rapidly came, through its original incorporation in the term "Cyberpunk", to characterize a wide set of hybrid, technologically diverse narrative genres ("Steampunk", "Dieselpunk", "Biopunk", "Nanopunk"). As the musical genre which gave them rise, these emerging strands are characterized by a caustic questioning of established authority, and use the same composite, *bricoleur* style and themes to reflect on possible, often dystopian, scenarios of social restructuration brought on by fictional (that is, "fabricated") variations in the history of technological infrastructure (see Kowalewski & Szkuat, 2009, for an examination of the diverse semantic wanderings of the word "punk"), thus exploring the com-positional relationship of science, technology and society to suggest a *bricolage* of possible worlds.

These "blurred genres" (Denzin & Lincoln, 2001) lead us back to the core methodological discourse of this Chapter, as the metaphor of the critical *bricoleur* is, of course, not new to the "fabrication" of cultural worlds, originating in the writings of French anthropologist Claude Levi-Strauss, who used this concept to describe how mythological (that is, narrative) thought can create novel solutions using material already available in collective social consciousness (Levi-Strauss, 1962). This po(i)etic process looks for not yet imagined tools, fashioning them with not yet imagined connections. Joe Kincheloe, echoing Denzin and Lincoln methodological take on *bricolage,* highlights its criteria of relevance and its politically charged implications:

> *"To better interpret, criticize, and deconstruct, Denzin and Lincoln call for bricoleurs to employ hermeneutics, structuralism, semiotics, phenomenology, cultural studies, and feminism, [...] in the proto-articulation of a new rigor - certainly in research but with implications for scholarship and pedagogy in general. This rigor in the ruins of traditional disciplinarity connects a particular concept - in contemporary education, for example, the call for educational standards—to the epistemological, ontological, cultural, social, political, economic, psychological, and pedagogical domains for the purpose of multiperspectival analysis."*   J. Kincheloe, 2001, p.682

A polymorphous, composite "rigor in the ruins of disciplinarity" is a fitting definition for a punk

attitude, which intends to uphold political and ethical values even in this historical conjuncture where knowledge-making institutions have incresingly socially disengaged models and procedures, in a technocratic/bureaucratic dystopia of regulations and standards. The regulatory necessity that shapes the internal politics of funding within the academia, and the selection of "legitimate" paths of social research is a conflictual space, often reflecting generational conflicts, as narrated by Ruth Nicole Brown, Rozana Carducci & Candace R. Kuby, in their *Disrupting Qualitative Inquiry:*

> *"Innovative ways of being a researcher and doing qualitative research are often met with resistance in the advising meeting, dissertation proposal defense peer review process for publication, funding, or promotion and tenure. Wheter in actual conversations with mentors, instructors, and colleagues or through subtle, nonverbal cues communicated via actions, educational researchers seeking to engage in new ways of producing and disseminating knowledge often hear 'This is not how we do things in the academia. This is not how educational research has been done before'"*
>
> N. Brown, R. Carducci & C. R. Kuby, 2014, p.2

As we have read in the above fragment, marginalized, politically charged approaches toward inquiry are often disqualified on the ground of evaluation, that is to say on the ground of quality itself. Or, in british slang, they are often considered to be punk and, accepting and furthering this appellative, they can constitute areas of resistance to normalization and conservatorism. The Punk metaphor can be indeed understood to constitute a strong, if undetected, undercurrent in today's methodological discourse, with its ironic cultural overcharge. It entails that actors within academic contexts don't speak with a unified voice (or even with neatly distinct, paradigmatically characterized voices), but indeed participate of different languages of different generations by which they are inhabited.

The current generation of established (that is, tenured) qualitative researchers is the first to be made of people who have spent their entire career struggling to legitimate a plethora of approaches which never achieved mainstream relevance: qualitative, feminist, poststructural, postcolonial, queer forms of research are still scarcely valued, both on an epistemological and methodological level. Still, this first generation of innovators pushed and pushes on, often taking up musical and artistic metaphors grounded in the art forms practiced by marginalized minorities, metaphors which helped them to challenge faculties composed mostly of powerful, senior, white males (Brown, Carducci & Kuby, 2014).

As a 30 year old, non-powerful white male, as a learner and researcher-in-training, as a *punk*, as a

nerd and as an admirer of both hard science and low culture disruptive art forms, and as someone who mistrusts (most of the above) labels, I was always interested in "patchwork" methodological discourses, and inclined to the deconstructive, politically charged argumentations that I am trying here to formalize as Punk methodologies. However I feel the need, in proposing such a possibly contested metaphor, to add some more metatext, and to look for further traces on the edges of academic discourse.

Among those "first generation" epistemologically art-influenced approaches it is possible to find Stephen Nachmanovitch (1990) and Mary Catherine Bateson's (2001; 2010) discussions of jazz and improvisation (which, I want to underline, was born as a marginalized music form among slaves, and was a inherently multicultural since its inception; see Shipton, 2007), highlighting the unforeseeable component of inquiry into social realities. This point of view was fully established and examined in depth by Oldfather, in his essay *Qualitative research as Jazz* (1994)*,* where the author highlights the preminent role of improvisation and adaptability in qualitative inquiry practices:

> *The jazz metaphor creates a pathway for making explicit the tacit understandings that enable us to make our way as researchers without fully orchestrated scores. As jazz is guided by a deep structure of chord progressions and themes, qualitative inquiry is guided by epistemological principles, socially constructed values, inquiry focuses, and findings emerging through analytic methodologies such as constant comparison.*
>
> <div align="right">P. Oldfather, 1994, p.3</div>

A similar low culture metaphor, (and one that is more close to 21st century musical sensibility and to current media ecologies), that of "remix", is discussed by American internet researcher and "nomadic scholar" Annette N. Markham. She highlights the charged nature of the term "data" itself as a frame which, in an age of networks where "within" and "without" are strongly blurred, can obscure relevant qualities. Hence, we need to face the selective nature of methodology, and to develop alternative forms which select for properties other than order and linearity (Baym & Markham, 2009). Markham uses the art-based metaphor of "remix" (once, again one founded in the music of marginalized communities), i.e. the practice and product of taking samples from audio tracks and putting them together in new and creative ways; a practice which originated among afro-american communities, then spread beyond music and became a staple of online interaction with the emergence of Web 2.0. Remix, Markham suggests, can indeed be a useful metaphor for research in such environments:

"Taking a remix approach begins with the premises of a bricolage approach and then shifts to a level we might call 'below method,' where we engage in everyday practices of sensemaking. The concept of remix highlights activities that are not often discussed as a part of method and may not be noticed, such as using serendipity, playing with different perspectives, generating partial renderings, moving through multiple variations, borrowing from disparate and perhaps disjunctive concepts, and so forth. [...] The elements of remix --generate, play, borrow, move, and interrogate, usefully resist disciplining and can prompt more freedom [...] Each outcome is an iterative rendering. Each is a work in progress. All are possibilities. A. Markham, 2009, p. 244*

Once again bricolage comes up as a key metaphor for methodological approaches that are able to tackle the fragmentation, complexity and messiness of the current historical conjuncture. It is within such panorama of bricolage-related approaches that American scholar and educator Yvonna S. Lincoln, main editor with Norman Denzin of the *Sage Handbook of Qualitative Research,* offers a final, if subtle, legitimation of the Punk metaphor in discussing methodology, when she explores the politically engaged bricolage perspective by using a poignant, punk metaphor, taken straight from the scraps of popular culture:

Fieldwork—including both method and representation— might be viewed as a jerryrigged operation. The appropriate metaphor here is Mad Max's car: parts and pieces assembled from scrap, from what comes to hand, which nevertheless runs across inhospitable and dangerous terrain. Y.S. Lincoln, 2001, p.693

This passage about Mad Max's car, no matter how whimsical it may look, is central (together with Markham's "remix" metaphor and earlier art-influenced approaches) to build an understanding of the ongoing cultural shift in the dynamics of hegemony in the academia, where fluid metaphors are taken from contemporary, "unserious", cultural narratives, and new, emerging generations of scholars adopt adopt them, mutuating from their plural and fragmented historical and cultural milieu. To expound on the example above, *Mad Max*, an independent dystopian movie series started in 1979, tells the story of how, after a major energy crisis (rooted in the actual historical facts of the 1973 oil crisis), social order is breaking down at the outskirts of civilization, giving rise to scavenging gangs on makeshift vehicles. This peculiar narrative makes this series a preminent example of what would much later be called the "diesel-punk" genre. Lincoln uses this colorful,

popular, punk metaphor as a paradigmatic example of the above discussed critical bricolage of low culture genres (the action movie) and global political issues (the energy technopoly) to suggest us to be politically and socially engaged, to be adaptable and sensitive, even in the ruins of high culture and disciplinarity, even if our methods (that is, etymologically, our paths) might be rough and tumble.

Given these complex and multifaceted tensions of politics and epistemology, which criteria could help us, as researchers and educators, in conducing relevant and disruptive research? How to conduct and trace fieldwork in this messy knowledge ecology? How to accept this com-presence of multitudes of points of view? How to be truly punk in our fieldwork practices and representations?

Punk Ethnography: odds and ends, cultures and rules, cases and sketches

On the foreground of a punk attitude, as discussed above, there is adaptability and fragmentation. Similarly, in discussing ways to convey the aesthetic relevance, complexity, and fabricated character of human endeavours, M.C. Bateson argues that, if life is a fragmented, non-foreseeable narration, is an art form, characterized by improvisation and multiplicity of materials:

> *I believe that our aesthetic sense, whether in works of art or lives, has overfocused on the stubborn struggle toward a single goal rather than on the fluid, the protean, the improvisational. We see achievement as purposeful and monolithic rather than something crafted from odds and ends, like a patchwork quilt* M.C. Bateson, 1991, p.4

Indeed, if we believe this "patchwork" metaphor to be ermeneutically useful and ethically respectful in regards to exploring lives, an account of lives which is constructed on the main criteria of neatness and precision risks to expunge the most lively and living components and visions of social realities. These patterns cannot be reconduced to all-encompassing theoretical frames, but must be recognized in their character of unforeseeable, unmanageable emergence from "small stories" (see Bamberg & Georgakopoulou, 2004), or, using more widespread scientical lexicon, as "case studies". Indeed, in the world of networks, any single node (or small group of nodes) can assume global relevance in kickstarting wide-reaching social phenomena and in disrupting established social order, as demonstrated by the role of social networking services in the so-called "Arab Spring" (for an in depth tractation of the theme, see Egyptian activist Wael Ghonim's *Revolution 2.0*, 2013) or in the leaks of embargoed, politically sensitive informations (Paivikki, 2012).

These mediated dynamics call us to inquire into such small realities, to look into them for

reflections of the whole and vice-versa, working both to create new connections and to deconstruct the abstracting push of hegemonic epistemologies. Danish economic geographer and philosopher of science Bent Flyvbjerg, exploring the epistemological push away from particularities brought on by positivist science, pinpoints and elaborates on five common misconceptions regarding the relevance and epistemological character of so-called case studies, highlighting this methodological choice as particularly critical in pinpointing some widespread oversimplifications in scientific discourse, where:

1. General, theoretical knowledge is more valuable than concrete case knowledge.
2. One cannot generalize on the basis of an individual case; therefore the case study cannot contribute to scientific development.
3. The case study is most useful for generating hypotheses; that is, in the first stage of a total research process, while other methods are more suitable for hypotheses testing and theory building
4. The case study contains bias toward verification, that is, a tendency to confirm the researcher's preconceived notions.
5. It is often difficult to summarize and develop general propositions and theories on the basis of specific case studies.

Following Flyvbjerg's reasoning (2011), and regarding it as a possible avenue for the above discussed "punk" disruption of hegemonic, homogeneity oriented scientific practices, Part III of this dissertation will be structured in separate but linked "cases", which will be used as composite counterpoints to the above mentioned misconceptions, and as "odds and ends" weaved to once again underline the "patchwork" character of apparently cohesive social realities. My choice of a case-based methodology is also due to an evolutionarily inclined sensibility on my part, which lends a great relevance not only on great narratives, all-encompassing descriptive frameworks, but acknowledges their roots in details, accidents and peculiarities, as discussed by Stephen Jay Gould and American psychiatrist Oliver Sacks in the introduction of *The Structure of The Theory of Evolution*:

> *Oliver said that he envied me because [...] I had enjoyed the privilege of devising and developing a general theory that allowed me to coordinate all my work into a coherent and distinctive body, whereas he had only written descriptively and aimlessly, albeit with some insight, because no similar central focus underlay his work. I replied [...]*

that he certainly held such an organizing concept in his attempt to reintroduce the venerable "case study method" of attention to irreducible peculiarities of individual patients in the practice of cure and healing in medicine. Thus, I argued, he held a central theory about the importance of individuality and contingency in general medical theory, just as I and others had stressed the centrality of historical contingency in any theoretical analysis and understanding of evolution and its actual results.

S.J. Gould, 2002, p.37

Indeed, in our globalized age, the concept of contingency as meant by Gould can help us to reevaluate and preserve the roles of individuality, particularity and locality. A "punk" attitude toward methodology can help us to overcome the dualism between individuality and community, and recognize the clash of differences around common interests and a critical, non-normalized outlook as organizing principles around which truly innovative cultures and communities can be born, resignifying the deterritorializing push of networking technology and resisting an encroaching cultural and organizational uniformity due to the spread of capitalist economy, a "Fordization of the Mind" (Fornasa, 2012).

In 1992 French anthropologist Marc Augè, observing the architectural and organizational homologation (that is literally, the reduction in the variety of discourses) in the proliferation of the spaces of movimentation of both people and goods brought on by globalization, be them airports, malls, highways or elevators, coined the neologism *non-lieux,* "non-places" to define such contexts, in contrapposition with "anthropological places" which are characterized as a-identitarian, a-relational, a-storical. While the spaces of online communication in general might, at an outsider glance, seem to be akin to this definition, British anthropologist Christine Hine, who in the nineties pioneered the fields of so-called "virtual ethnography" and cyberethnography, suggests that the spaces of online communication are among the most deeply relational and historical in our current social configuration, and indeed, as we reach the present day, Hine even suggests that, in our perpetually connected age, to do research in social realities while completely ignoring their interweaved "virtualities", the more and more pervasive "online" component of our lives, often means having an incomplete panorama of the situation at hand (Hine, 2012). Again Annette Markham, exploring research in online environments, highlights elements of interaction that are much more transparent in traditional face-to-face settings, and therefore can provide useful pointers for multi-contextual methodological reflection in our post-modern age, and, once again, help in questioning the arbitrariness of boundaries, as (Baym & Markham, 2009):

1. Boundaries between self and other are often unclear, particularly when information develops a social life of its own, beyond one's immediate circumstances.

2. Boundaries of situations and identification of contexts are often unclear as dramas play out in settings and times far removed from the origin of interaction.

3. Agency is not the sole property of individual entities, but a temporal performative element that emerges in the dynamic interplay of people and their technologies for communication.

These displacements of qualitative methodological discourse, together with the above discussed punk-informed preoccupation with "cultures of difference", lead to another key choice of mine: that of employing a "family" of approaches to the study of cultures developed within the field of anthropology, first and foremost ethnography, "the writing of cultures" that, as we have seen in Chapter I, has been pioneered by scholars of play. Without pretending to be an ethnographer, much less a scholar of anthropology in its most general sense, this choice pertains, once again, a strategy of disruption in the patterns of institutionalized production of knowledge, a "punk" re-composition of blurred, literary genres. This choice of method is threefold, and rooted in the writings of founding fathers (and a mother) of this disciplinary field, authors who worked in the field of anthropology much before the above discussed "virtualized" perspectives emerged, but whose work still remain core to ethnographic practice, and helped me to embody the politically disruptive values of a "punk ethnography" approach.

The first of these authors is Margaret Mead who, after having explored cultural differences in a variety of locales, helped the practice of anthropology move away from its then exclusive interest in faraway communities of "savages" (Mead, 1959), kickstarting a disruption of its underlying colonialist discourse to bring the critical potential of the above mentioned diversity within western society (a poignant example of such dynamics is Mead's treatment of sexual mores, and its influence on then still in-embryo "sexual revolution"; see Lutkehaus, 1995). Mead was the first to recognize how ethnography is not a passive endeavour, one of mere description and amusement for "civilized" audiences, but can be a powerful political force, lamenting how *"Anthropology has to date made very meager contributions to man's developing concern with the future"* (Mead, 1978). This perspective oriented my fieldwork spacially and temporally, helping me to keep my focus on differences between contexts (be them real or virtual), and on the possible futures brought on by the spaces I explored, to question the "here-and-now" character of much academic research.

The second author is Clifford Geertz who, writing that "*The aim of anthropology is enlarging the*

universe of human discourse", emphasized games' role in such a process, in that they allow to interpret, re-interpret and, ultimately, acknowledge and widen the "webs of meaning" that, according to Geertz (himself following Weber, 1904) constitute the patterns of a culture and run the risk of entangling its participants. This perspective oriented my fieldwork thematically and semiotically, helping me to focus my attention on the generative aspect of playfulness itself, as a deep understanding of games, humour and jokes of a culture. This constitutes a necessary core for achieving *"the native's point of view"* (Geertz, 1973), while never forgetting that any account is, first and foremost, a *fiction*, a "play" itself, to question the serious, objectivistic character of much academic research.

The third author to guide my approach to fieldwork, and maybe the most resonant to me in his "nomadic" scholarly identity, is Pierre Bourdieu, who directly confronted the dicotomy of plurality and abstraction, and especially the contrast between the formalized order of theories and the emergent self-organization of practices, highlighting how this contrast is indeed one that is much reflective of current academic standings as pertaining to social sciences. Writes Bourdieu (1972):

> *With the excuse that to understand a foreign language it is necessary to know its grammar; scholars act just as the indigenous speakers of that language obey a grammar.*
> P. Bourdieu, 1972, p.81

The ethnographic practice of "coding" through which such a grammar emerges is bound to disciplinarity and the normalization of practices. A key issue of legitimacy raises in the networked milieu: are the representations of the "untrained" subjects, i.e. those trained into the accepted ways of scientific methodology acceptable as scientific accounts? Do insider theories have the same value of outsiders'? Do they have the same structure? Bourdieu, however, suggests that these questions are radically wrong: inhabitants of cultures do not have such systematic representations, and regulations of behaviour are often left to "fair play", to the same risky practice of fabricating and upholding "magic circles" that has been discussed in Part I of this dissertation, a practice which is both inherently playful and aesthetically complex. Again Bourdieu:

> *Less codified societies, those where even essential interaction is left to a sense of fair play, to improvisation, have a huge charme, and to survive it, to keep it under control, you will need to be an absolute social genius, to have an extraordinary sensibility to play.*
> P. Bourdieu, 1972, p.83

My choice of Bourdieu's approach to ethnography is also intended to echo his deep, reflexive awareness of the role of institutional limitations in the production of knowledge, suggesting that *"a sociology of sociology is a fundamental condition of sociology itself"* (Bourdieu, 1982.), and cultural production is "historical through and through". It is intended to echo his own "extraordinary sensibility to play". This perspective oriented my fieldwork with its tracing, annotation and coding strategies, for this helped me to focus my attention on the fabricated character of such accounts, and on the modalities in which such fabricated character being unavoidable, can at least be made evident and open to discussion through its very character of unconventionality and incompleteness, thus questioning traditional academic notions of authority and accountability.

Specifically addressing the theme of academic authority, in his writings as a philosopher, as a sociologist and as a cultural critic Bourdieu was always wary of what he called "the biographic illusion", i.e., the belief that a subject can write of his or her individual experience without reproducing societal infrastructures, especially if this subject is academically trained. Indeed, as pertaining research methodologies and scientific writing, Bourdieu specifically discusses how the "scholastic point of view" shapes the ways we, as researchers, approach our "objects of study". As we are pushed toward systematicity during all of our training, we tend to see systematicity in those things we explore and examine. We see cultural agents following clear, explicit, well established rules, we see them follow determinate and well thought strategies, because this is what we did to "survive" to a stage of education that allows us to make our first tentative forays in knowledge production (Bourdieu, 1988). Our decades as students, and our membership in a professional group create *"...a censorship effect which goes way beyond institutional or personal duties: there are questions which are not asked, because they touch on fundamental beliefs which lie at the bases of science and of the functioning of scientific reasoning itself."* (Bourdieu, 1982).

This censorship (or "habitus" in bourdieusian language) which leads us to seek for systematicity and order makes it hard to theorise (etymologically, to see) the "fuzzy", "messy" patterns of the social world, its practical, embodied, contextualized and therefore mutable nature, resistant to be encompassed in a system of knowledge production still deeply entrenched in machinistic epistemologies and practices. The researcher is at risk to find himself or herself *"mistaking the things of logic for the logic of things"*, to quote Bourdieu, himself quoting Marx (Bourdieu, 1973).

This same "orders of logic" risk to become even more muddled when discussing the dynamics of the internet, this apparent *non-lieux* which has indeed become not a discrete, virtual domain, but a daily, even unremarkable way of carrying out interactions, having transitioned in less than 30 years from a marginalized conversational space to an accepted, even required way of being present in the world (Hine, 2015). A Punk researcher will focus the unconventional, the resistant, the divergent,

thus going beyond linear logic which, as Bateson noted, *"is a poor model of cause and effect"*.

Still, the distinction between "real" and "virtual" is one that cannot be ignored. It is conveyed, first and foremost, through topological distinctions pertaining the relationship of different points and nodes, distinctions which seems to grow stronger and stronger as metaphors of "cyberspace" fall out of common use (Cohen, 2007), to be substituted by apparently "pure", de-localized networks. This semantic evolution challenges one of the most used metaphors, especially in the field of social sciences, that of "mapping". Are topological metaphors still useful for inquiry, or are they an obscuring and misleading impediment? And if this is the case, what metaphors could work in their place? How ecan the Punk scholar give a shareable account of his or her fieldwork experience, balancing between blind entanglement in obsolete metaphors and chaotic disintegration of meaning?

Maps of conquest, Sketches of utopias

Being indeed "mapping" the main methodological metaphor used in the title of this dissertation, it is necessary, in the interest of clarifying my epistemological position and leaving it open to discussion, to closely examine its implications and consequences, and its relationship with the "punk" metaphor, before launching into the Cases themselves.

Inquiring deeply into the very character of such a common metaphor in scientific discourse, we can notice how the often scarcely reflected-on mantra of "The Map is Not the Territory" is just as often selectively expunged from Austrian logician Alfred Korzybski's larger discourse. An original and scarcely explored thinker, Korzybski tried, in his *Science and Sanity* (1947) to formulate from the ground a wholly new "General Semantics", meant to avoid the pitfalls of Aristotelian logic. Tackling the problem of representation, both in scientific and in everyday contexts, to its most radical end, that of the core structures of our language, Korzybski writes:

> *As words are not objects - and this expresses a structural fact - we see that the 'is' of identity is unconditionally false, and should be entirely abolished as such. Let us be simple about that. This last semantic statement is genuinely difficult to carry out, because the general structure of our language is such as to facilitate identification. [...] Even science is not free from identification, and this fact introduces great and artificial semantic difficulties, which simply vanish when we stop identification or the confusion of orders of abstractions. [...] Difficulties in present theory are due, in the main, to*

semantic blockages or commitment to the structure of old language.

<div align="right">A. Korzybski, 1947, p. 263</div>

As discussed in this fragment, we researchers, as co-constructors of knowledge, have to be deeply aware that: 1) not only the two constructs of map and territory, as particular expressions of the separate orders of symbols and objects, are to be located on different logical types according to Russel's theory (1910; see also Bateson, 1972, for what is probably the most famous discussion of logical types, and Elkaïm, 1987, for further inquiries into the paradoxical epistemological implications of the map metaphor in costructivist epistemologies), and 2) any representation we propose to both evaluative institutions and the general public lacks identity with the "objects" of our research The best we can achieve is to provide a shareable and discussable punctuation of the "messy" flow of events, or, following Wittgenstein, to design a playable language game (see also Polkinghorne, 1983; Mäyrä , 2008; Kultima, 2010).

In highlighting once again the relevance of playful design, as discussed at length in Chapter II, we can acknowledge that a greater adherence of the map to the territory does not necessarily improve its usefulness, its "playability". In fact, the latter does not depend on the map's identity with territory, but lies mainly in the *differences* from it, mediated by analogy and metaphor. This is poignantly narrated by Jorge Luis Borges in this short "parabola" (1946):

> *. . . In that Empire, the Art of Cartography attained such Perfection that the map of a single Province occupied the entirety of a City, and the map of the Empire, the entirety of a Province. In time, those Unconscionable Maps no longer satisfied, and the Cartographers Guilds struck a Map of the Empire whose size was that of the Empire, and which coincided point for point with it. The following Generations, who were not so fond of the Study of Cartography as their Forebears had been, saw that that vast map was Useless, and not without some Pitilessness was it, that they delivered it up to the Inclemencies of Sun and Winters. In the Deserts of the West, still today, there are Tattered Ruins of that Map, inhabited by Animals and Beggars; in all the Land there is no other Relic of the Disciplines of Geography.*

The attempt to produce a correspondence between map and territory, fieldwork and representation, generates only an absurd confusion: the "quest" for the "one true map", as narrated by Borges, engenders a foolish competition, which is by necessity founded on a very restrictive number of criteria, therefore generating, if brought to the extreme, representations which are not evolutive,

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neither useful, or communicable; the representation, to be meaningful, needs to contain *differences* (from the territory) *that make a difference* (in its user).

Indeed any "map" is useful as long as it entails analogies *both* with the perceived patterns of the world *and* with the perceptual, cognitive and cultural patterns of its constructors and intended users, patterns which are, in themselves, inextricably weaved; the second set of analogies, that with its constructor and users, are, however, much more important. In fact any map that does not take into account its users and observers becomes unreadable and can bring to disaster, just as, on the contrary, a "false" map can still be useful as a space of discussion and language-play, adaptable and falsifiable, as long as it creates a community around it. A paradigmatic example of this paradoxical dynamic is poignantly expounded in this historical episode, as narrated by Italian psychologist Pietro Barbetta (see Barbetta, Capararo & Pievani, 2006):

> *During World War I a group of soldiers got lost on the Asiago Plateau, during a snowstorm. Then a soldier took out a map and said: "I have a map to get out of here, a map of this place". They started walking and reached the right place safe and sound. Their commander asked how did they find the right way, and the answer was that they had a map. Only, it was the wrong map, a map of the Pyrenees. It worked because the group trusted it.*   P. Barbetta, 2006, p. 141

This fragment inspired the title of my dissertation, as it redefines the map as a pattern of community building instead of a tool of representation. Doing qualitative research, especially in virtual and playful contexts, amounts exactly to this: constructing, using and interacting with maps of dubious ontological status, just as play and games are.

The reader might ask, at this point where did punk go in this epistemological detour? The disruptive, politically engaged critical dimension of Punk, however, lies precisely in the historical subtext of this fragment. In fact, after all, it is a military tale, leading us to another problematic connotation of the map metaphor, since maps, considered in their historical uses, most often served imperialist and colonialist efforts. Maps have indeed most often been employed as a *language of conquest* (see Pascale, 2011), to impose new social orders on the "savages" who inhabited the "new territories" of the Empire; they enact a hierarchical disposition (and, once again, *dispositif*) of space which deeply influenced the development of modern knowledge institutions, as discussed in this fragment by Australian geographer Peta Mitchell:

> *Traditional epistemology is consistently defined in geographical terms— knowledge is*

surveyed and divided into fields, topics (from topos, or place), provinces, domains, realms, and spheres. Implied in this subdivision of epistemological territory is a mastery or dominance over knowledge, as the terms "subject" and "discipline" make evident. Thus knowledge in the Enlightenment tradition is represented metaphorically as a territory that can be unproblematically encompassed, mapped, and viewed empirically and objectively. Moreover, this knowledge can be framed, by the philosopher, in an objective and literal language.   P. Mitchell, 2007, p.2

Quite a few years before, Pierre Bourdieu, as always an attentive observer of colonial dynamics and patterns of subjugation brought on by the imposition of metaphors, similarly wrote:

"It is meaningful that culture is often described as a map. 'Map' is a foreigner's metaphor, a foreigner who, having to find his or her path in a foreign country, and lacking the practices mastered by indigenous people, resorts to a model of all possible paths..."   P. Bourdieu, 1972, p.180

After such a parade of fragments "against" mapping, readers might ask why this metaphor is still in this work's title. The answers lie both in the World Maker and Punk metaphors. The "maps" I will discuss are not "maps of identity" in any sense, but they are, echoing Bachelard and Bateson, second order fabrications, i.e., patterns of artifact-making and meaning-making practices**.** Finally, and keeping strongly in mind the discourses of fabrication and language-play, mine is also a strong anti-theoretical statement, a position which I endeavour to share with some most eminent scholars, as discussed in *An Appreciation of Oliver Sacks,* by American science writer John Horgan (2015):

...Sacks is a theorist–or, perhaps, anti-theorist, in the same sense that Stephen Jay Gould was an anti-theorist in biology and Clifford Geertz in social science. Each of us, Sacks reminds us, is unique and constantly changing in ways that resist scientific analysis; our idiosyncrasies and mutability, far from being extraneous, are essential to our humanity. This insight, this anti-theory, has philosophical, ethical, political and spiritual as well as scientific implications.

To say this is not completely renounce order and regulations in our discourse as researchers, but to shift their analytical focus from the explanations of phenomena (theories) to the higher order discourse of the ways in which we build those explanations (epistemologies), as, quoting Bateson,

"those who claim to have no epistemology have nothing but a bad epistemology".

To be anti-theoretical means therefore, in these perspective, to not only play by the rules (of scientific discourse), but, having acknowledged and understood them, with the rules. In completing this panorama of anti-theorists, as in, scholars who were more interested in the plurality of difference that in regularities, I will add a famous statement by Bourdieu (1994, p.65), *"All of my thinking started from this point: how can behaviour be regulated without being the product of obedience to rules?"*. This same question is to be pointed toward the scholars and the "observers" of cultural practices themselves: how can I produce an account of a plurality of cultural contexts, especially those structured among radical playfulness and heterarchy, without merely and unreflexively reflecting the "rules" of procedures of observation and ethnographic writing?

In his *Esquisse de une theorie de la practique* (1972) Pierre Bourdieu outlines a particular transdisciplinary perspective on the production of cultural accounts where ethnography is achieved, first and foremost, by putting an emphasis on the emergent character of practices and meanings, and therefore coherently putting forward the very emergent construct of the sketch, as highlighted by Brazilian design scholars Lima, Biggs & Buchler, in discussing Bourdieu's relevance to the design of spaces:

> *...the term "sketch" derives etymologically from the Greek skhedios, meaning unprepared; and from the Latin schedius, meaning hastily made. "Sketch" therefore refers to something that is hastily done and is by nature incomplete, rough and unpolished. These are drawings that do not necessarily follow any kind of convention, such as scale and proportion, to which other kinds of drawn representations usually conform.* A. Lima, M. Biggs & D. Buchler, 2010, p.3

The representation issue, or of how qualitative research can be tracked, shared and presented to other members of the scientific community and to the general public is indeed a key one, and one which I will return on in expounding the Cases which com-pose Part III of this dissertation. In doing this, the Sketch will be a key metaphor: while (unavoidably) still a technology, sketching is one that can hardly be monopolized or used to discipline and conquer. Just as the first punk performances, sketches, be them architectural or ethnographic, can be intentionally raw and crude in their form, they make their artificial nature apparent, and let the hand of their maker leave its organic mark, with the chronological (and therefore narrative) order of the layerings of the drawing remaining visible in its messiness. "Sketching" does not impose an order to the observed context, and forces the observer to at least partially renounce his/her ordering instincts, the "codings"

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inherent his/her point of view, exposing the contrast between the messiness and raw character of vibrant, lived spaces and the linearity of Gutenbergian knowledge.

My Generation's Punk still does not wanna be tamed

The active, co-constructive processes of regulation implied in a Punk epistemology, in the practice of sketching and in the "less codified cultures" which will be examined, fits my piagetian epistemological background (see Piaget, 1980, on regulation) more than stable, universal rules. The issue of regulation also touches once again on the political undertones of my work: can learning institutions really "Ignore All Rules", when rules get in the way of further creation and learning, as Wikipedia users are called to do? Can *they* call to do this? What other forms can shareable knowledge take? Is it intended to be shared with non-participants?

In discussing issues of legitimacy and regulation, there is one final, strongly relevant implication of the punk metaphor: the awareness that any kind of academic discourse, any kind of learning where participants are involved not only as objects-of-research but as active participants can be perceived as "taming", since it comes from machineries of knowledge production which (as Gutenbergian, disciplinary, serious institutions) are fundamentally different from theirs. To echo the verse by punk band Ramones I used in the epigraph, to "be learned" by the external, inherently hierarchical Other that is the Academia is often considered strongly devaluing and objectifying, somewhat in apparent contrast with the participatory worldview proposed by John Heron (1996) and Peter Reason (1998): fully participatory cultures are, as we will see throughout the Cases, able to pinpoint the fundamental, non-participatory directivity of the current political framing of knowledge institutions, their inherent objectifying power, and therefore can enact practices of epistemologically savvy resistance, which, as a "punk" researcher, I will be interested in highlighting and appreciating. As we academics enter internet cultures, we will incur in the wrath of politically engaged and creative "Natives", which engage in emerging forms of cyber-resistance, starting from "simple" (but spread) diffidence or passivity toward researcher, continuing with scathing blogs and even enacting active cyber-sabotage, polymorphous expressions of an unease on the part of supposed "objects of research" or even supposed "participants" (Hine, 2005).

As this messy conflation of metaphors, and this writing, might appear as wild speculation, far from the actual cultural discourse of the web to a "newcomer" to the contexts that will be discussed in Part III, I want to offer, as ideal conclusion of this Chapter, and a first foray into actual internet conversations, an example of such punk dynamics and an ideal point of entry in the cultural phenomena I will explore.

In a paradigmatic (second hand, and quite literal) "sketch" which bridges many strands of my methodological discourses (punk, bricolage, playful design, and networks) internet culture commentators and game creators Mike Krahulik and Jerry Holkins (whose site, *"Penny Arcade",* a hybrid of comic strips and ironic commentary on "geek cultures", has reached more than 4.000.000 daily hits as of the writing of this dissertation, thus constituting a key cultural hub) tell, in a series of comic strips, a dramatized account of Krahulik's son first foray in game design practices, as the eight-year-old Gabriel asks his father and "uncle" Holkins to play a role playing game he created.

The systemic complexity of such games, which usually comprise rules which ought to be able to account for the creation of whole worlds and for the complete free agency of players, prompts an initial skepticism on the adults' part, which quip *"whatever your dad is doing, you want to do that too, right?" - "Yeah that's true. I made a lot of tables which were not, strictly speaking, tables".* After a few comic strips chronicling the adventures lived through Gabe Jr.'s Role-Playing-Game, pinpointing its naive ingenuity, creative freshness and original re-elaboration of cultural tropes, Jerry Holkins wrote a short commentary on such emergent game design practices:

> *I am at the point now where I am trying to figure out a chicken slash egg scenario: specifically, which has primacy. Are the kids that we have making games because*
>
> *1. They see us making and playing them?*
> *2. They play games where modifying them is the game?*
> *3. It's fun, and… they want to?*
>
> *If they live in a place and a time where any of the above things are real, and describe actual events, any specific impetus would be inextricable. These things are simply airborne in the culture. And children have always, always made games. But the games they're cooking now are more sophisticated, systemically, in that they have systems, as opposed to the awesome wholly emergent sort of thing they usually get up to. [...] So they make games that "look" like other games and learn how.*
>
> *I spend a lot of time trying to figure out what this generation's Punk will look like.*

I did, indeed, spend a lot of time trying to figure out just the same, as you readers will while reading the following Cases. I will propose, to echo Holkins, "ethnographies which are not, strictly speaking, ethnographies", messy sketches of playgrounds in, out, and at the margins of the academia, sketches through which I will playfully question the authoritative infrastructure of

knowledge, the serious things we, as learners and researchers, see our predecessors doing, to play the game of modifying the "game" of knowledge, to glimpse the fun in the making of knowledge, and the knowledge in the making of fun.

PART III

Sketches From the Playgrounds:

Three Case Studies on Ludic Creation

Case I - The World Makers' Virtual Places:
of Networks and Inclusion

Because nerds like us are allowed to be unironically enthusiastic about stuff.
We don't have to be like, 'Oh yeah that purse is okay' or like, 'Yeah, I like that band's early stuff.'
Nerds are allowed to love stuff, like jump-up-and-down-in-the-chair-can't-control-yourself-love it.
When people call people nerds, mostly what they are saying is, 'You like stuff',
which is just not a good insult at all, like
'You are too enthusiastic about the miracle of human consciousness'

- John Green -

Foreword to the Cases: Silly Seriousness

The above, lengthy, opening quotation is intended to set the tone for the whole Part III of this Thesis, and to willingly uphold a paradox: my fieldwork was a very serious activity, in that it comprised the epistemological, pedagogical, political and aesthetical positionings discussed in Part I and II of this dissertation, and, at the same time, it wasn't, as it pertained, for the most part, playing games, talking about games and making games. Hardly work, someone could say, and yet it was almost exhausting at times, both in its practices and in its writing.

Speaking of writing, I want to highlight once again, following the composite, messy argumentations in Chapter IV, how *"Anecdotal is not a curseword",* as told me once by a Finnish colleague, and indeed, through the three Cases that compose part III, the reader will encounter mostly apparently anecdotal accounts (or *"Anecdata"*, as Turner, Thomas & Owen, 2015, have playfully proposed in discussing collective game design practices), be them copied and pasted from online forum discussions, recorded on my phone or re-constructed *a posteriori* from fieldwork notes. And, even more disruptively toward academic seriousness, field tales often replete with patently silly themes as, among many others elven theology, finnish profanities, talking chairs, starship interior design and friendship between fish. In this opening I want to once again underline the necessarily ironic, "punk" approach discussed at length in Chapter IV, and explicitly invite the reader to not dwell on the most superficial and literal level of such discourses, but to venture with me into the ethnographical exploration of online community based game design practices and discourses, of

Finnish institutional game design practices and distributed game design events with an attention to the deeper structure, with a will to seek for the "patterns which connect" (Bateson, 1972).

My place among scholars, my place among players

As I touched on throughout this dissertation, I have been a player and a participant in online cultures and gaming communities since quite a long time before my doctoral course. Therefore I had to tackle the complex and polymorphous issue of online identity well before participating in any formal research activity pertaining it. The starting question is, therefore, who am I, as a player *and* as a scholar online?

Since the inception of internet connectivity in my small countryside town in 2001, I adopted a single moniker (and, therefore, a single recognizable identity) in online contexts, *NoobZen*, a nickname intended to autoironically convey to other players my position as a learner (or a "*noob*", in the dispregiative meaning of internet slang) and my intention to accept, reflect and meditate on this position (*zen*, from middle chinese 禪, "meditative state"). Reinforcing and expliciting this attitude is my choice of avatar during this research (Fig.1), even if the term "avatar" itself went something out of fashion in later years (see Boellstorff, Nardi & Pearce, 2014, on this semantic evolution): I chose to be publicly represented by this photo of David Carradine's younger self in the old tv series *Kung Fu* because (beside a more than slight physical resemblance) to me it iconizes the apprentice position. It is meant to say, through the language of globalized, popular culture, *"I'm here because I want to learn, and please bear with me if I might be a bit stubborn and childish in my desire."* I will, throughout this Case and the next two, often discuss such aesthetic characteristics, with the intent, as touched on in Chapter IV, to provide a "thick description" through aspects of daily life which risk

Illustrazione 1: Fig. 1: GeekDo Community avatar, with "microbadges" conveying personal interests, community involvement and support.

transparency and invisibility to ordinary observation, but that constitute relevant strands of radically entwined cultural narratives.

Speaking of transparency, by starting with me I also intend, before moving on to the diverse
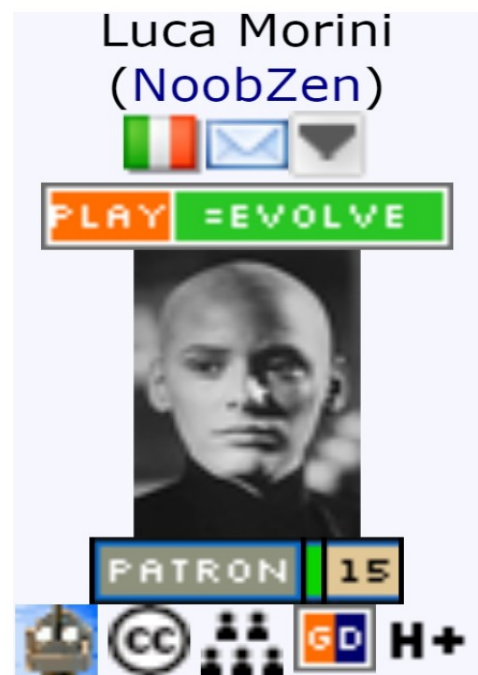
communities I entered, to highlight the common ethical position of full disclosure I endeavoured to apply throughout all of my fieldwork: in all of the communities I explored my intent as a researcher was always open to public scrutiny, be it through explicit discussion on my part, the patent inquiry oriented nature of many of my interactions, through the information available in my freely accessible profiles and, when possible, even through other evident cues, meaningful for those accustomed with the non-verbal language of each specific community (such as, for example, *Geek*'s microbadges, which can be seen below my depicted avatar).

Even though I chose to restructure and make more open my online identity as part of my fieldwork, to conform with higher ethical standards of research (see Kozinets, 2010; Markham, 2011; Hine, 2012), I did not enter a completely new field in doing this, but I stepped in places which were at the same time contiguous and distinct from places I had always visited almost daily, if mainly as a "lurker" (in internet jargon, the non-participant, "hidden" users of online forums, which usually constitute a large, silent majority of community members; see Zhang & Storck, 2001, and Muller, 2011). The *Penny Arcade* site and forums, which I touched on at the end of the preceding Part, were indeed just one among a plurality of sites I visited almost daily to obtain information and news on my playful hobbies, however when re-entering many of them with a different role, this transformed both my identity within them and the activities therein (Slater, 2002).

The initial choice of working within specific, well defined and distinct communities within the larger gaming culture allowed me to connect to an existing pedagogical tradition focused on the threefold character of "real life" communities: practice, learning, inquiry, as defined as the tightly interwoven processes of knowledge production, transmission and utilization (Dewey, 1938; Gabelnick et al., 1990; Wenger, 1998). On the practical level, the communities I chose were well suited to my intent to both foster and inquire into "grassroots" de-localized participation, and provided me with an enormous quantity of already available and freely accessible ethnographical "data", even though this quantity made for very complex interpretations and, therefore, a stimulating methodological challenge, as discussed throughout Chapter IV.

In fact, however the number of users of any of the single communities which I will discuss below might appear extremely high, and therefore apparently unmanageable with traditional qualitative approaches, what happens in reality is that the "active members" in a given moment and, even more relevantly, the really involved, creative members are a very small minority and even fewer are those available to participate in research activities, "distracting" themselves from the communities' normal endeavours (Hine, 2005; Kozinets, 2010).

The choice of communities: of games, tools, and theories

Even taking into account my non-trivial (informal) aquaintance with gaming, I spent a lot of time trying to figure out what would the proper main "nodes" of my inquiry be: the choice of the specific communities to be involved had to be motivated by a criterion of cultural relevance, both in their numerical user base and, most importantly, as main and interconnected aggregators within today's game ecology, and a criterion of diversity, with the intent to avoid a mono-culturally connotated simple vision of this complex reality, and instead trying to gather a wide diversity of approaches and visions on the same issue.

For this very reasons, after carefully evaluating the pros and cons, I decided not to take in consideration som very popular and active communities built around specific games, preferring to seek for more general and trans-contextual communities. Among the specific game communities I considered but discarded there was *Battle.Net,* hub of Blizzard Entertainment, with over 22 million users, and home to *mods* (functional or aesthetic modification or reworks of commercial games) that went on to become full fledged, commercial games such as *Defense of The Ancients* (see Cayatte, 2014), and *Minecraft*, the 100 million players creative world-building game (see Hill, 2015).

Another kind of community I explored further, but which assumed a background role in a second moment for similar, lack-of-diversity reasons, were those built around specific authoring tools, such as MIT Media Lab's *Scratch* (the name referring both to a child oriented programming language and its development environment), Yoyo Games' *GameMaker: Studio* and Scirra's *Construct 2* (both popular tools for the creation of simple, 2D games) and, last but not least, *Unity*, which, with almost 400.000 users, at the present day, represents a privileged "bridge" from amateur production to true professionalism (Graves, 2015). These communities, focusing on the diffusion (and peer teaching) of different, proprietary development tools or game engines (and correlated efficient and low-cost development and organization tools) maintain to the foreground of their learning discourse technical and instrumental issues (ibid.). For this reason, while not neglecting the philosophy and general approaches to game design and community building, they appeared not to constitute proper sites for in-depth inquiry from such a perspective, even though they constituted a deep shift in productive dynamics, allowing lower and lower budgeted teams to engage in the creation of games that are independent from traditional, top down productive and distribution structure (or, in internet jargon, "indies", echoing similar phenomena at the margins of other media, such as film and music; see Gnade, 2015).

Given the above criteria three sites were selected to be candidates for further probing; I invested a

few weeks in lurking so that I could gather a wide amplitude and a quality of data hardly available in "real" ethnographic contexts, without exposing my presence if not in mere "click numbers". The forum where I "lurked" on was necessarily, given the force of its sheer numbers, the *Steam* community (store.steampowered.com), built around the eponymous networking and digital distribution platform owned by Valve Corporation. This is, as of today by far the biggest aggregator of video gamers (and, by extension, of players in general) with more than 125 millions users as of February 2015 (internal source). The *Steam* platform is, however, mainly intended, and largely used, as an online digital store (that is, a site where direct purchase of software is possible without physical retail), constituting a strong shift in software distribution practices. The *Steam* platform, while retaining a strictly commercial purpose and structure, has been able to build its way to success through smart (if limited) involvement of its user base (see Inghirami & Mollona, 2014), and, starting in 2012, through the *Steam Workshop* service, became the biggest global source of user-generated content in games (Rowe, 2014), often just *"mods"* of a simplistic nature but paradigmatic of a need for participation and medial production which (manifesting its core punk-like character, as discussed by Holkins in the closure of Chapter IV) claims legitimacy and visibility independently from the mastery of high level game design or coding skills.

Once again, it would appear improper and simplistic to neatly separate and create counterpositions between creativity and market: the rise of digital distribution concurrent with the spread of broadband capability, that is, the possibility to buy games and other "digital goods" (be them movies, music, e-books, etc.) through direct, online purchase, in many cases lowered the entry price to access such information commodities, both through the above mentioned elimination of intermediaries and the obsolescence of physical supports for digital data (Danaher et al., 2010). The creation of such a strongly centralized hub for the video gaming economy, however, did have a strong disruptive effect on older, more horizontal communities, effectively concentrating on the *Steam* platform a majority of the efforts to achieve visibility and publication, and therefore creating an enormous quantity of free labor for commercial game publishers, by prolonging the commercial life of their products through endless new content (see Kucklich, 2005, and Sotamaa, 2005; 2007; 2009). The fact that the main place where both *"mods"* and "independent" games are distributed is, as of now, under control of a private enterprise might indeed appear dangerous for the diversification of digital products and the fostering of grassroots creativity. However, these shifts in production dynamics, akin to those discussed in Chapter III, seem to work systemically, producing a strong push toward the opening of corporate enclosure itself: Valve Corporation, in the effort of mantaining its leadership in the distribution sector, is more and more willing to compromise on many levels (to provide a poignant, if merely economical, example, by having introduced in 2015,

as a first in digital distribution, the practice of providing refunds for working but subjectively unsatisfactory products).

In fact, being a private enterprise which sells immaterial and "useless" goods, Valve has a contested relationship with its audience, needing not only their continuous feedback but their loyalty (especially as other digital distribution platforms emerge) to maintain a good relationship with its community of users, a relationship which is often due to immaterial and relational stances of openness and trustworthiness, prompting *Penny Arcade*'s Jerry Holkins to ironically comment how "*The current media environment is one in which trust is the only currency. Well, that, I guess, and currency*" (http://www.penny-arcade.com/news/post/2015/06/01/the-new-kids). However, while, obviously, extremely interested in "mining" (see Chapter IV) the community for data as to better meet the expectations of its customers, Valve Corporation strictly forbids external researchers not only from doing the same, but also placed hard limits on any inquiry practice within it. Even without taking into account the possible legal consequences of such activities, it was evident since the start of my lurking that open discussion of research practices would have been unfeasible, and, even if I was open to accept a more "hidden" approach to inquiry, any result would have been unpublishable. The most general, organizational level analyses of *Steam* here provided are therefore to be understood as a means to provide a greater context and background into current digital economy, and into productive infrastructures as pertaining the whole medium of games, and not as a true exploration into the "world-makers" cultures in themselves.

Wanting to find a way around these dynamics of corporate control, and intending to explore spaces and cultures less colonized by the distortions brought on by market economy (that is, to try and exclude 'currency' from Holkins's above commentary), the second site I "lurked" in was *ModDb.com*, widely recognized as the historical, independent and fully "grassroots" hub of "modding" (as in, the practice of producing modification, or even completely new versions of other, commercial games; see Sotamaa, 2009; Unger, 2012). With its 300.000 registered members (and an active production-level-per-user well beyond the average of other communities; ibid.) this site, founded in year 2002, has become the aggregator of underground auto-production dynamics, in resistance to the only recently loosened closures of mainstream industry, dynamics that emerged starting from the second half of the Eighties, at the intersections of the spreading of networking, videoludic culture and hacker culture (Mäyrä , 2008; Sotamaa, 2009). ModDB is also a relevant node in disrupting the economy of current video game production, as modding practices go even beyond the less budget-intensive production of "independent" games, venturing into the range of completely free, barely 'sketched' Do-It-Yourself games, products made nor for the mass market nor for mere sustanance of artistic fringes, but made for the sake of making or, to quote game designer

and cultral critic Anna Antrophy, *"not to make games for more kinds of people, but to have more kinds of people making games"* (Anthropy, 2012, p.14).

Another (less strictly political and more theoretically grounded) criterion influenced my further choices of fieldwork spaces, that is, my intent to glean general elements of participatory playful design which would be in themselves transmedial, that is, applicable to each and any playful creative practice. Thus, the last site of the first phase of my fieldwork was the *GeekDo* community, which, while initially built strictly around board games (as *boardgamegeek.com*, founded in year 2000) and rapidly becoming the main online aggregator for this area of interest, has, in later years, opened its doors to virtually any kind of games (with sister sites *videogamegeek.com* & *rpggeek.com* integrated in a whole community within the same site). This kind of structure was of particular interest to me, and became even more and more so with the progress of my inquiry, as its particular, hybridized approach to game cultures supported my transversal approach to game design, therefore helping me in avoiding to focus excessively on the technological aspects of game development, to inquire into the more abstract and metaphorical themes of play and design. While *"The Geek",* as colloquially called among members, is constituted by "only" a million users, its characters of transmediality and abstraction were probably why, as of the end of my fieldwork, it was the most relevant community, and the one which provided many of the forum excerpts below.

Entering the communities: of Gags and Gatekeepers

The focus of my "lurking phase" in these sites was threefold: first, to evaluate from a closer point of view the practical opportunities of my entry in the field, correlating to the formal regulations of the site and the presence of suitable levels of involvement and production, as discussed above as pertaining *Steam* inquiry bans and *ModDB'*s creative culture.

Second, to identify and contact possible "gatekeepers", people that have the possibility to facilitate or hinder access to the community. The "gatekeeping" power of these users can be due to an "institutional" position, as owners of websites, or members who have been given community management jobs and moderating power (that is, the power to manage or end discussion threads, or even to "ban" users who have violated the site etiquette; see Frith, 2014), or in an informal sense, as "opinion leaders", long time "veterans" or users otherwise considered as authoritative by the community, be it through external, "real life" merits (a successful career in the game industry, for example) or even through "community service", the relevance of the individual's contributions to the community discourse (O'Reilly, 2009).

Third, another, and even more important, pattern that can be observed and learned through non-

participant observation are the non-written rules, well beyond formal posting limitations, and especially the communicative standards and meta-levels; as noted, and touched on in Chapter IV in classical ethnographic literature (Geertz, 1973) this step can be thought to be achieved when the researcher begins to understand (and connects on an emotional level to) a community's in-jokes, as in, the fundamental, playful aspect of cultural re-production, which are often conveyed in a meta-linguistic, visual form, often relying on satire of current cultural trends (Fig.2, an ironic commentary on paid mods) or highlighting the strength of the relationships within the community (Fig. 3).

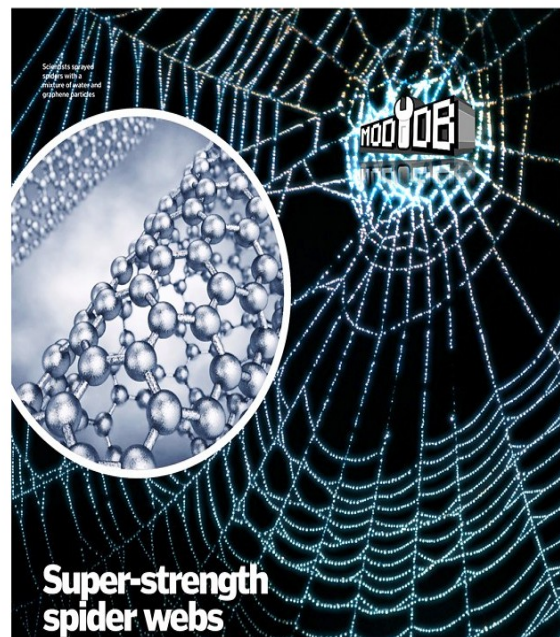*Fig.2: Satire of payed mods from Steam Community*

Fig.3: User representation of the ModDB community as "super strong web"

Having reached this kind of contextual cultural understanding, the true active phase of my fieldwork could begin, not without a certain nervousness on my part.

In fact the "entrée" in any community, whether it be "virtual" or "real", as defined as making one's own presence and identity as a researcher known and manifest, is never an easy step. As all relevant literature confirms (among which: Geertz, 1988; Bartunek & Louis, 1996; Boelstorff, 2008; Hine, 2013; Kozinets, 2010) this is an extremely critical moment, as the researcher runs the risk of being considered a mere "academic invader", the kind of the reductionist scientist, equipped with a metaphorical top-down magnifying lens, someone not interested in contributing to the community but only in "taking away", dis-integrating and de-contextualizing information and practices. As I personally learned from past research in the virtual world of *Second Life* (Morini, 2013), even simply identifying oneself as someone with a background in psychology can sometimes be by itself risky, triggering widespread cultural stereotypes about pathologization, labelling, measuring,

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reductionism and violation of privacy. These widespread forms of resistance are not to be considered as a *tout-court* refusal of scientific involvement (and members of these communities are often quite scientifically literate, both by level of formal education and as culturally reinforced by the collective performing of a shared "geek" identity; see Tocci, 2009), but as a further marker of an epistemological and political re-construction ongoing within these communities, as discussed in Chapter III and IV.

Taking these dynamics into account, I was aware that before asking the community to contribute, even if it is for something that the researcher might deem to be meaningful for everyone involved, it was ethical (as also evidenced by abundant methodological literature Heron & Reason, 1996; Denzin, 2004; Reason & Bradbury, 2008; Cairn & Blythe, 2009; Blackshaw, 2010; Denzin & Lincoln, 2011;) that I contributed to the community development in a more "naturalistic" way. In doing this I made good use of my experiences within the Tampere Game Research Lab (which will constitute the focus of Case II) to present myself and introduce the community users to the "academic side" of game discussion and design, and to share tools and practices that I deemed to be useful in the very first and most basic phase of game design, brainstorming and ideation (for example the open book *1001 Game Ideas,* Kultima et al., 2008), tools that were welcomed with curiosity and interest by community members, thus allowing me to initiate in an informal, pleasant and useful manner our discussions and our cooperation.

In the meanwhile I began contacting privately, on each site, those gatekeepers that I mantained to be both more influential and more interested in game design practices, explaining my positioning and my research intent. Even if I knew that the site was "off limits", I deemed useful to start from the "Mod Squad" of the *Steam* forums which, as above mentioned, were not directly accessible through public discussions by researchers, as any kind of activity even remotely resembling "surveying" is explicitly banned by the forum rules. Still, these moderators, contacted via private messages, have been quite helpful with me, pointing me to possible external, open discussion sites and social networks (mainly *reddit.com*), opening up to "out of community" based locations for inquiry and therefore questioning the construction of any "single vision" of cooperative, distributed game design practices, thus laying the foundations for my exploration of Jam cultures, which will constitute the main focus of Case III.

In the *Geek* community, I chose to contact as my gatekeepers of choice both the "official" community managers and some users particularly involved in moderating and organizing the "Game Designer Resources" thread on the forums, a gathering of extremely diverse information on the creation of games, be them links, books, well designed game examples or just advice collected within the community. While the manager answered my queries politely but remained on an

"institutional" level pertaining permissions and posting rules, I was able to entertain with a particular user, '*Mezmorki'*, an interesting, if fragmented, discussion on the nature of design and on the parallels between "playful" world building and wider "world making", as defined by Postman (1995), also being professionally, in real life, an expert in community/city planning and design. Mezmorki helped me getting into the nuances of the *Geek* community, pointing me at particular areas where the game design discourse is deeper and more critically informed, starting from the *Cult of The Critical* guild (a fully integrated sub-community, dedicated to *'provide a place to centralize resources and information pertaining to critical analysis of games and gaming hobbies.'*) and the community thread *A Brief Crash Course on Game Design.* These suggestions were instrumental for my informed entry in the *Geek* community, and in shaping my open approaches to research design, as can be properly exemplified by this brief excerpt from Mezmorki's introduction to his own *Crash Course*, written with the intent to widen accessibility to game design practices for *Geek* users, but seemlessly applicable to the circulation of ideas within the academia:

> *The bitter truth is that ideas are a dime a dozen. And chances are, someone else has independently already thought of the same thing you did anyway. As you will find out, the real work, sweat, blood, and tears of game design is in the later development stages and playtesting – something that isn't really "steal-able." In addition, by publically discussing or testing your game – you are also establishing a track record that this is "your" game design, a further deterrent to potential idea theft. [...] My advice would be to share your design or idea as soon as you feel comfortable and are looking for feedback.*

This discussion of openness, and of the fundamental "unsteal-ability" which have not passed through the "work, sweat, blood and tears" of fieldwork and discussion within the scientific community resonated strongly with the epistemological and political objectives on my work, giving me, since this starting point of my fieldwork, the feeling that I was "on the right track". I only needed many more months of work, sweat, blood and tears.

During this same phase of my fieldwork these "painful" factors were, however, being hinted in my interactions with *ModDb* community's founder, Scott Reismanis, better known by his nickname *"INtense!",* the very first "gatekeeper" whom I tried to contact. Our discussion on the criteria and the possibilities for my inquiry within his 'turf' went on for more than two months (see Wirman, 2013 on the peculiar character of e-mail interviews) before reaching a turning point. Scott had always been extremely polite and very available, but very reluctant, and even a bit defensive, in

specifically discussing design practices, something that I, *ex post*, blame on my overly enthusiastic, inquisitive approach. However, when further questioned, he revealed his reason for hesitation in discussing design, while still mantaining the conversation open:

INtense!:   *I cannot give you a response as a game designer, as I'm a web guy but if you want a response from a web perspective I can provide that.*

After this answer, I had the opportunity to sincerely emphasize the value I gave to his supposedly "non-professional" opinion as a designer, and the huge value I attribute to the ability to foster networking, well over any other specialized skill, thus reinforcing and further reframing my (I have to admit, a bit pressing) inquiries as a "positive question" (Cooperider & Srivastava, 1987; Reed, 2007).

Me: *I respectfully think that you are underselling yourself. While it's true that you are a "web guy", as in you are not a professional game designer, in my humble opinion your ability in promoting this network has influenced today's game design culture much more than many big-name veterans. That is to say that yes, I'd value your perspective on these issues <u>a lot.</u>*

Shortly following this exchange Scott opened up, agreeing to provide me with answers to what I, by then, considered, in our discussions, to be the three "core questions" of my research, which I hereby present, together with *INtense!*'s answers.

Me: *What did you learn from playing and making games, in the most general sense?*

INtense!:   *So many things it is hard to know where to start, I've seen many games come and go from all manner of talented developers. What I've learnt is that there is no formula on how to make games, and no formula for what succeeds. What works for one team may not work for others but with so many talented people trying to make the next "big thing" one thing is for sure and that is you need determination and patience.*

Me: *What is the "core" of game design for you, again in the most general sense and*

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indipendently from the tools or even the analog/digital format?

INtense!:   *For me it comes down entirely to concept and fun. Games are meant to be enjoyed so before you think about tools, art quality, style figure out if your game mechanic is one that people will enjoy because often it is the obscure ideas that succeed and not the obvious ones.*

Me: *In which ways your experience within the community shaped or changed your vision of games and game design?*

INtense!:   *Well I've learnt how tough it is, to make a game takes a long time and I've seen many great games be entirely missed while others succeed. Knowing how to design a game is one thing, but being able to get people playing is another.*

INtense!'s answers were very close to the core of my inquiry, and were key in the transition to the next phase of the inquiry, one that proved to be fraught with misunderstandings on my part, and that, because of this, was the most relevant in illuminating the methodological and epistemological distinctions I discussed in Part II of this dissertation.

The message "This is not play": a critical incident

INtense!'s answers and Mezmorki's approach to game design education, weaved with my then still superficial ethnographic work and with the relevant game design literature which I discussed at length throughout Chapter I, became the starting point of what would be the next phase in my inquire, that is, trying to employ crowdsourcing practices (Brabham, 2013) to cooperatively generate accounts of the community's cultural practices (see) through a wiki platform (https://participatorygamedesign.wikispaces.com/home).

I chose a custom-made wiki, a place external and trasversal to single communities where I hoped to spark a discussion about what I chose to call an "Atlas", as in a collection of spontaneous, native "maps" (Fornasa & Morini, 2013) of what participatory game design could be. Valuing diversity as a resource, the choice of a wiki platform became obvious for its versatility and openness, and for

the correlated possibility of using any kind of media content to create a site-neutral reference documentation that will be available and revisable by everyone interested in contributing (see Suoranta, 2007).

The skeletal core of the wiki was built around three main "dimensions" (Game, Design, Community), each containing an extremely simple list of six bullet points open to be discussed:

GAME	DESIGN	COMMUNITY
Undestand Rules	Sharing Spaces	Feeling Welcome
Understand Interaction	Sharing Experiences	Feeling Involved
Understand Players	Sharing Tools	Feeling Supported
Playing with Pleasure	Making Themes	Valuing Diversity
Playing with Problems	Making Experiences	Valuing Sharing
Playing with Others	Re-Making	Valuing Learning

This specific kind of layout, and its discoursive contents, were inspired by the "Index for Inclusion" (Booth & Ainscow, 2011), a publicly available, free set of materials successfully used to promote inclusive values within many European schools, costructed in a similar, grassroots, participatory way and built, in its core, on a tenet which can be applied well beyond its origin in disability studies: *"nothing about us without us"*. This structure and these bullet points were absolutely not supposed to be final, but they were to be understood as an effort to spark questioning and generative discussion among those whom I consider to be the true experts, not by any formalised professional status but only by their deep dedication and love of playing and making games (and I'll rehiterate here that, etymologically, the term "amateur" does not imply any lack of skill, but just this, love for something), a dedication and love that sorely need to be explored within formal learning processes, reclaiming the culture shaping, utopian character of play (Suits, 1973).

However, quite unexpectedly for me, the wiki was greeted with a diverse set of reactions: while many users found the initiative to be interesting, but too complicate, too abstract or too artifact (among the comments I received: *"This is interesting, but looks convoluted, and hard to use in any practical way" "I will need a lot of time to dig through this"*), other community members refused the initiative outright, disqualifying or suggesting others to ignore it (*"Why should I be doing this? You are the researcher, so just do it for us." "I have no interest in this whatsoever"*).

This was, undoubtedly, the hardest moment of the whole research, both scientifically and emotionally, but at the same time it offered the most important self-examination cues, both from a methodological and researcher positioning point of view. After an initial moment of frustration, I realized, with the help of the methodological literature discussed in Chapter IV, and with the

support of my advisors, both from Italy and from Finland, how, in a truly qualitative and participatory research, feedback is always meaningful and even a partially failed "data collection" can set into motion a sense-making process in which to frame these interactions. I realized that I unthoughtfully, even unknowingly, had made my informants my "research objects".

In an epistemological simplification due both to my inexperience and my intellectual enthusiasm I had unconsciously constructed a paradoxical inquiry: *To appreciate you as autonomous 'world makers', become my subject in colonizing map making!"* was my request, or, shortening it to an inversion of a famous Batesonian discussion, *"This is not play!"*, a message which, as discussed in Chapter II, was, depending on the case, immediately absorbed within the playfulness of the community, or expelled by it.

Participating and contributing first-hand to these dynamics I could, acknowledging my mistake, feel its burden and reflect on the "necessary unity" of the triangle observer/oberved/observation, and on what need to be the "human scientist"'s caution and respect (which I partially violated), who must care not to disrupt with mere de-construction-without-re-construction the systemic dynamics in which he or she participates (Reason & Rowan, 1981; Heron, 1996).

My research therefore violated the "magic circle" by trying to define the conditions for their creation (that is, the conditions for game design) univocally rigidly, even if with a purpose that I considered positive and shareable; this "shareability" proved itself to be not so obvious for everyone, but for a researcher who wants to call himself systemic it is not possible to exclude some parts from a whole just to force them in a pre-defined experimental framework: it is not inclusive to bend the "sample" but it's an evolutive attitude to widen the research field to where living systems and their autonomy bring us (Geertz, 1984).

After this epistemological and methodological realization, I chose to revert to a less pressing way of researching, that is, I chose to continue contributing to the communities instead of mining them for all-too-ordered patterns.

The form I had given, until then, to my inquiry was much too abstract, much too distant from the daily, practice oriented needs of the "world makers", and too directed at ordering and taming the very messiness which gives life, meaning and flexibility to these online contexts. I chose, ultimately to respect this messiness, and while this did not, of course, mean the end of my inquiry and presence within the communities, it changed its form to a resonantly messier and more organically participant one, from "what" and "how" to "where" and "with whom". (Ackermann, 2014)

A different inclusivity, or the rules, the roles and the worlds

Almost concurrently with the "failure" of my wiki, in the summer of 2014, a big event was coming up to shake geek cultures: a new edition of the seminal role playing game Dungeons and Dragons, which, through its establishment of many narrative and systemic conventions during the heyday of Eighties gaming culture, constitutes a foundational, if hidden, core of modern popular culture, both in its ludic declinations (see Ewalt, 2014) and in the general forms of storytelling (see Favreau, 2009).

As pertaining this Case, and creating an interesting juxtaposition with the failure of my wiki, what was most interesting to me was that the design phase of this particular edition was constructed through a crowdsourced approach: the designers iteratively put out new version of the rules, leveraging the communities' experience and discourse to conduct a massive playtest. This "democratic" approach was greeted with universal acclaim by the public, who endlessly discussed the smallest details of the rules of the game, arguing for a version or another. However, the quality (and the width of the audience) of this iterative discourse suddenly changed when one specific sentence, part of what is usally called, in jargon, "the fluff" (that is, the non mechanic part of a game, the theme or narrative that upholds the magic circle and gives meaning to the structure of the rules), reached the public while the game was still in an unfinished, unprinted state:

> *You don't need to be confined to binary notions of sex and gender. The elf god Corellon Larethian is often seen as androgynous or hermaphroditic, for example, and some elves in the multiverse are made in Corellon's image. You could also play a female character who presents herself as a man, a man who feels trapped in a female body, or a bearded female dwarf who hates being mistaken for a male. Likewise, your character's sexual orientation is for you to decide.*
>
> M. Mearls & J. Crawford , 2014, D&D Basic Rules, p.33

While apparently discussing sexuality in a fictional, pseudo-mythological milieu, this sentence did in fact, as many commented, "*bring the gaming community out of the dark ages",* and fostered inclusion and diversity within a still strongly male dominated culture, replete with stereotypical representations and exclusionary attitudes (see Peck, Ketchum & Embrick 2011, and Richard, 2015 for critical commentaries on the history and current state of inclusion within the medium). Blogger Ismael Gerena, commenting on the above paragraph, highlighted the overwhelmingly favorable reaction of gaming community reactions to such a direct, explicit inclusive statement, and its almost

law-like value in fighting discrimination:

> *There have been hundreds of Facebook posts and Tweets about this paragraph expressing gratitude and relief at its inclusion. Stories of people who wanted to play homosexual or transgendered characters only to be told 'Those don't exist in Forgotten Realms'* [one of Dungeons & Dragons many "settings", that is, fictional worlds where the narrative of the game is set][...]. *It is now a **RULE** in D&D that heteronormativity is **NOT** the rule, and that everyone is welcome.*

It was possible for me to fully realize, through this poignant example, how "rules" in a game are never neutral or disconnected from 'reality' , and how the permeable boundary of the magic circle can work as a safe space for cultural experimentation, highlighting the interconnectedness of game ecologies as culture making sites. This is not to say that inclusion started within games. Civil rights movement have been around since almost a century ago; but playgrounds, even if virtual ones, can, to this very day, be the places were it is fully claimed (see, among others, Rogers et al., 1984, Burgess, Lupton & Wilson, 2004, and Tsolidis, 2015, for plural perspectives on the close relationships between urban playgrounds and inclusion).

This thread of my inquiry, (through a powerful reversal of my construct of inclusion), led me to be involved in the controversy which would, by the summer of 2014, come to be called "the Gamergate", a conflict on "gamer identity" which was initiated when indie game developer Zoe Quinn was perceived to receive undue attention to her interactive fiction game *Depression Quest* (which, as the implied by the title, is intended to get the player acquainted with the themes of clinical depression, thus using the medium to tackle different, sensitive themes) due to her gender and supposed sexual relationships with game journalists and commentators. This led to a dire state of affairs were Quinn, together with fellow game developer Brianna Wu and feminist cultural critic Anita Sarkeesian, was subjected to a sustained campaign of mysoginistic attacks. The campaign was coordinated through a plethora of online forums in an anonymous and amorphous movement that ultimately came to be represented by the Twitter hashtag #gamergate. The harassment included the dissemination of personal information, threats of rape, death threats and even the threat of a mass shooting at a university speaking event (see Meserve, 2015).

This phenomenon went well beyond ordinary 'trolling' (in internet jargon, the practice of sowing discord by starting arguments or upsetting people with inflammatory messages on online communities; see Hardaker, 2010, for an in-depth examination of this phenomenon), and

highlighted key contested nodes of gamer cultures and identity (gender, color, sexuality) which I had only rarely encountered as conflictual motives within the communities I examined at close. This lead me to reconsider the peculiar role of these communities as participation oriented, inclusive nodes within a larger (and much more fragmented and contested) cultural ecology (see Salen, 2009, on the plural character of the ecologies of play). This reevaluation of my chosen fields' character was central in opening up my observation beyond them to inquire into the larger patterns of ludic production and consumption. This wider perspective reached a key turning when I read Zoe Quinn's manifesto *'Punk Games'* (from which the excerpts below come) and its surrounding discourse:

> *It's no secret independent game makers are feeling the ever-increasing pull these days between making art and making rent. [...] Strung up between social and economic tensions, many creators and critics have left the industry entirely over the last seven months' crucible of online abuse and hopelessness. Surely, we independent game makers have to have a choice between enduring these conditions and quitting altogether. Games need a united punk movement [...] While some might see that and think "oh great more crappy work", I feel that completely misses the point. [...] You're starting with a truly blank canvas, and that has just as much potential to yield truly experimental work as it does to produce crap.*
>
> Z.Quinn, 2015, http://boingboing.net/2015/03/16/punk-games.html

This manifesto found a concrete expression in the website, *'*www.gamesareforeveryone.com*'* , "*An ongoing list of resources by Zoe Quinn, for people who might not think games are for them."* While undeniably commendable in its aims and structure, providing a plethora of resources, links and communities, this site provided is overwhelmingly focused on digital games, thus once again highlighting divides in the field of play, divides that I wanted to overcome, so that I could inquire further into the plurality of the World-makers' inclusive philosophical undercurrent.

Holding strong to these redefined inclusive criteria, and indeed with a different idea of inclusion in mind I decided to tear down my wiki, and started my work anew with a completely different intent, which ultimately led to the methodological stance expounded in Chapter IV: not to order and 'code' online gaming communities and their practices, but to provide the fragmented communities and practices of players with possible, practice-oriented, discursive bridges. Most importantly, I intended to give the communities something that they could really consider useful and interesting, even at the cost of renouncing the neat and ordered character of academic inquiry. To do this, I

made good use of my trans-community experience to construct an hybridized meta-resource, compiling a big list of all the documents intended to teach about game design, be them pertaining boardgames, role playing games, video games, interpretive games, be them wikis, professional courses, free e-books, videos.

I worked to create a messy, redundant knot of links, and to share it all across the communities, calling them to the discussion of their shared background. With a pinch of geek humor (and following Rheingold's advice about "giving an epic goal" in the constitution of online community endeavours, 2002), I called the thread *'World Makers Assemble! The Master List of Lists of resources".* Here is a screenshot of the home screen.

Fig.4: Homepage from my wiki, https://participatorygamedesign.wikispaces.com

This new "iteration" of the wiki received a much more positive feedback, ranging from simple 'likes', or specific community equivalents, to short acknowledgments, of which I hereby messily report some (through which the global nature of such communities is made once again patent, as can be gleaned from the different levels of mastery of English language):

Nice thread. learning how to design something is always good to learn and discuss...

BookmarkingPage This is a fantastic resource pool you've developed. Thank you very much for displaying it here (and in other places, as you've stated). You've done us a great service.

Thats very usefull list of stuff you have there. I had a quick look over few of those

documents and articles and this is definetly a great resource for game design. I have to
applaud you, very well done.

Looks like an awesome resource, Luca! Thanks for taking that on.

I want to use your ideas with my children. If we achieve some goals (an early definition
for a game, for example) I'll say to you. Thanks again for share it!

Other users brought the interaction and the community effort on a truly cooperative level, posing requests for further, specific materials, that I tried to anwer to the best of the communities' collective knowledge, or proposed a variety of integrations to the wiki, or brought on critical perspectives toward my (unavoidably academic) style of writing, still perceiving a fundamental distinction between our positionings:

One thing that would be useful would be a list of consequential games, release date and
platform so that designers could more readily get a handle on what has gone before

I see good info but I can't help to read verbosity here and there. Anyway, here is a link
about concepts!

Ofc I'm into self teaching so if actual pros have something better to share go ahead,
sharing is caring yes?

There were still, unavoidably, some oppositional members, but their responses were only slightly defensive, if quite clearly still targeted at the academic nature of my perceived intrusion. Among others, I think the following one does a good job of portraying this ambivalent attitude:

Sadly, most of us aren't doing PhDs and don't have time to read all that. What's the 20%
among these you recommend the most?

And, despite the apparently oppositional tone, I indeed did my best, with the help of the communities, to provide indication directed to the single communities', or even single users', needs. In the following months I saw my collection of links growing steadily, and, most importantly, becoming integrated in similar resources across a variety of community, not only through my

individual efforts, but through the untraceable (since online identities are not necessarily stable) sharing and mirroring at the hands of other users. Indeed, within online communities the concept of authorship itself can be somewhat dubious, and even if sources could be fully traced, what really counted, in this case, was the value and the visibility of the contribution for the whole network of 'World Makers'.

Messiness, or the research that happens while making other plans

While keeping up the updates on my wiki, thanks to my forays in larger productive ecologies I fully understood that I could further my inquiry without it being limited to a single strand, and, indeed, that I had to be playfully unfocused, if I wanted to "thicken" my understanding of these communities. Through the shared, if not always "on", lens of playfulness I therefore had the opportunity to discuss themes well beyond the immediate scope of play, as a community of players, like any other, is first and foremost a community of individuals, and these online spaces always provide sections to go OT ('off topic', in internet jargon), and to discuss apparently unplayful themes through the point of view of people who are certain of sharing at least some most general literacies and narratives. Asimov, Obamacare, dual-party systems, job interviews, storytelling, family values, LGBTQ rights, rock music, food, copyright laws, where only some of the themes I discussed with my fellow players, discussions which once again proved enriching and provided me with a vision of gaming cultures in general as fully interwoven with "serious" and "real life" cultural discourses.

As more closely pertaining to this work, I had the opportunity to participate in endless discussions of themes which where relevant or tangential to this dissertation, such as the definition of games, gamification, game related literature, game aesthetics, personal gaming history (both joyful remembrances and embarassing moments), psychology of play, an astounding variety of discourses and positions that deeply enriched the theoretical perspectives on play discussed in Part I. In the following pages I intend to bring this Case to a closure (and to a transition to the following Cases) by messily re-composing some among the most insightful excerpts from these threads which most closely related to the core concepts of this dissertation.

I will start with a number of threads I myself posted, building on Zoe Quinn's site and my personal experience: it was only right, having achieved full participation within this communities, to put into question one of the basic assumptions of my work: *'Are games really for all?'* I asked he communities*,* discussing the possibilities of the spreading of a basic game design literacy and Quinn's initiative to lower technological barriers to game making. Here are some of the answers,

which started on a somewhat sarcastic and pessimist tones, an understandable position given the (once again) abstract and apodictic tone of my inquiries:

User1: *Very few things are for everyone. Sleeping is for everyone. Eating and drinking are for everyone. Breathing is for everyone. Eliminating waste is for everyone. That's probably an exhaustive list of activities that are for everyone*

User2: *I'm going to go with a big no. Game design - whether board games, RPGs, or video games, is not for everyone. And it's not about lowing the barriers. It's about the fact that different people have different skill sets. I've seen a lot of people try with video games - especially since there are so many tools to create video games these day (based on whether you can or can't code, based on if you can or can't get art...) They honestly think they have the next big app, but when their precious game is released, they lose tons of money on it, because they are NOT designers, and should have stuck with just being a programmer, or just being a project manager. [...] And design can certainly be taught - just like coding or art can be taught - but like those, you have to keep at it to get good. It doesn't just magically happen. And even then, getting someone to like doing it is an entirely separate issue.*

The above, strong in its denial of the possibility of "games for everyone", takes however a strongly market-oriented stance: what the User is saying is that not everyone can make *commercially viable, succesful games*. Given this answer, I took time to clarify my line of inquiry, which also pertained the ongoing lowering of the entry barriers, both technological and methodological, to make Do-It-Yourself, free games. This, however, initially led to an even stronger responses against it:

User3: *Dear god why would we want to do that? How much lower can it get? All you need is a word processor and PDF creator to design a game? There are tons of crappy games being produced!*

User4: *Really? I think the loads of crap creates a barrier to entry more than anything else.*

User5: *It seems more that **you** don't like amateur games, and therefore amateur games are to blame for every thing you don't like about the hobby.*

"User3" referred the lowest possible technological barrier to enter production in the field of games,

that is producing a merely textual role playing games, while "User4" accused the current, "noisy" ecology of games to be a cluttered, and therefore unapproachable one. However, "User5" called them on this opinion, generating a turning point where the discussion attracted users with different positions as pertaining Do-It-Yourself game making, and reached its most conceptual, abstract level, exposing tensions and contested positions about the access to productivity which reflected my wider inquiry perspective.

User6: *Once you understand the premise(s) of design you can apply them to most things. The best way to propagate game making is for makers to put out their design process, unfortunately, in this world of copyright BS, there's a lot of people paranoid about being stolen their (mostly unoriginal) ideas. There's no technological barrier to come up with a pen and paper rpg but I'm in favor of people creating loads of crap, the act is more important than the result, it creates interest for the medium. Best thing you can accomplish would the creation of a design group, share resources, share opinions, discuss...*

We can see, in the two above posts, two juxtaposed positionings on the production of so-called "crap", low quality, maybe even unplayable games. One that deems it dangerous and obstructive, and one that considers it a necessary step of learning any creative process, recognizing the possibility of "making order from noise". This debate continued for ten days, with the general position shifting more and more toward the "noisy", "punk" side of making for the sake of making:

User7: *I'm seeing this in a maker perspective, not the player's one. Making for the sake of making, the result is secondary in importance. Just **trying** to come up with a perfect proprietary system will sharpen personal likes and dislikes, it will redefine personal tastes. My home, my clothing, my furniture are all things that people considered crap... There are no best practices in creation, walk the beaten path and you end up on the same spot again and again. Discrimination invariably fails at elevating any medium. It creates elitism and therefore more closed doors, more closed paths.*

Indeed, the meaning of making new games itself was questioned in another relevant discussion posted on the community, titled *Why continue making games?* Given this historical moment were massive access to both means of production and fundings (through crowdfunding sites as Kickstarter; see Mollick, 2014) is perceived to be transforming 'the hobby' in a messy, hardly knowable tangle of newer and newer games. But while, as we have read above, games might not be

generally considered to be "for all" in the communities discourse (or at least not from the perspective of players), the consensus on the value of having new games was far greater, finding its foundation both on aesthetic grounds:

User8: *Why paint new pictures, compose new music, author new books, take new photographs, or make new movies? Art for art's sake is a valid goal. As is self expression in one's own chosen medium.*

And evolutionary ones. Among other posts which discussed the dynamics of variance and selection as pertaining games, I found a particular one to be remarkably poetic, that is, able to capture the playful, creative self-organization process that brings to the creation of novelty, as discussed at length in Chapter II.

User9: *They* [games] *might be numerous and similar, but that need not lessen our pleasure in contemplating them. Imperceptibly, or at other times in leaps and bounds, they evolve into forms that we have never seen.*

First Coda: 'Will game design shape the future of our entire world?'

As I get close to the end of this case, and with it the transition from informal online spaces to the formal, and yet still playful, learning enviroment that is Tampere's School of Media, I want to highlight some of the discussion closer to my disciplinary field, that of education, and which skirted this well established, if contested, distinction (see Malcolm, Hodkingson & Colley, 2003). The relationship between games and education was indeed a recurring theme in community discourse, if often pertaining gamified approaches or serious games. A particular climax as pertaining these theme was reached through an awesome 'flame' (in internet jargon, an extremely rapid succession of often emotionally charged responses) prompted by the thread *'Five reasons why school and boardgames don't mix'* , a provocative title through which a young Singaporean teacher actually tried to send a call for help for the introduction of games, aptly pinpointing stereotypical responses or cultural reasons which bring to the exclusion of games on the part of traditional formal learning institutions:

1. *Games are not designed for educational purposes.*
2. *Schools are a place where learning is supposed to take place.*

3. *Educators and school leaders are usually not gamers.*

4. *Games do not offer any advantage over other media*

5. *The end users of games are children, but the people to decide whether they get to play games are adults*

The post, being initially mistaken by most users for an affirmation of a necessary separation, brought on an enormous number of responses (more than 140, and still ongoing as of July 2015) trying to debunk those five reasons one by one, or proposing counterpoints, and questioning both the nature of formal learning itself and utilitaristic paradigms that might distort it. Among the more poignant responses:

User10: *If you consider school a place in which only academic skills are worth teaching then I can at least see your argument. If believing that school is also a place to teach social and life skills, I think your argument falls apart. Games are incredibly valuable for teaching a large number of skills which are important to create well functioning children who later become well functioning adults.*

User10: *Five reasons why gaming will always be part of my class:*
1. *Technical reading and writing skills*
2. *Creative Development*
3. *Basic Math Skills*
4. *Self Editing Advancement*
5. *Social Engagement*

User11: *The teleological goal of education can, and often will, distort the game play into something less than fun because that (fun) is not the primary goal. [...] I would like to see games used in the educational arena first to expose people to new ideas about play. So many mechanisms and game play states are available today to teach many different kinds of thinking and strategy. The goal of educational games, if any needs be stated, should be to teach new ways of problem solving, in an enjoyable context.*

User12: *For me, the whole idea of something having or lacking usefulness should not be a part of education, as the goal of education should not be to create a person capable of earning lots of money, it should be an aid to bringing about a well informed,*

capable thinker. Job security should be secondary.

I had entered the online communities with big questions and all-too-focused inquiry strategies, and it was only through letting focus go that I could let all of these discussions come into my view. The one that I want to use to provide closure, and that gives this closing paragraph its title, is however, one that another user posed, *"Will game design shape the future of our entire world?"* . The thread itself was, in fact, quite unfocused, and only vague hints could be gleaned of its poster perspective, letting the discussion rapidly into ironic responses, among which some users simply answering *"YES"*. However, when questioned about his or her line of thought, the original poster gave a straightforward and, to me, impressive response.

User13:   *If gaming makes you better as you suggest (and I concur)- what does game design do to you??*

User14:   *Gaming makes you better, game designing is a way to be a teacher !*

This user never actually explained his or her reasoning, but this was a perspective that I always kept in my mind while continuing fieldwork through my diverse sites, as you will be read throughout the next two Cases: does game design really make people into teachers? I was to discover it, and to bring the issue to another complexity level, through my encounters with Tampere University's *game design teachers*.

Case II - How a Node Connects to the Whole:
The Stories and Spaces of Tampere's Game Creators

"Yet a harp might be constructed
Even of the bones of fishes,
If there were a skillful workman,
Who could from the bones construct it."

- Vainamoinen, from the "Kalevala", Finland's national epic -

Welcome to Finland: of Silence, Crackers and Serious Playfulness

"I hope you'll be at ease here, we are quite an informal community" told me Olli Sotamaa, my local advisor, and Tampere University's (that is to say, Europe's, to say the least) main expert on game modding communities and practices, breaking a long silence as he took me for a tour around the School of Communication, Media and Theatre. I had been in Finland only for a few days, and I was still a bit awkward in my interactions, as Finnish can be peculiar people to a true-grown Italian's eyes, almost our polar opposites in many ways: as quiet, essential and straightforward in their demeanor and speech as we Italian can be noisy, redundant and oblique. So quiet, essential and straightforward that, during the first month of my stay, I often mistook their respectful distance for exclusion: small talk is not a thing there, people talk if they have something to say, else they value each other's privacy and space. Adding to my awkwardness was the fact that Finnish language is not even Indo-European, and completely unfathomable, or at least was to me at that starting point of my stay. Still, almost everyone spoke English quite fluently, often even thanking me because I forced them to practice it more, thus adding their graceful inclusive effort to the subtle guilt due to my enforcement of "foreign" communication patterns.

I was quite nervous on that true "first day on the job" at the University of Tampere, but the environment felt indeed quite cozy, an island of warmth in the middle of Finnish February's frozen landscape: it was clearly not simply an utilitarian, institutionalized workspace, it felt like a living place, almost a home. A character made patently evident by traces of messiness as, having arrived *"the day after a party"*, I could see the common kitchen of the department (open to faculty and students alike) still stuffed with used dishes and empty bottles, while Olli showed me where to store

my pizza, if I ever wanted to order (or even make) one. We met Director Frans Mäyrä , and he greeted me without ceremony and with a warm smile. He was the first person I contacted to visit Tampere University, and the one who pointed me at Olli, as the one colleague closer to my themes of inquiry. *"Hope your stay will be fruitful for your research"* told me Frans, *"and knock whenever you need something, the door is open"*. He then walked away in his warm (and funny) looking, colorful socks, similar to the ones Olli and everyone else walks around in. The winter would still be quite long and cold, and comfort there took precedence to any dress code.

While the reader might find the above discussed details of Finnish quietness, dirty dishes, pizza storage and funny socks to be mere local color, it is precisely because of this character that I touch on them: to convey, through everyday details, the deep informality which permeates and makes possible to study games (and their making) in what still remains a formal learning institution. This is not to say that there is no seriousness in the School of Media: Finnish straightforwardness often made meetings and seminars seem almost confrontational for Italian standards, as presentations and projects were thoroughly dissected and made object of the most blunt, earnest discussion. This earnestness does not have any lasting impact on interpersonal relationships, but is commonly understood to pertain only to the circulation of complete and useful feedback, which can be often perceived as harsh (for different cultural standards), but is never held as a grudge. This reflects a quite peculiar position of Finnish learning institutions (as of today ranked among the best of the world; see Darling-Hamond, 2012) toward learning and research, one that is characterized by a strong value placed on allowing for mistakes, while not allowing mistakes to define an individual learner's identity (see Ropo, 1987, for an in-depth discussion of Finnish teaching ethics and values). Around the School of Media lots of colorful, straightforward (and supposedly encouraging) stickers conveying this particular attitude could be found: *"If you never fail, how do you know what to improve?"* asks one, *"Your research idea sucks! That's good! Make another one!"* reads another, setting a mood of openness and earnestness regarding inquiry and debate, a mood which helped me a lot in confronting the conflicts and failures discussed in Case I.

My discussion of this "fail forward" attitude is, once again, not simply a folkloric one, nor it is meant only to provide an insight in Finnish pedagogical approaches. It is, in this context, intended to highlight the close connection between the organizational cultures of networked, independent creativity and digital technologies and patterns of production, as discussed in Case I. Linus Torvalds (the Finnish creator of the most widespread open source operating system, *Linux*, and therefore one of the main proponents of free software and open culture; see Bretthaur, 2001, and Williams, 2015 for an in-depth historical perspective on free software cultures) discusses "management by perkele" (a typical Finnish profanity, roughly equivalent to "damn") as a metaphor

for a style of communication that endeavours to be open and honest about opinions and emotions about any problem within cooperative processes, for the sake of full clarity and disclosure between participants even at the cost of proper etiquette (Mannonen, 2009; Torvalds, 2011).

The *Linux* case is indeed a paradigmatic example of the preminency of the Finnish independent software development culture as a key node in the reappropriation of digital pathways of production. Tracing the historical roots of this specific embodied and contextualized reappropriation (probably among the oldest instances, most assuredly among the most successful and eventful), is not a trivial task, and Olli Sotamaa's current research pertained exactly the emergence of the Finnish peculiarity, trying to go beyond the most often told, common sense saying of *"We have to keep ourselves occupied during our long winters"*, and inquiring into the fragmented, underground exploits of the so-called *"demoscene"*. This particular artistic subculture, once again, started from a technological appropriation, concurrent with the advent of affordable home computers in Northern and Western Europe in the Seventies. The "demoscene" evolved from a playful, competitive practice of software crackers, that is, individual users who employed their coding skills to find ways to circumvent copy protection mechanisms in software and games, thus bringing copyright infringement practices to a new dimension. This users personalized animated introduction sequences (or "intros") to cracked software, signatures which at the same time signaled a cracker's skill in violating corporate control systems and his or her skill in audio-visual programming. In time, the practice evolved, with intros becoming more and more elaborate, and ultimately detaching themselves from piracy to become a digital art practice in itself in the form of "demonstrations", or "demos", for short (Saarikoski & Suominen, 2009). From the cracking and editing of games to the creation of artistic objects and the re-creation of games themselves the step was quite short, and through its extremely active "demoscene" Finland laid a solid foundation for the active and internationally astonishingly successful Finnish games industry (Tyni & Sotamaa, 2014), a business which, as of 2015 has an estimated value of almost 3 billion euros, and provides jobs for almost 3000 people directly involved in game making, be them designers, coders, artists, managers or researchers (to give a basis for comparison, U.S. Game industry, currently the biggest in the world, employs about 40,000 people, thus having, proportionally, a fifth of the employees; see http://www.tekes.fi/, for further statistics).

Indeed, like most of Finland's game makers, the game studies research group within the department of media, the GameLab, is mostly composed of the sons and daughters of those pioneering crackers: a young research group, composed of young scholars from a whole spectrum of disciplines (among which information sciences, cultural studies, philosophy, education, psychology, journalism), transdisciplinary "refugees" who found a common, comfortable space in the "magic circle" of play.

I was somewhat of a refugee too, from the rigidities of mainstream developmental psychology and performance oriented education, and even though I knew I was coming in such an hospitable and playful place (I had chosen it for this very reason, beside my contiguity with Olli's specific area of expertise), yet I found myself bewildered: a university department that properly balances playfulness and learning, even if it includes as its core a game studies research group, was something that I had to see and to live in to believe it was (and is) possible to harmonically and fruitfully reconcile the often rightfully counterposed polarities of institution and playfulness, a polarity I discussed at length in Chapters I and II.

During my visit, the institutional learning moment which most strongly embodied this particular approach was Annkaisa Kultima's Game Design Workshop, which proved to be key in providing me with diverse, formal, and more professionally oriented, perspectives on game creation, paralleling the informal, unprofessional approaches I was exploring through my online fieldwork. Annakaisa, or *"Akoo"* for short, as she is widely known in the Finnish game development community, was a doctoral student like I am, the appointed teacher for the Game Design Workshop course, a scholar of philosophy of science and epistemology, and a very direct woman, one that almost seemed to be looking for intellectual confrontation, especially when discussing games and playfulness. The first lecture of her course was conducted together with Director Frans Mäyrä , who once again highlighted the deep similarity between research, learning and games, the character of freedom which they have in common (as discussed in the Introduction and Chapter II) and the value of games in themselves, not as mere tools, be them for economic gain or for training. Annakaisa then expounded on the skills needed to be creators of games, highlighting how that of the game designer, while strongly technologically influenced in the current historical conjuncture, is first and foremost *about* and *with* people: beside game literacy and creative problem solving, game designers' main job is to understand and refine the players' experience, therefore they need to develop empathy and communication skills. This expertise is to be considered a community asset: *"People out there don't want your ideas, but can be the most helpful in refining them. You need to network, you need to participate, you need to share if you want to work in the game industry".* This passionate speech left the students, especially those who where expecting the work of the game creator to be an a-social and exclusively technological one, quite shocked, and even more silent than the usual Finnish classroom. Then Akoo provocatively asked: *"So, do you have any boring questions?"* Straightforward, indeed.

"People oriented" theoretical and philosophical reflection and questioning play indeed a key part in the Game Lab's academic endeavours, which, since the founding of the DiGRA (Digital Game Research Association) in 2003 in Finland, constitute a core of modern game studies. At the end of

april 2014 a very important opportunity occurred, highlighting this core role: the university of Tampere held the *"Critical evaluation of Game Studies Seminar"*, where I had the opportunity, together with other researchers and students, to meet and discuss with many of the "big names" of game studies I quoted in the first Chapter of this work, marking a powerful impact in the theoretical structure of this dissertation. In the context of this specific Case, it is worth to highlight how, while founding fathers of modern Game Studies like Jesper Juul and Eespen Aarseth discussed the punk-like unity of morals, aesthetics and politics of independent development or the ontology of game studies as a field of study and the violence inherent in its disciplinarity, the effort to disrupt the seriousness of academic seminars which so characterized the GameLab environment was still present and strong in the playful exchange of commentaries via tweets, in the pervasive humor of presentations, in the obscure inside jokes pertaining our common (and still academically marginalized) ludic literacy, in the random, estraniating commentary provided by the *Murmur* "talking chairs" (one among many of the GameLab's experiments in interactive environment design). The *"Critical Evaluation of Game Studies"* constantly questioned the boundaries of academic cultures and practices, avoiding consensus around any "mainstream" and fostering plurality of approaches, as *"Play is safe as long as its purpose can't be understood"* (Simon, 2014). Having set the stage of Finland's historical relevance in both the story and the study of modern game culture, throughout the following pages I will endeavour to convey at least part of this playfulness and of the patterns of its balance with both learning institutions and business, as I explored and participated not only in the formal activities of the Game Lab, but also in the crisscrossing of the lives of the whole Tamperese community of game makers, comprising of amateurs, perspective professionals, game design V.I.P.s and educators. But, at least for now, let's get back to the institutional core of this playfulness, and even to its topological and architectural whereabouts.

An Academic Playground: The Oasis Room

I will continue my account of this particular node of the global game making community examining its material infrastructure, that of the physical learning ecologies themselves (echoing Bourdieu's discussion of Kabila's houses, 1972, and Massa's Foucault-influenced discussion of institutional buildings, 1987), whose core I chose to identify, deeming it a useful interpretive lens, with its most concrete (pun intended), patent manifestation: the so-called "Oasis Room".

Lying at the physical center of the School of Media, the Oasis Room is a remarkable effort of participatory design, built starting from acknowledging a need for a re-discussion of learning spaces

on the part of students, and from an in-depth survey of student's co-abitation and co-working needs, making use at each step of the design process of their articulated suggestions and their feedback (see Kultima, 2014, for the full story of this co-design process, which goes beyond the focus of this tractation). The Oasis room is, at a first, cursory view (Fig. 5), a colorful hybrid of library, social room, auditorium and arcade, shaped similarly to the tall, wooden stairs of a sauna, an architecture which Finnish people almost seem to find inherently conducive to a relaxed emotive climate and to socialization. Within this room, students game studies and media studies can find

Fig.5: Oasis Room Panorama

quite a treasury of rare books, many of which are said to be "the one copy in Finland" or "never been printed outside of Finland". *"In OASIS, you don`t have to be silent, but be nice to others!"* reads a welcome sign, quite the contrast with the customary silence and seriousness of ordinary university libraries. However, the room is indeed much more than a library, as it can be immediately gleaned by a looking at the screens which punctuate the bookshelves: yes, these computers are replete with "serious software", the tools for development, editing and creation that are needed so that students can work on their assignments in a lively social environment. However, this is also (and most importantly) a gaming room, fully furnished with high-end computers, gaming consoles, whole libraries of games (both digital and "analog") and also "retrogaming" implements, through which to experience videogaming from an historical perspective (that is to say: to allow the older faculty members to play again with the students the games of their childhood).

Whenever I didn't have meetings, conferences, lectures or I was not browsing through the other (silent and serious) libraries of the University of Tampere, I spent a substantial part of my time in the Oasis Room, even though I had been provided with my personal office and desk. I had not come to that place in the North to do my research alone, nor I feared being distracted or disconnected from my online inquiries. In fact, from an infrastructural standpoint, the perfect connectivity of this

room (a feature which recurred in each and every student's co-design questionary, together with "*We need more electricity plugs!"*) allowed me to seamlessly continue browsing the virtual playful spaces I discussed in Case I. While I was discussing games and game design online, I also wanted to see playfulness around me, especially playfulness within an academic context. It reminded me at every step that what I was doing is not utopian in the sense that is impossible, but just that it is indeed possible "somewhere else", in a different institutional configuration of the socio-cultural *dispositif* of education (see Zizek, 2013).

In that environment I had the opportunity to observe a learning and researching community not (only) irregimented in the ranks and files of ordinary classrooms (which still constitute a very relevant, and necessary part of Finnish University curriculum), but also sprawled on the huge pillows of the Oasis room, gathered around its interactive tabletops, reflected on its screens. Using this particular place as a privileged entry node I observed and participated in the social life of Tampere's School of Media, where faculty members and freshmen play together Kart videogames, or even musical games, overcoming their hierarchical differences (and Scandinavian reservedness) in playful displays of song and dance. This pulsing heart of the department, this open, informal node of relationships, is a paradigmatic representation of an organizational climate where hierarchy is present and respected, but consciously and explicitly kept to a minimum as it is perceived to be an impediment for learning and communication (see Hautamaki & Kupiainen, 2014). Here conviviality exists and thrives, without necessarily meaning the complete dissolution of scholastic infrastructure, and with it the expansion of possibilities a true democratic community of learners entails.

This participant observation, this "deep hanging out" (Geertz, 1998) in the Oasis Room and being part of playful learning patterns which self-organized and unfolded around and within me, is something that I still miss a lot, as it most closely embodied in a very concrete, material way my reflections on the contested relationship between play and the Academia, so thoroughly, if only theoretically, discussed in Chapter I. A place built to play for the sake of playing together, and not because playing is a way to learn something, not even because play is a way to disrupt hierarchy, to generate creative thinking, or to socialize (even when recognizing that it can be all this). Play for the sake of play, acknowledged for its inherent value.

To have a place designed around these values, however, is something that seems to run contrary to the most basic tenets of the organization of knowledge in most of the so-called developed countries, being it currently costructed through close bonds with the constructs of productivity and training (see Denzin, 2011), and something that even educators themselves find hard to accept. As an example of this conflicted dynamics, I remember how, during a conference focused on education

and technology, the Oasis room was open for a session focused on "the design of learning spaces"; a group of scholars from all around the world was invited to visit the room, and there were curious looks on their faces as they awkwardly found their seats on the stairs, on the huge poof seats, or on the above mentioned talking chairs, which welcomed the surprised visitors with an informal Finnish greeting: *"Moi!"*.

The chair of this session was Akoo, and that day she looked very proud and happy, being one of the main people responsible for the creation of such an innovative space, and being this her "creature"'s first international appearance. When the inquisitive murmuring ceased, she addressed the audience: *"So, how do you like this place?"* she asked with a wide smile.

However, the very first impressions were not quite what she (and I) expected: *"Isn't this place colorful! Is this a kind of university nursery, or the faculty kids' space?",* inquired a man. I saw Akoo's eyes freeze and I feared the "straightforward" answer that might come. She tried to be diplomatic: *"This is a social learning and research environment"* she answered, quoting the design document. *"It is designed to foster open culture, informal learning and casual information sharing, it is a place we created to be conducive for well being and creativity, a friendly resort in the middle of the campus".* The audience seemed perplexed, and one of the presents pressed on, to ascertain the practical uses of the room: *"But what do you do here actually? Do you hold lectures? Workshops?"* Further quotes from the design document: *"That can happen too. As we designed the space for opportunistic use, it is capable of supporting a range of different activities, and the desires of the visitors. Aside from the occasional lecture, this is a space open for the whole learning community to use as they feel, as long as the activities are open for everyone who might want to join.* Another guest insisted: *"That's nice, but if you don't design activities they'll just come to play and don't learn anything."*

I balked at such an affirmation, which, to be auto/biographically complete, even made me briefly reconsider my disciplinary positioning. Was this really the consensus among educators? Was learning still to beconflated with training, an activity to be designed from the higher-ups? This response constituted a mirroring and confirmation of the conflicts and failures I had encountered online: there, the ordered, institutionalized character of my inquiry proposals was neutralized and ignored by the playful community, here, the playful character of Annakaisa's proposal was neutralized and ignored by the institutional community of education scholars, once again highlighting an almost unhealable divide.

Annakaisa responded discussing the fact that learning participation, teamwork and the use of common spaces was still to be considered learning, but the audience was divided even on this, still favoring performance and measurable results to socialization. This core of contrast, this open

discussion was indeed what I was looking for when going to Finland, a way to heal the divide: to find a space where playfulness had become part of an institution without disappearing or destroying the institution itself, thus gaining a hearable (if sometimes misheard) voice within the academic debate. Discussing the innovative character of the Oasis space with my italian colleagues, however, a further, enlightening point of view emerged: the Oasis does indeed look like a nursery school, and not just because of its colorful furniture, but because nursery school spaces are, at the current state of inquiry into the design of learning spaces, the only ones to have experienced a remarkable evolution through explicitly focused, liberating pedagogical thought. The spaces of youngest children are, ultimately, designed as true playgrounds, and not as the panopticons which schools and higher educational institutions are (Burke, 2006), with the Oasis constituting a material counterexample which helped me in structuring the strong critical undercurrent toward the current shape of learning institutions discussed on a theoretical level in Chapters I and III (see, among others, the approach of Loris Malaguzzi, 1995, toward the design of children spaces, an approach which, sadly, has remained confined to such environment, its most general theoretical and political considerations unheard by learning institutions at large; see Edwards et al., 2014).

A professional in the playground: of instincts and realizations

Beside my "deep hanging out" (Geertz, 1998) in the Oasis Room, however, many more formalized activities went on during my stay in Tampere, highlighting the institution's attention toward the close and reciprocal relationship between technological progress and the restructuration of learning spaces. However, as pertaining the focus of this work, the most relevant in orienting my fieldwork was once again Akoo's above mentioned Game Design Workshop. Akoo's course, beside the above discussed opening lecture, was mainly intended to be a practical one, and while containing touches on the theoretical perspective on game studies, was mostly focused on providing students with design strategies, project management techniques and technical tools to become professional game designers and developers. Following this professionalizing approach, the course was further characterized by lectures and workshops held by famous personalities of the exploding Finnish game development industry (whose revenue grew by 260% from the start of 2012 to the end of 2013; Nordgren, 2014), noted designers, producers, artists and market specialists which Akoo contacted or came to know throughout her own research activities.

One of the first we encountered, was Mikko Karvonen, a lead game producer from Rovio Entertainment. Rovio is a key node in Finland's modern information economy and pop culture iconography: starting from quite humble beginnings, this game development company ascended to global renown thanks to the *"Angry Birds"* game (2010), which, through a combination of accessible game design, commercial availability and historical conjuncture (being one of the first games to be digitally distributed on the first widespread generation of smartphones) as of the end of 2014 mantains the remarkable feat of having been downloaded more than **two billion** times,

Fig.6: Angry Birds' main characters

making it the core of a billion dollars merchandising business, thanks to its iconic and recognizable characters (Fig. 6). The CEO of Rovio Entertainment, Mikael Hed, is considered to be one of the most influent personalities in Finland, and his invitation to the Annual Honor Dinner for Finland's Independence Celebration on the part of former President of Finland Tarja Halonen herself almost single-handedly propelled the job of the creator of games into respectability, and even cultural acknowledgement.

Mikko, as one of the lead producers in Rovio Entertainment, was at the moment one of the most important people in Finland's digital economy. And there he was, discussing with students of how to prototype their own games, that is, how to transform a momentary, subjective idea into the first version of an evolving, material, interactive feedback system (as discussed in Chapter II). *"Prototyping is fun"* , he told the students *"only second to seeing people playing your game and having fun."* He then added something which, while still sounding quite Finnish in its stubborn, "fail forward", character, once again echoed the playful paradigm of learning and research I endeavoured to discuss and promote in Chapters II and III, and the suggestions about the teaching ability of game designers I was gleaning from online fieldwork: *"And don't worry if you fail: a failed prototype is a good prototype, it means you have learned something about your game and making games in general".*

As one of our workshop sessions, Mikko proposed an apparently paradoxical acivity: *"Let's convert some well known videogames into boardgames",* a task to confront which we were provided with a big box of random, small objects and stationery: crayons, Lego Bricks cardboard box, colored

sheets, balls of yarn, plastic animals and so on, something that my education as a psychologist could easily recognize as akin to the "Treasure Basket" of heuristic play (Goldschmeid, 1990), and my methodological background readily associated with bricolage, as discussed in Chapter IV. The activity was hands on, almost completely unguided, and relied on the informal feedback of coursemates and of Mikko as close expert, who walked around the tables, fiddling with prototypes and laughing with the students' at their bizarre (and indeed very fun) efforts in system re-designing. Together with three coursemates we managed to produce a semi-playable (if tongue-in-cheek) paper-and-*Lego* version of *World of Warcraft* (the world's most successful Mass Multiplayer Role Playing, which, as of the writing of this thesis, involves more than 7 million users in simulated exploration, warfare and pseudo-tolkienian fantasy life in general; see Bainbridge, 2015). In our analog version "building" a character did not mean spending hundred of hours fighting monsters to harvest materials and 'experience points', but mostly using some basic rules to build it with Lego bricks harvested from fighting other monsters made of Lego bricks, randomly spread on a crayon drawn map. It was simple, but it worked, at least for a fun, 5 minutes romp. Most importantly, it was amazing, in creating even this little, incomplete game, to see a system come to life in a sudden phase transition of complexity (Heylighen et al., 1999), from a simple, clunky set of rules and markers to something open, and responsive, to exploration and interaction. After the workshop, I approached Mikko as, being involved both in one of Finland's most important game companies and in game design formal education, I was interested in his professional insight into game design processes, even if, indeed, his professionality set him apart from the "amateurs" which constituted the main focus of my online fieldwork. This notwithstanding, I asked him if he could grant me an interview, to which he accepted gladly.

On the day of the interview I arrived at Rovio Tampere a bit early, as I wasn't sure of where to find it in the larger Finlayson area, another paradigmatic symbol of Tampere's (and Finland's) very successful transition from the Industrial Age into the Information Age: a complex of cultural venues, museums, cinemas, international restaurants and digital startup offices, carved into the locales of the great tessile factory which brought the Industrial Revolution (and became the main source of jobs) in this area of Finland in the nineteenth century (see Jalava & Pojola, 2007). *"Tervetuloa",* welcomed me an employee at the door, showing to me a big red sofa in the main room, and telling me that Mikko was in a meeting and would be available in a few minutes. Beside me on the sofa two kids were playing a football video game, and even setting aside the two children this didn't really look like an office. From where I sat I saw a colorful kitchen, and quite a lot of toys and plushies thrown around. A messy, creative space indeed, I thought to myself, as I reread my notes for the interview, and jotted down a couple words about the environment. The meeting

being over, Mikko asked for a few minutes more to clear the room, while a woman came to call the kids, which protested the interruption but followed her out of the "office". Two of Mikko's colleagues promptly took their place on the sofa and the gamepads in their hands, and while I couldn't clearly understand what they were saying, it was all but evident that playing games was an integral part of the job there, and this was a long due rematch (see Portillo & Meneely, 2015, for an in-depth tractation of digital startup's peculiar workplace and worktime design). After a couple of minutes, as I smiled at the typically Finnish absence of celebrations for a goal, Mikko came to call me, apologizing for the delay. I followed him to a little meeting room, which looked quite empty compared to the entrance room. I took an inquisitive look around, and Mikko quipped:

I had to take away a few things. You might be into industrial espionage.

It's not always easy to understand if a Finnish is joking, but he probably was not. I let the comment drop, while taking a mental note of the actual, astonishing magnitude of the businesses that passed through that small room, and, after thanking Mikko for having me in this place, I started with the interview.

Me: *Given the huge magnitude of Rovio's success, I see that you work by necessity in a transmedial design environment. How did you arrive at game design in particular?*

Mikko: *Mostly by playing, as everyone else. When I was five I was playing chess, then I played 'Magic: The Gathering', then I was game master in role playing games...I think this is quite an usual path for game designers. As for formal education, I majored in folklore studies, since I was in the university way before courses like the one we met at existed.*

Me: *What can you tell me of your work environment? Is the design of design spaces important?*

Mikko: *Of course it is important, but does not lead creativity. It can hinder or inspire it, but it's not the key component. Still, having spaces where you can stand and move around, spaces full of different things is much more stimulating than having to sit still in a cubicle. The most important thing is the organizational level: I am convinced that low hierarchy is quite integral to design spaces, since you need feedback to go around as much as possible.*

Me: *Speaking of feedback, what can you say about the importance of community in your work?*

Does community feedback come into play? And if so, how?

Mikko: *Well, this is not always the case. Indies can trust on the good will of a small fanbase, but on a Rovio-sized scale community feedback can be inconvenient, and hard to interpret. Being loud is not the same as being representative, so, as a designer, you mostly have to trust your instinct. Also, we don't need ideas from a whole community, we already have an overabundance.*

Me: *This is extremely interesting to me: what is this "designer instinct" you speak of? Could you please elaborate?*

Mikko: *I think it is mainly about the accumulation of experience, but involves also a deep understanding of how systems work. Design requires systems thinking. So maybe instinct is not the right word, it's not about not thinking, it's having already thought a lot about your design choices, and then following your gut.*

Me: *And is this kind of "gut feeling" something that can be taught? Can game design really be taught? And if so, how?*

Mikko: *Yes, of course you can teach game design. But you can't really do it in the traditional way. You can't just do frontal lectures on "how to do game design" and think it will work. You have to be very hands-on, and, as an expert, be constantly there to mentor, guide, and most of all give constant, meaningful feedback.*

Me: *I see, and I saw this approach working very well at the University. But those are people who want to make game for a living, they are involved by default. My final, million dollar question is: how do you involve new people in game design?*

Mikko: *Well, there is actually an easy answer, and is that you have to make them play first. People don't play much, and when they do often play bad games and disqualify games as a whole. I'll tell you a personal story: my mother was bedbound for a while, so, to help her pass the time, I brought her a tablet, on which to read books and news. However, on the same tablet I had one of my games, and my mother played it for quite a bit. You see, she always told me I played too much, and wasn't happy when I chose that of the game designer as my career.*

However, after playing she changed her mind. She told me she had finally understood how much work and care has to go into creating games.

I just remained silent for a moment, grateful of such a powerful and personal testimony. Then Mikko continued:

"That's what you need to involve people in game design, you need realization"

Well, this was quite a realization for me too: being someone who, throughout my life, was never inclined to devalue games, I had never fully realized how to become a professional in game design is something that only a few people think to be a possible, meaningful (or even socially acceptable) career, and something that indeed requires challenging hegemonic culture. After thanking and saying goodbye to Mikko, I walked home through a park, where children were climbing on wooden structures, yelling to each other the ever-evolving (and to me still linguistically unfathomable) rules of their "Let's Pretend" games.

While each and every child tries his or her hand at world making and game design as a necessary undercurrent of his or her developmental path (as discussed in Chapter II), legitimating and refining this unacknowledged and underappreciated skill into a consciously reflected upon life trajectory, a professionality and aesthetic literacy, is still culturally hard, and the "compact dequalifying dispositive" (Fink, 1962) seems to stand strong even in the age of interactive media. Having spent some months among perspective professional game designers in a place where this is (or at least is on the way of becoming) a "respectable" profession, I had the remarkable opportunity to discuss what patterns of discourse move and motivate these people. This also brought me to the contested realationships between market and creativity (theoretically discussed at length in Chapter III). And, in doing this, once again true research happened at the pub.

The market and the stories: of Conviviality, Embodiment and Access

Tampere based game development companies (which, at the time of the writing of this dissertation, are 48, having grown in number by 600% since 2008; see neogames.fi, 2015) often gather together to host dinners and nights in local pubs, having realized that networking and conviviality are mainstays of the profession of the game creator, and to allow for students to begin their participation in the community while still in their formative years. As for me, I started attending these nights as a means of seemlessly mingling with the local game maker community, but also

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because, as common sense said, winter nights are indeed long in Finland. I remember, during the first of this meetings, how I broke the ice with my until then very quiet coursemates, chatting with some of them about the relationship between local environment and the designed environment of games, using the common ground of our game literacy to further the reciprocal exploration of our cultures and countries. It all started with a well known trivia about a globally successful game:

K: *So, Luca, is it true that Assassin's Creed II* [an historically set action/stealth game] *levels are all patterned after real Italian towns? Do you have so many buildings that old still standing?*

Me: *Indeed they look like that. I visited Venice (Fig. 7), and a couple of those towns in Umbria and Tuscany and they look quite similar. But I was not jumping from roof to roof, so I wouldn't know about the details.*

J: *Your country has so much history...I'm going to Tuscany this summer, so I'll get to see those places and maybe make some games set in them... Here in Finland we just have woods and lakes, with wooden stairs and cottages here and there. And saunas, of course.*

Me: *You know, now that you mention it, when you look at it this way, Alan Wake* [a cinematic horror game by Finnish developer Remedy; see Fig. 8] *is really, really Finnish in its environment and atmosphere: wooden cottages in silent forests, freezing lakes and that yellowish light, when the sun is low on the horizon...*

J: *I never realized that. It is all so... usual to us that we don't see that as Finnish.*
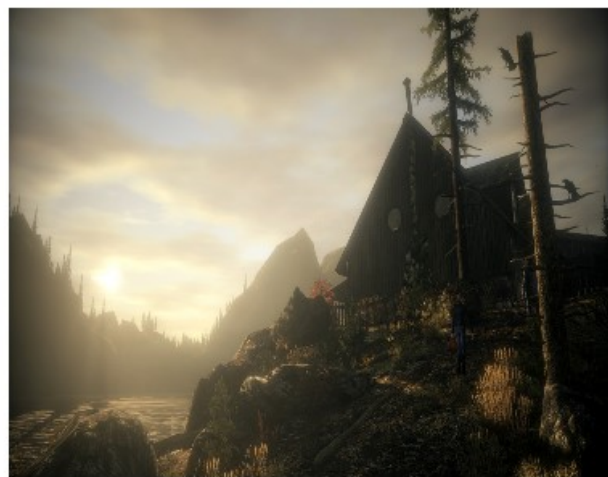

Fig.7 & Fig.8: On the left, Assassin's Creed protagonist jumping around in Venice. On the right, pseudo-Finnish sunset and lakeside woods in Alan Wake.

Speaking of the virtual spaces we had shared thanks to the apparent delocalization of gaming culture, with the help of my coursemates I realized how true it is that while the player's places might be online, both players and game creators are very real, embodied, historicized and contextualized people. These informal meetings are indeed a great opportunity to realize the (often underappreciated) embodied character of game-making practices, as they are at the same time professionally advertised to be opportunities for "Best Practices Sharing" and characterized by an extremely convivial, even party-like atmosphere, where people interested in games just meet, chat, have a drink together and share playful stories around a real, material table, like I did with my coursemates without being bound by the much more focused discussions of online threads.

These informal meetings notwithstanding, the pressures of the current shape of the electronic entertainment market can make themselves very strong, and work against accessibility and diversity of alternative patterns of storytelling. One day, the invited "V.I.P." speaker in Akoo's course was Joachim Achren, who became a celebrity in the Finnish game development community as the creator of the big data infrastructure driving *Supercell* games. A little historical-economical aside: *Supercell* is a Finnish game developer, famous for the "free to play" games *Clash of Clans, Hay Day* and *Boom Beach* which, through a system of "microtransactions" to buy optional in-game services or items generate (as of 2015) a revenue of more than 5 million dollars per day (internal *Supercell* source, 2015). Supercell is also the protagonist of the biggest economic turnout in the whole Finnish "electric media" history, when, in 2013, Japanese investors bought 51% of the company for the awesome sum of 2.1 billion euros. This acquisition generated a sudden, massive tax revenue increase for the Finnish government, and together with Rovio's above discussed worldwide success, played a big part in legitimating that of the creator of games as a socially acceptable job, and, most closely to the interests of this Case, as a socially acceptable avenue for studies, prompting the Finnish government to invest in Game Design and Development courses within universities, and Startup funding for emerging developers (mainly through the Finnish Funding Agency for Technology and Innovation).

Joachim's lecture was focused on game metrics, and how to leverage the "big data" generated by their massive number of users (similarly to the quantitative research practices discussed in Chapter IV) to better "monetize" one's game, explaining how this is not only an issue of marketing, management and infrastructure, but, in the above discussed age of free-to-play, crowdfunding and digital distribution (Alha et al., 2014), is an issue of game design in itself, as the feedback systems which constitute the core interactive structure of a game can be made so that they exert subtle pressure on a player to buy services, items or expansions (see Zagal, Bjork & Lewis, 2013, for a tractation of "Dark Game Design", as in design practices which are not aligned with the best interest

of the players). After this lecture (which was quite interesting to me, highlighting the political distinctions as pertaining design patterns I discussed in respect to the "punk" practices discussed throughout Case I) I had lunch with two students, J. and V., who expressed quite different positions on the theme of monetization and, most generally, on the theme of market and its contested relationship with the creative freedom of perspective developers. This discussion began when V., almost breaking a wall of silence, blurted out:

V: *This course is getting quite... Weird. I am not sure I want to learn all these wallet-opening tactics and surveillance technologies... They feel... dark.*

J: *Well, that is how you can get a successful game out there. More than that, that is how you can get into big companies and, eventually, get rep and autonomy as a designer: by being able to work with the current state of the industry.*

V: *I know, I know, it is just... I just want to tell my story.*

This heartfelt admission was quite striking, and resonant with my efforts as a researcher, in that I strongly understood his need to be heard, and to escape the "mainstream" by focusing on subjectivity and critical perspectives. In his pursuit of a career as a game developer, V. was certainly not looking for fame, power or money, but he represented, if naively, the "punk" attitude of achieving the bare necessary technical aptitude to make one's own message aesthetically meaningful and able to reach a wider audience. J., on the contrary, more pragmatically recognized the undeniable role of economic forces in sustaining creative spaces in the current historical phase, and was much more willing to compromise:

J: *I know that V., I have a story to tell too, but how will you survive while you get there? You can't hope to just put out your own game and make a living out of it.*

V: *Why not? I just need simple graphics and a bit of tech-savvyness...A simple point-and-click adventure would suffice to me, I want to tell a story, not worry about about mechanics, technology, and especially not worry about milking my players for money.*

I intervened, trying to find, in the paradoxes of technopoly and creativity theoretically discussed in Chapter III and here so poignantly embodied, a sustainable mediation between V.'s admittedly

idealistic position and J.'s starkly pragmatic one:

Me: *V., as you learn to use more current technology and design paradigms, it is probable that your work will be more attractive and more accessible, and therefore your story will reach a lot more people. Isn't that what you want? To be heard?*

The answer from V. came quite abrupt, and uncharacteristically emotional:

V: *"Oh, come on Luca, do you think Tolstoj was preoccupied with accessibility?"*

Finnish straightforwardness. I'm quite sure he didn't emphasize it with the above mentioned "perkele" just because profanities don't translate well. He was right in stopping my ill-advised mediation effort, as "accessibility" was absolutely the wrong word. It had, in that context, the same character of marketing and technocracy that he was denouncing in the lecture. V. then continued:

V: *"I am reading McLuhan for the Media and Society course, he says that even guns are means of communication.... But this does not mean that I can tell my story with a gun, in the same way that I can't tell my story with a free-to-play, micro-transaction infested game."*

The patterns of the story V. needs to tell, whatever that might be, are not conformable to what can be told taking into account market patterns, and indeed he found those very patterns which currently deeply shape the medium of games, the same medium which he had chosen as the most comfortable and apt to express his subjectivity as a "digital native", to be disruptive for subjective narratives themselves. As an aside, I will add that "accessibility", in the sense of conforming with the standards of greater socially acceptable relevance, with the "mainstream", might indeed be not be my own forte too, as discussed in Chapter IV.

The Game Design Workshop was indeed full of men and women who had stories to tell, and were looking for means to tell them that were consonant with their intent, from the one who wanted to be the next Rovio to the nostalgic of Eighties' games, from the one who wanted to create complex world ecology simulators to the theatre-oriented live action role player. Diverse young men and young women who all chose games as the medium for expression, just as, in the past, people chose music, cinema or literature.

To encourage such diverse students in networking and to challenge their reservation, Annakaisa, as part of the course evaluation, requested them to make various games following the typical Game

Jam model (which will be discussed at length throughout Case III): having to complete a game on a given (usually sufficiently vague) theme, within a limited time, in small teams built on skill diversity. These project were, however, not to be evaluated on an individual level: students did not receive "grades" for these games, which were mostly shared and played between coursemates, nor for their individual contribution, as, running contrary to ordinary learning course expectations, participants were not expected to practice the same skills, but mostly to be able to work together (evaluation was, instead, founded on the comprehensiveness and style of individual course diaries, which Akoo encouraged to be *in depth, and with pictures, please"*).

After having stood on the sidelines of the Workshop for the first months, due both to concurrent academic duties and not wanting to saddle teams with a "human scientist", I elected to participate in the composition of teams for the last "amateur" level project before the students moved on to their industry internships and I was due returning in Italy. Indeed, as I was fearing, my technical skills were quite poor, in respect to a class composed mostly of information sciences students, but I could still contribute writing (I am an academic, after all), design and a bit of sound editing. With my team I drew out of a hat our two themes, which turned out to be, to our surprise *"Giant"* and *"Hookers"*. Akoo (who of course had a lot of fun coming up with random themes) smirked, and she surely couldn't be accused of perpetuating gender stereotypes in the media, given the (once again quite straightforward) title of her talk at the Inclusion Panel during the last International Game Developer Conference: *"I Have a Fucking Right to be Here!"* . Still, she was (and is) acutely aware that one of the best ways to overcome exclusion and objectification is, indeed, by playing to deconstruct them as cultural artifacts, to consciously play with them as to discern their boundaries and therefore to push them, especially through the appropriation of new expressive technologies (Kultima, 2010).

The game-making process, as it was to be expected, was a lot more technology intensive than our prototyping workshop, also because of the presence in my team of an expert coder, K., who favored a high-level developing solution, the *Unity* platform I touched on in the Case I. Given my bare minimum expertise, my job was, as the most qualified "people person", mostly on the general design level, trying to work with my team mates to come up with a simple, fun concept, and to work in the themes in a way that was sufficiently ironic and referential, and therefore disruptive of stereotypical representations. At the end of the first day we settled on a small game, a hybrid parody of the Fifties' science fiction "giant monster" film genre, and Seventies "exploitation" movies (low budget films leveraging their bizarre and basic themes for popularity; see Schaefer, 1999): a surrealistic confrontation where two giant hookers battled crushing both the city and their procurers. The most pragmatic readers might at this point pause and ask *"How does this have something to do*

with education?" I hereby want to reinforce the appeal which opened this Part of the dissertation: to not dwell on the surface of our little game's presentation, but to inquire into the deeper pattern of culture and interaction that underlied it: we were, in creating our little, parodic game in fact, appropriating both technology and stereotypical cultural motives to satirize their own stagnation, a tongue-in-cheek, over the top representation of female empowerment.

As for the game development process proper, having helped to set the stage on a design level, on the technical level all I could do was fiddle with the numbers K. provided me with, as to fine tune the player experience and, together with an animator, provide the necessary in-game assets, that is images and sounds. Not for a moment in this phase of the project I felt excluded or sidelined, neither for our cultural and linguistic differences, nor for my lesser technical skill, as my team mates at each step frankly discussed and explained their choices, and the motivations behind them. I could see, in that moment, the true transdisciplinary cooperation needed in making a game, even if it was something so simple and so apparently trivial, an open discussion between very different people, points of view and languages, each realizing the necessity for the other.

Second Coda: of puzzles and stubborness

When midsummer came and days had become just as eternal as nights were five months before, I was soon to get back to Italy. On my very last day at the university, the Oasis Room was open to for a Cultural Studies conference, and this particular audience looked more appreciative, and commended Annakaisa's efforts in introducing within the Academia a different construction of its spaces, making me question, once again, my disciplinary place in formalized learning institutions and processes. I looked one last time in a corner of the Oasis, and I saw, just like the first time I arrived in the Room, a 2500 pieces jig-saw puzzle lying scattered, with a simple message: *"Please help me!".* Despite all the time I had spent there, I never knew who poured down the puzzles, I just saw people stopping for a few minutes to put maybe a couple of pieces in their right places. Every 2 or 3 week a new puzzle was completed.

Gratuitous cooperation at its finest.

The last day of the conference, I went together with all the "game interested" attendees for a beer at that same pub where much research and critical evaluation had repeatedly happened. I thanked Olli for all his advice and support, for how, despite our disciplinary and cultural diversities, he was able to understand the ambition and the utopian undertones of my research, and how he quietly helped me to confront its contradictions and its more practical, everyday quandaries, while never losing sight of the bigger picture. I told him that I hoped we would meet again, even if I didn't know what I

would be doing with my research, and after it. He told me that *As long as we are into play, we will meet again. We are not so many in the academia...* For a moment he looked like he wanted to add *sadly*, but, as a long running local joke goes, Finnish Man Not Show Emotions.

Then he added: *Be stubborn and play your own game, you know better.*

He sounded, as always, quiet and straightforward, which prompted me to further the question that concluded the first case: if *"someone who plays his own game"* (that is, a game designer) can indeed be a teacher, and a game design teacher, as I had learned here, could be someone who, bringing the issue to a higher complexity level, builds learning (and playful) communities, what could the next step be?

Case III - The Game Jam Experience:
Transient Spaces of Open Cooperation

"I believe that collective experiences and dialogue are fundamental

to make play and technology more accessible and diverse"

- Enric Llagostera -

"We don't see things as they are, we see things as we are"

- Global Game Jam 2014 theme -

Of dogmas, gifts and global networks : a brief history of jamming

Having learned, during my Finnish stay, the relevance of local, embodied communities of design, I came back to Italy with a newfound certainty: to have a sufficiently layered understanding of game design communities, I had to explore hybrid contexts of research, capable of reconnecting embodied interaction with the networked spaces I discussed in Case I, that is I had to inquire into the practice of so-called "Game Jams".

Before getting into the specific and well bounded places and events which constitute the bulk of this Case, once again a bit of historical background is due: how did these *"gatherings of game developers for the purpose of planning, designing, and creating one or more games within a short span of time"* (Wikipedia's definition of "game jam") come to be? It all starts in 2001, with a challenge posed to the game-making community by american game designer Ernest Adams, who proposed a new, alternative paradigm for game design, jokingly calling it *"Dogme 2001"* (echoing the danish avant-garde film making movement *"Dogme 1995"*, which endeavoured to de-emphasize visual effects and to reclaim creative power for directors; see Vinterberg & Von Trier, 1995). This approach was built (with well acknowledged irony) on the axiom that "Technology stifles creativity", thus critiquing the quantitative, performance oriented drifts of the unavoidably very technology-intensive medium of digital games. Here is an excerpt of Adams's manifesto:

Dogme 95's goals were twofold: first, to uncouple filmmaking from technology (by denying it its technological tools), and second, to remind the director that he or she is

not a demi-god (or demagogue), but part of a collaborative process whose primary aim is drama, not the aesthetics of film itself. [...] The first goal of Dogma 2001 is similar to Dogme 95's, to reduce the emphasis on technology so that the game designer will tend to concentrate on the game itself: gameplay, rules, the user interface, the game world and the player's role.

The article caused a lot of debate in the game-making community, around which rallied plural, critical perspectives toward the then stagnant state of game design, mired in the "safe investments" of sequels and prequels of known, successful games (Donovan, 2010). It was the following year that this critique found its definite crowning, and forever changed the community building practices of digital games, when american game programmers Chris Hecker and Sean Barret, with a remarkably punk attitude, sought to provocatively invert the *"Dogme"*, gathering fellow professional developers to informally "jam out" some truly new games. To "jam", in this context, meant to improvise original and diverse solutions starting from the collective appropriation of a shared technologically driven standpoint, that is, using the same software engine and resources to produce a plurality of original games. Hecker and Barret endeavoured to demonstrate in this very practical way how the appropriaton of technology, even when standardized, can indeed inspire creativity through community based, improvisational practices. Furthermore, their choice of the "jam" metaphor once again highlights the cultural relevance of marginal music practices to understand the milieu of the activities discussed in this dissertation (the word "jam", borrowed from Western African Youruban language, historically referred to the practice of afroamerican Jazz musicians to play without preparation, sometimes based on a shared chord progression or chart, using this collective space to come up with innovative aesthetic solutions; see Giddins & DeVeaux, 2009).

This "Jam" event became publicly known as the "0th Indie Game Jam", during which 14 designers and programmers created 12 original games. Ernest Adams commended the efforts and the innovation-oriented intent of the "jammers", recognizing them as the true expression of his call for a new creativity:

The Indie Game Jam represents exactly the kind of creative spirit that Dogma 2001 was intended to foster, just inverted. Dogma 2001 suggested that we try designing games without reference to the technology that would implement them. The Indie Game Jam was about exploiting a given technology in as many new ways as possible. It represents

exactly the sort of thinking that the our medium needs more of, thinking that begins with
"What   if...",   rather   than   with   "How   much   money..."

After Adams's acknowledgement, published on the very popular gaming site *Gamasutra*, in barely a year similar initiatives were multiplying exponentially, being seen as important opportunities to exercise and stretch game design muscles, and to experiment not only with new technological and organizative solutions, but also with themes that often went unexplored in the medium of digital games.

In 2002 this model was adopted by the *"Ludum Dare"* forum, which comprised a small community of amateur game makers, rapidly taking over the site and becoming its main focus, transforming it into the main organizational node of distributed, networked (and most often extremely messy, in their incompleteness and all-out amateur character) experiments in game design. To this day the *"Ludum Dare"* online jams are probably the most known and "attended" jam events (with the last *Ludum Dare,* the 32nd, held from the 17th to the 20th of may 2015, producing 2821 new, original games), even if they exist mainly through online means, rarely (and sparsely) organizing physical meeting opportunities for its fragmented, global community.

Ludum Dare, starting from its very name (in latin "To give a game", even if always, jokingly pronunced as the english verb "to dare", as in "dare to make a game"), emphasizes the above discussed character of openness, inclusivity and sharing, mixing it with a heavy dose of punk-like irony, which allows and respects the submission of even extremely rough, unfinished games. I remember the first time I entered the "old school" IRC (Internet Relay Chat; see Chapter III) that constitutes the main meeting point of the community, the core of the networked mess of communication that crisscrosses the whole world at the climax of a Jam: *"This is all that I could do" "I am sorry" "I am such a noob"* wrote a user, after providing a link for his or her game, which consisted simply of a square "character" moving around a flashing, psychedelic background, on a soundtrack of ludicrous techno music. It wasn't even a game proper, having no purpose or direction, but everyone in the chat, including me, welcomed and complimented the beginner game designer for his or her efforts, and the sincere (if brief) moments of surrealistic enjoyment the "game" provided, thus encouraging the self-called "noob" to publicly declare his or her will to continue experimenting.

Beyond this informal, pervasive climate of appreciation for any community shared effort, proposed games are also evaluated formally and publicly by the community, in a distributed, articulated and transparent version of peer review processes: this discoursive dynamics make indeed the Ludum Dare very popular as a learning experience for amateur game creators, which can, through the

community, receive a *"baptism"* of massive feedback, characterized by both earnestness and friendliness, so much that even many children enter the friendly "competition" using game creation software, as those discussed in Case I (see Colton et al., 2013).

This explosion in submissions (both fully elaborated and incomplete) and in participants of all skill levels has led long-time organizer Mike Kaszprak (more widely known by his nickname *'PoV'*), an independent game designer, to seek through crowdfunding a sustainable business model to devote his full time to the huge amount of work that coordinating and keeping the whole global *Ludum Dare* network fully functional and accessible requires. While I was in the last, open, phase of my ethnographic fieldwork into the communities discussed in Case I, I deemed fruitful to branch my inquiry into the Game Jam community, asking 'PoV' for a brief interview, its questions intended to echo those discussed in Case I with INtense! , as to provide a different point of view on those same themes. His responses proved to be so detailed and insightful that I report theme here in full, to better inform the rest of the discussion:

Me: *What do you think can be learned from making games in the most general sense, independently from the tools used or even from the digital/analog format?*

PoV: *I suppose, at a fundamental level, understanding how to make games gives you an understanding of rules. You're given rules for many things in life: Rules for math, rules for games, rules for a job. It can give you an insight in to why something the way it is. Sometimes a rule is actually due to a limitation, and with time and insight, you can potentially come up with better solutions to the same problem. Also sometimes limitations go away and the rule remains. That rule could be making things way worse, just to account for something that was an issue long before. Someone has to notice it's no longer a problem. So as a general life skill, I think making games helps you develop insight in to how and why things work, and having iterated a design gives you the tools to improve things.*

Me: *Why is involving more and more people in game design a good thing? (assuming it is to you, of course)*

PoV: *I think it gives people a vocabulary for rules, empathy, and education. I've already talked about rules, but user testing is an exercise in empathy. You challenge your assumptions by watching people react to the scenarios you create. It's not always about's what is said, but what is meant by what they're saying through their words and actions. And at least to me,*

education isn't something limited to the time you attend school, it's a life skill. Not everyone chooses education are a career, but the best leaders and collaborators are good teachers and listeners. Information today is available in an unprecedented way thanks to the internet, and much of it's free. Anything you want to know, say if you wanted to learn to cook a recipe, you can watch a 5 minute video at your leisure to learn it. You no longer have to take a course, or dig through books to learn a skill. You can educate yourself in anything, at any time. And when there's something you know, and someone you want to teach it to, having practised games design you already know that something obvious to you isn't necessarily obvious to them. You can be a better teacher, because you can empathize.

Me: *How did your experience with the jamming community shape or change your vision of games and game design?*

PoV: *The main thing for me was that it didn't have to take so much time to make something. I've been making games most of my life, even before I got in to the games industry. Until we started jamming, it wasn't really clear to me how quickly we could iterate on things. Make a prototype in a weekend, test this idea, and find out quickly if something is worth pursuing. Things don't have to be designed in a bubble. You can answer big design questions by trying things out. Prototyping can be a life skill.*

To me, a project is a big long list of unknowns until it's finished. Some things you can sort-of know (if you've done it several times before), but any worthwhile project has things you've never done before. Things you want to work, think will work, but might not work. So jamming taught me that we can try things with little consequence, and make big informed decisions in days instead of months.

It's also taught me that you can actually make amazing things in just days. Process and workflow are huge. Middleware has become a big part of game development today, because for most, there's no reason to keep reinventing the wheel. To use food metaphor (haha sorry), not everyone is interested in how a sausage is made. You just want to turn on the grill and cook it. If you had to prep the sausage every time, you probably wouldn't do it. But since the prep is done, it's easier for everyone to just buy them and cook them.

It is proper to pause for a while and, before diving into the following field observations which constitute this case, and reflect on the assonance of PoV's perspective with the fundamental core of my dissertation: the dynamic acknowledgement and breaking of rules (that is, self-regulation),

systemic empathy and the possibility to substitute rigid, long term learning programs with flexible projects. The above reflections, it must be highlighted, do not come from a professional in education, participation or community planning, but from a computer programming dropout, if one that, resonating with the closure of Case I, has gleaned the close relationshop between creating games and teaching.

"What do we do" at the Global Game Jam

In later years, indeed, the possibility to get collectively acquainted with the creation of games through the game jam phenomenon has grown to a completely new dimension not only in its numbers, but in its organizative infrastructures starting from 2009, in the form of the Global Game Jam, founded by the International Game Developers Association Education director, Susan Gold, in collaboration with Gorm Lai and Ian Schreiber. During the Global Game Jam participants distributed all around the world are invited to make games in the extremely short timespan of 48 hourse, and share them thanks to an ever expanding global organizative network which provides spaces and emphasizes, in their choices and organization, a paradigm of openness and inclusion. Indeed, participants in the Global Game Jam are not expected to be expert developers, artists, or designers, but can be of all skill levels and coming from any field of expertise (Scott & Ghinea, 2013). Everyone, ranging from professional game developers to educators to artists and designers is welcome to participate, thus providing a relevant avenue for the involvement of non-professionals and even "simple" curious outsiders in the complexities of game design, as Global Game Jam's foundational intent is to broaden the outreach of the International Game Developers Association's game education goals (Fowler, Khosmood & Arya, 2013).

The Global Game Jam begins each year many months before the actual event when, at the end of summer, the global network of jammers fires up, and self-organized committees spawn all around the world, in the effort to find spaces (and adequate technological infrastructures) to share and inhabit for the few days of the event itself. During the first edition, in 2009, the sites were 53, and the 1600 participants created 370 new games to be shared. As of 2015, the Global Game Jam comprised 518 locations all around the world, requiring a quantum leap in organizative efforts, but also strongly evidencing the globalized nature of the game making community, and the explosive character of its growth. From the informatized far east of China, Japan, South Korea and Taiwan, to Cuba, Brazil, and many others locations throughout Latin America, from Russia to Iran and the Emirates, from India, Indonesia and Malaysia to North Africa, Zambia and South Africa, the whole world is, for the 48 hours of the Jam, pointed by a network of closely connected playful nodes. Here

in Italy we have, as of 2015, only a few active sites (six, as opposed to Finland's fifteen), among which the Politecnico, Milan's technological university, has been the most active site since its first participation in 2014.

As a relevant part of this dissertation, I decided to participate in the Global Game Jam as a participant observer, once again highlighting since my subscription in the network my peculiar reason for participation, and, indeed, a full disclosure on my part was unavoidable, as each of the Game Jam sites' security measures are relatively stringent, and the identification process quite in-depth, due to the amount of technological implements which would be amassed in such a crowded space. On the day of the Jam I remember walking toward the designated space both quite eagerly and almost stumbling, overloaded as I was with a quantity of electronic gadgets and analogic prototyping stuff (my small, personal Treasure Basket, another mark of my experience in Tampere's Game Design Workshop) I had brought from home: you never know on which platform and through which technology you might be able to pull a game out of nothing, so better be prepared.

While swaying under the weight of my game design baggage, I had the opportunity to discuss the choice of spaces with some local students I met on the way to the Politecnico, after having recognized each other as perspective participants from the electronic equipment we were transporting and (maybe most importantly) from our extremely nerdy shirts, a choice in apparel which during these events constitutes both a sign of distinction from mainstream pop cultural representations, and an expression of individual, subjective interest and preferences (mine read *"Druids always choose the hard way, it encourages natural selection"*, in a reference to role playing game narrative conventions). Wanting to commend the Politecnico's openness to the big, messy event that a Global Game Jam is, I inquired into the wider attitude of that institution toward playful practices:

Me:　　　　*It must be good to study in a university that is open to such big events. Hosting the Global Game Jam seems like a huge effort, and, judging from the website, we will be quite...cumbersome in our numbers.*

Student1　　*Nah, this is not about hospitality or interest in the jam itself...More then everything, it is a low-cost publicity stunt for the higher-ups. Because the Global Game Jam always reaches the news, we are a cute curiosity for mainstream media.*

Student2　　*Yeah, you are right, sadly. It's like "look at those nerds going!"*

Speaking of the marginalized media practices of do-it-yourself game making as "curiosities", a recent example can be useful to "thicken" my portrait of the contested relationships, and the cultural discrepancies, between the "indie" community and mainstream media: the reality show *"Game Jam",* which infamously closed on the very first day of its run, when (among a variety troubles with producers being more interested in putting up a good show than creating a space to make good games) one of the female developers was interviewed about her *"being a pretty girl as an advantage to her team"*, to which all the participants in the show promptly packed up and indignantly left (see Campbell, 2014).

Student2   *At least for the Global Game Jam they actually lend us the spaces, last time we tried to stay here the weekend for a Ludum Dare we've been kicked out by saturday noon.*

Student1   *We really need to find some other place willing to host us for free, else everyone will just stay home, work online and miss the opportunity to meet other game people in real life.*

Student2   *Yeah, online jams are cool, but nothing like the real thing.*

These were students of information sciences talking, even students who attendeded game development courses at that very same university, courses in which the academia invested as to attract external financements through the heightening economical relevance of games, not differently from what I discussed happening in Tampere. And yet, against their own economical interest in educating creative and networked professionals, knowledge infrastructures still find hard to include these heterarchically managed and horizontal creative practices, even when, on a strictly instrumental level, they pertain precisely what is taught in productivity and market oriented courses, and find even harder to work

Fig.9: Politecnico's entrance hall just before the Global Game Jam

and be inclusive with the ideas of conviviality and informal networking.

When we finally arrived at the Politecnico, the main room was already full of people (Fig.9), a quite colorful gathering indeed, a melting pot of people of different ages and professionalities, 321 individuals (according to the site information) united by their interest in making games. It was quite weird to see a university this lively and full of smiling, playful people. It reminded me of my Finnish experience for a brief moment, before realizing this level of crowdedness would be unbearable to my northern colleagues. Just as it often happens in "pre-jam parties", some people were mostly there, in that preliminary phase of the event, to showcase the games they made, be them a refinement of other Jams' efforts, or completely autonomous endeavours. The Global Game Jam is, after all, one of the rare moments when a whole delocalized and distributed community tries to come together, at least for a few hours, as here in Italy we have neither local companies nor universities hosting dinners or social events to foster conviviality and networking.

At the reception desk volunteers did their best to thoroughly check the participants I.Ds, to help people find places to store equipment and to set up their napping corners, but most of all to facilitate team building, even if this phase would come up only in a couple of hours. Soon after having my documents approved, I was asked: *"Are you a coder, an artist, a writer, or a designer? Or maybe a sound guy? We also have a "?" badge if you are unsure."* The receptionist smiled at my patent hesitation. *"Maybe you can be a producer, or a project manager",* she asked. This is somewhat of a running joke at the most "unprofessional" levels of Do-It-Yourself game development, as in such a small team that of the "producer", or similar management-oriented roles, is mostly defined by what he or she can't do. I hesitated further. I didn't really consider myself qualified for any of those roles, maybe least of all anything pertaining management.

So I chose to explore firsthand if what I studied and experienced during the months spent in Finland amounted to something, I chose to prove myself in a core role of the creative process, as to verify that I was not just theory and academic writing: I answered *"Game design"*, and I received a very yellow badge with a big gamepad printed on it (Fig.10). Weird iconization, and a bit reductive, I thought at first. However, from a wider, epistemological

Fig.10: Game Designer Badge, representing a stylized gamepad.

perspective, as I write I can't help but find proper to be characterized by a key feedback node, given

my emphasis on cybernetic approaches, as discussed in Chapter II. And, having been christened with such a symbol, I was indeed a Game Designer, at least to the eyes of other participants.

We were then gathered in the main room for the presentation of the theme, which was preceded by short video talks by game designers Mitu Khandaker Kokoris, Amora Bettany, Pedrio Medeiros and Reiner Knizia. During their informal, five minutes talks they spoke of the Global Game Jam as our *"Playground of innovation"*, we were told that *"There are no failed games here"*, that *"No developer is an island"*, that what was important were *"the stories and the connections we make",* and that *"we are tiny, but we are connected".* They encouraged us to throw us into our games with *"Humility and surrender"*, to foster *"Diversity"* and *"Inclusion",* to confront the themes of *"gamification"* and of the *"hybridization of real and virtual".* I was moved, as I perceived many others to be, by the deep passion those people had (and have) in their work, and by the shared belief in games' potential as an expressive medium and key culture making node. Then, almost abruptly, the moment of the theme declaration came and, after a bit of necessary suspense and dramatic tension heightening, was finally revealed to be *"What do we do now?".* Knowing my Finnish colleague Annakaisa was an influent member of the Global Game Jam Theme Committee, I could almost see her smirk again, just like when I drew "Hookers" from her hat of random themes for the course project.

I could easily perceive the confusion in the crowd of the participants at this reveal, and this same question was of course crossing most of their minds: *"What do we do now, indeed? How do we make a game with that?",* to which the theme announcement video promptly answered *"It's up to you!".* In the messy, team building phase that followed I gathered around the idea of *"hybridization of real and virtual"* a team of first timers at the Global Game Jam: two coders, an artist an interface designer, and another game designer, which were all interested in experimenting with the boundaries between boardgames and digital games, materiality and virtuality

In a few hours of brainstorming and sketches we came up with a theme and a core mechanic, intended for hybridized digital/interpretive play around a table: 5 players frantically trying to keep a comically malfunctioning starship from breaking down, using a plethora of skills and tools to respond to the threats via synchronized commands on their respective smartphones, while having among them a secretly oppositive player playing the "replicant", an android with the objective of making them fail. It was indeed a good metaphor for what we were doing for the following days: running all around our project, trying to synchronize our efforts and skills in pinpointing and fixing the voids in design and development before the time ran out. Only without the risk of exploding, and without a killer robot among us.

I didn't sleep much during the following days, nobody did, and not only because we had to do a lot of work in meager time, but because of the sheer, deeply involving fun of working on a game.

When making a game, it happens that you ask yourself (and team mates) the most unproductive, surrealistic questions: *"How is a starship constructed?" "What rooms it should have?" "What could cause it to blow up?" "Who works on it?" "Do androids have a moral standing?"* Ranging from engineering, to interior design, to astrophysics, to human resources to philosophy (if keeping a strongly comedic approach), this were   only some among the questions that had to be answered rapidly, and keeping into account both the narrative level and the game system level to create a meaningful, harmonic whole. As our coders struggled with the synchronization of the phones and the complexities of the interface, we stripped down the game to its bare minimum, removing rule after rule while trying to keep alive its core experience. The rooms of the starship became six, then five, the available actions where reduced, the role of the android simplified; the last night of the Jam, in an energy drink fueled frenzy, while our main coder got some well deserved sleep, we even tried to convert our "hybrid" game into a fully analog, tabletop one (Fig.11), but the day after, when the uploading time was barely a couple of hours away, we realized we wouldn't be able to present a finished, fully working game within the allotted time.

In our team we were all at our first experience in such a big (and intense) event, and we all overreached, as the game idea and mechanics were too complex, both from a design perspective and from a technological standpoint, to be satisfactorily tested, iterated and coded in a mere 48 hours. Our amateur will to produce a game we would all love pushed us to ignore a longstanding tenet of experiments in design: *K.I.S.S.* , or, in full, *"Keep It Simple, Stupid"*

Fig.11: Messiness in game design processes

(Wood, 2006). My emphasis on the relevance of time constraints here is not be read as a productivity oriented one: I do not intend to promote simplicity for efficiency's sake, but, coherently with the general approach of this dissertation, to explore its systemic and aesthetic purpose, as to achieve simplicity without making a system break down requires quite a lot of sensitivity and fine tuning, and is remarkably harder than simply adding and adding until the game system becomes an unelegant muddle. The possibility to achieve first hand, as a community, and through very practical means, this deep, systemic realization of the distinction between muddle and precision is one of the most relevant findings in grounding theoretically my will to promote the spreading of game design as an undirected learning practice: to achieve simplicity and elegance in game design is ultimately,

in the words of Gregory Bateson, a quest for *"The skeleton of truth"*.

This epistemological realization, however, was also accompanied by a further pedagogical one: that of the possibility, and the conditions, of a complete reevaluation of error and failure. We knew we had failed, and yet we kept working to our best effort until the very last moment, to upload our messy tangle of rules, code and art, so that, maybe, someone else would pick it up and find it interesting, and even worthy of being completed. There was no ill will or accusation between us, because we all knew we all worked to our best, and, most importantly, we all had learned too much to not smile with gratitude at each other and at our work. As a trace of that playful learning, here I report a transcript from a thankful email, sent by one of the participants in my team:

> *I learned a lot of things, among which:*
>
> *That I should smoke less.*
>
> *That sleep deprivation makes for bad testing and, deliriously interesting possibilities.*
>
> *The interface is tons of work, and design has to be clear early.*
>
> *That art in a game is important, and takes a lot more time and effort than I imagined.*
>
> *That coding is harder than it looks, even to coders.*
>
> *That is better to discuss with someone who knows how jams work.*
>
> *That games that are wonderful as digital can't work as analog, and viceversa.*
>
> *That writing down a clear ruleset while you have rules clear in mind is amazingly hard.*
>
> *That iteration is as exhausting as it is fundamental.*
>
> *That our game was an awesome idea.*
>
> *That a team is more than the sum of its parts*

This checklist does a remarkable job of pinpointing the manifold, closely woven levels of learning that such an intense participation in a collective, creative event can provide: technical, organizative, epistemological, aesthetical and even personal, paths that, within formal learning institutions, are barely explored, favoring measurable performance and knowledge of discrete facts, as discussed in Chapter III. While we were learning all of this, during the same 48 hour, all around the world 25.000 people were learning these same, and many other, things, and 5438 games were made (or almost made) and uploaded on the Global Game Jam network, to be freely played and further developed by anyone, almost 20% more than the 2014 edition.

After saying goodbye to my team mates, as I was sleepily exiting the building, I almost crashed into two enthusiastic designers testing their brand new game on a virtual reality visor built with just an ordinary smartphone, cardboard and magnets (commonly known as "*Google Cardboard*"; see

MacIsaac, 2015), who were dodging digital obstacles visible only to them. After a couple of minutes, while I was giving the game a try as an "external playtester", and I was too dodging non-existant trapdoors and endangering other participants, one of the designers, barely 20 years old at a cursory look, joyfully told me:

It is good, isn't it? Even my father now understands why I like making games!

As Mikko revealed to me in Finland, you need realization (even when it is virtual), and the Jams are a great opportunity for the public to at least hear of the possibility of making games, of appropriating the means of cultural production, even at the cost of becoming "curiosities".

Of openness and closure: a tale of two jams

My experience with the jamming communities however, was not close to being over: some weeks later I received a call from P., one my team mates at the *Global Game Jam*, asking if I could be interested in taking part in another, much smaller Jam to be held at Milan's Swiss Institute as a game designer. My yellow "designer" badge must have been extremely convincing, I thought to myself accepting enthusiastically, as it provided me with the opportunity to participate in the jamming community from another, completely different point of view.

More than that, this invitation allowed me to juxtapose *two* completely different points of view almost at the same time, as I already intended to participate in the 2015 edition of the *Game Chef*, a game making event whose rules are extremely simple: teams have nine days to "cook up" an "analog" game (be it a tabletop game, a cardgame or a role playing game) based on a common Theme, and share it with the world, if passing through a peer review process similar to that of the *Ludum Dare.* The Game Chef is still a very small event (even though it originated in 2002, paralleling the first Indie Game Jam) if we put it beside the sheer magnitude of the Global Game Jam, but it still constitutes a relevant example of how the above described organizative model of Jams, their distributed openness, inclusivity and "punk" approach to "game making for all" is spreading to forms of creativity contiguous to the digital games where it originated.

Five days before entering the Swiss Institute Jam, I attended the starting meeting of the Game Chef: we are around fifteen people, mostly from Milan, but also coming from all around northern Italy, as once again the issue of the spaces made itself relevant. Even with such a small number of people, it was hard to find open, inclusive places adequate for the meeting (and the messy efforts) of playful, creative people. The hosting space for the Game Chef in Northern Italy was therefore chosen to be

the Game Over Room within Centro Sociale Leoncavallo, a small hackerspace (a community-operated workspace where people with common interests, often in computers, technology, science, digital art can meet, socialize and collaborate; see Cavalcanti, 2013) within a self-managed social center in Milan, which, in later years, is emerging as a possible, if unstable, rallying point for the local indie game community. Indeed, that would be an overstatement and a simplification: the Game Over Room, a simple, 20 square meters room stuffed with old Pcs but "furnished" with full connectivity and accessible plugs (echoing Finnish students' priorities in the design of community spaces) is itself a marginal space within a marginal space, highlighting once again the fragmented nature of countercultures in respect to technological progress (see Bey, 1991).

To give a paradigmatic example of this fragmentation: one evening, while I was there testing the games being designed for the Game Chef, a middle-aged woman entered the always well-open door, giving a curious look to all of our technological implements, to the whiteboards full of brainstormed words and sketches as pertaining the Game Chef Themes, to the Tresure-Basket-like mess of prototyping implements on the main table, and to the old-school arcade game at that moment projected on one of the walls, looking more and more puzzled. Then she asked: *"So, what do you do in here?"* G., one of the main people responsible for the creation and maintainance of the space, answered plainly: *"Well, we mostly play, and sometimes, like today, we make some new games."* The woman insisted: *"Ok, I can see that you play. But _seriously_, what do you do?"*

It was Finland's Technology and Education conference all over again, but this time G. didn't have a design documentation to quote, and, with a bewildered look on her face, could just repeat, almost as if she had not been heard: *"Here we play and we make new games."* and, after a brief pause, dared to ask: *"Do you want to participate?"* *"Not today, thanks, I have other things to do."* answered the woman, still appearing very perplexed.

Through this brief exchange I could once more realize how the rethorics of Seriousness and Productivity have a way to creep in, even in the places of marginality, even in spaces which seek to structure themselves in explicit contrast with western capitalist production and partecipation modes.

The situation at the other Jam, at the Swiss Institute of Milan, was quite different from that of the Leoncavallo social center: while connectivity and electricity plugs were indeed overabundant, the doors were tightly shut and participation controlled. This, in fact, I discovered was not a completely open, undirected Jam event, but an invitation based one, and one with an explicit purpose: to showcase (even through a dedicated Universal Exposition event) international cooperation between Italy and Switzerland, and to give visibility to the emergent, and equally marginalized, game making communities of both countries.

The very first thing that we discussed at the Swiss Institute, even before telling each other our

names, was, however, the key issue of openness, as if to dispel a looming unease toward any contiguity this event might have had with corporate market and institutions. The most experienced coder of the italian group (and one of the people who had a larger part in organizing this peculiar Jam), overcoming the patent shyness so common in his professional group, preceded even our greetings with what sounded almost as a personal oath:

> *The games that we will create here in this Jam will be presented at the Expo, yes, what you heard is true. But you have my complete assurance: they won't be branded, appropriated or commercialized, be it by governments or private enterprises. They will be released under Creative Commons and freely shared on the web, like with any other Jam's games.*

Setting aside the undoubtedly different backgrounds, career perspectives and even political outlooks of all the participants, this was something that, evidently, had to be made explicitly clear since the start, reinforcing the notion that openness and sharing constitute the unavoidable cultural roots of the Game Jam movement.

To continue with this juxtaposition, the Game Chef "opening address" was quite different: it was held by *Ruger,* an emerging game designer, known for his extremely cheerful hawaaian shirts and his amazingly depressing, interpretive games (among which *Avant la Fin,* where the two participants play the role of a couple where one is going to die soon, and roleplay their last days together). *"Games should not necessarily made to be fun",* begins Ruger, a noted and outspoken follower of independent designer and cultural critic Anna Anthropy, *"Nor do they necessarily have to have a winner, but they have to make you experience something you ordinarily could not"* he continues*,* borrowing Anthropy's general definition of games as *"rule based experiences"* to clarify and guide his approach to game design. Indeed analog games, and especially role playing games, can be much more freeform, as discussed in Case I, so Ruger challenged us to break our habits as gamers, and to realize the constraints of hegemonic gaming culture, often still stereotypically bound to trite dynamics of war and conquest. To emphasize this challenge and this attitude, while we waited for the global Game Chef Network to send out the themes, we played an apparently silly, narrative game *Haiku Kaiju* to break the ice, collectively creating a surrealistic poem about a giant monster, then we discussed our respective backgrounds, interests, and, maybe most poignantly, favourite games, the most direct way, in that environment, to present ourselves and our approaches to the medium. In both Jams I presented myself openly in the same way: as a scholar of education, and as someone who considers game design to constitute a hidden and devalued core of any

learning process, and to be recovered through a larger, more accessible inolvement in making games. Interpretations of my position were diverse, ranging from misunderstanings like *"So you want to make educational games?"* to the discussion of known, playful learning approaches, but acceptance of my presence was complete, even welcomed as a sign of interest from the "outside world", and defensive attitudes were reduced to a couple jokes, to the tone of *"I'm too big to be a guinea pig!"* The difference between this playfully defensive interactions and online refusal was indeed remarkable, once again conveying the differences in etiquette and relationality in online and face-to-face contexts.

When the theme of the Game Chef came out, Ruger found himself confirmed in his argumentations: *"A Different Audience"* was the main theme, published together with a few more "ingredients" (Dream, Dragonfly, Abandon, Stillness) to be used at will, and to provide variety for the games that will be produced. The brainstorming phase was collective and quite intense: as a whole group, we rapidly filled a couple whiteboards with anything came to mind in relation with both Theme and Ingredients, and with long list of media to be taken as inspiration, be them literature, films, music or other games. I joined a small team of three, using the brainstorming phase to gather other more "traditional" players, who, despite the "opening address" indeed intended to make a game which, after all, was intended to be fun and to have a winner. This was not to deny the possibility of the radically different approaches to games as commendably promoted by Ruger, Antrophy and Quinn (as discussed in Case I), but indeed to claim that innovation, as demonstrated by the subverters of "Dogme 2001", does not necessarily come from abandoning constraints, but by confronting them in full awareness, and using them to shape new possibilities.

The Swiss Institute Jam was quite more straightforward, also due to its much strict timing: after the above discussed premise about openness and round of presentations, we were immediately given the theme, "*Tandem*", which was intended to further symbolize the cooperation between the two countries, to which we dove straight into brainstorming: in a couple of hours, after considering a number of concepts, we came up with a simple story: two unlikely friends, an anglerfish and a starfish, coordinating their movement (given that one player controls movement to the left and upwards, and the other to the right and downwards) to try and escape a randomly generated submarine maze.

Given the simple concept, the design part of the game would soon apparently be left to the background, to focus on the technological development of the maze, of the character and of the physics driving the game. In truth, however, while artists and coders worked very hard to put out a beautiful and working game, the first day I had my hands full with finetuning the experience, finding a balance between the numbers of the basic physics engine I was given to give a proper

feeling of swimming through the water. The second day I effectively played the much maligned role of the project manager, as coordinating a team as small as five people (a character artist, a level artist, a sound artist and two coders) unders such strict time constraints can indeed be useful: each one of them has to be extremely focused on the technical aspects of his or her specific job, and there was a need for someone who retained a full view of the larger design process and of its systemic complexity, thus validating the need for a "macroscopic point view" in game design I discussed in Chapter II.

As for the Game Chef, given the more abundant timescale, we were able to discuss more at length concept possibilities and design choices. So much that the full first day went through without settling on a single concept, but mostly discussing the manifold possible interpretation of Themes and Ingredients, and the kind of games we'd like to make: something that could tell different stories to different audiences, overcoming the somewhat fixed nature of analog games. During the second day, a revelation came suddenly from a humorous exchange, as we were, once again, discussing the conceptual distance of Do-It-Yourself games from mainstream media:

Me: *"I wonder how would non-gamer journalists describe this if it reached the news like the GGJ"*

F: *"Breaking news: nerds draw dragonflies in self-managed space. Panic among population."*

B: *"You know what,* this *sounds like a funny game!"*

This was a turning point: by using the "5W Questions" typical of journalistic writing (When, Where, Who, What, Why), we were able to produce an open ended rule set to cooperatively/competitively compose surrealistic news stories, starting from fragments generated by the players themselves, satirizing the centralization of news agencies through a playful reveal of the composite and competitive character of mainstream narratives.

The experience of the two jams was extremely different, and the games produced were quite metaphoric of the jam environment itself: within the (partial) enclosure of the Swiss Institute we created a game of cooperation for escape, while within the open, fragmented space of the Game Over Room we created a competitive, compositive narrative game. These games, in a not-so-subtle way, reflected the expressive needs of the game makers as shaped by their momentary context, at least as much as they reflected the assigned themes, highlighting their almost undeniable nature as powerful, if subtle, means of cultural critique.

Third coda: of cigarettes and sofas

After the Swiss Jam, I kept in contact with the Swiss developers community leader and organizative hub, known as Dragica Kahlina, who concluded the jam commenting on how *"Any game made differently from industry standards can help make more people make games"*, and on her endeavours to bring more and more people in contact with the complexities of game design, through Jams, courses and informal workshops at the University of Zurich.

This inclusive efforts, and her different perspective both from a national and from a gender standpoint prompted me to ask her for the last of the brief, informal interviews I weaved into my multi-sited fieldwork, interview which we decided to hold via Skype. After a few very busy days on both parts, Dragica contacted me from a co-working space she just had finished setting up, which, from my point of view, looked like a well illuminated, cozy flat. After a brief exchange of greetings, thanks, and inquiries into our games and their presentation at Expo (to which none of us two had attended: to both, the process was much more relevant than the result), I started with my interview:

Me: *My first question is quite practical: Were you able to convince the university to lend you spaces for your workshops?*

To this question, Dragica first answered *"I tried, but nope, however..."*, then slid aside on her chair, going out the camera view and letting me se the big, very yellow sofa on the other end of the space, which I instantly found so very reminiscent of that big, very red sofa which I saw at Rovio Tampere:

Dragica: *See that? I don't trust any learning or creative space which doesn't have sofas. If you aren't comfortable how are you supposed to come up with original solutions? Universities are too restricted, to make games you need to have open spaces, and to have other people, especially people from completely different background. And you need to be safe, comfortable, and also to take a nap sometimes. You also need to be able to leave, and not only for cigarettes, which seem at times to be just a socially acceptable excuse to get out of restricted spaces. That's not good for health.*

She was very enthusiastic, and while jotting down some brief notes I missed the opportunity to ask her if the "not good for health comment" was referred to cigarettes, or the restricted design of learning spaces. So I continued with the interview:

200

Me: *What do you think is the most important thing that can be learned by making games?*
               And by making games in Jams?

Dragica: *I think that the most important thing is that making games in can help you visualize*
               processes and systems, especially changing systems. As for the jams, they are force
               you to do that quickly, and also teach you frustration. Playing games can be
               frustrating, but that's nothing compared to making them.

Me: *That's very interesting to me. How do jams help visualize changing systems?*

Dragica: *It's because they are about failure and iteration: in the liquid society, iterative*
               learning needs to be acknowledged: you can't just grow up and then stay the same
               for the rest of your life. Everything changes, and we have to change too, not to
               remain same and serious. Kids are not like that, kids always want to learn, until they
               get it taken out of them. They are told 'no more fun, it's time to learn and then to
               work', and cease to be kids and to be creative. But in the current economy you have
               to be creative, or else a machine will do your job...If not now, in ten years tops. Jams
               are a way to keep that kid alive.

Me: *Ok, for the next question...You know that Italy is not a good place for gender*
               equality...

Dragica: *I heard that, yeah.*

Me: *...And moreso if a woman intends to make games. Please give me a different*
               perspective.

Dragica: *Here in Switzerland we have courses that are 50% men and 50% women. That way*
               women can know that it is a safe space, that they will not be sole subjects to macho,
               unprofessional behaviour.
               There's also the fact that women more rarely put on hold everything that is not work.
               I'm not talking only about having kids or a family, but about having a social life
               beyond work. In university, as in the game industry, men are expected to give 120%

of their lives to productivity, leaving everything else aside.

Me: *So, if I understand, you are saying that men renounced humanity in favour of productivity, while women wouldn't?...But I think that things are slowly changing, because men too don't want to spend all their time just working, even if they are into games...*

Dragica: *I surely hope so: if game creators are more humane, if their life is rich and diverse, they will work from different premises, they will be able to create richer and more diverse games, not only the usual "shoot-your-way-to-objective" stuff*

I thanked Dragica and, among the many themes we discussed which might be considered key to rethinking educational practices and spaces, and which I have already discussed at length throughout this dissertation, I underlined quite a few time with my pencil one specific thing: <u>Sofas.</u> While it may sound a trivial detail, it represents a key of my critique of learning spaces: why is it so deeply ingrained in our culture that learning has to be painful, or at least uncomfortable? Or, reversing the question that closed the introduction: why couldn't it be games? Once again a person with a very technical background, one very far from education and human sciences, but also one who had a deep experience with game design, had proved to be sensitive to some of the key issues with formal learning institutions, in a way that many so called specialist hadn't.

Which leads us, finally, to the pedagogical and political question that closes this Cases, and opens to the Conclusive considerations: if a game designer can build himself or herself to be a teacher, and if a teacher of game design can be a learning community builder, can game design communities re-build *education* itself?

Of Closures and Conclusions: Making a More Playful World

The collapse of every traditional experience translates into the inquiry into the new worlds we are becoming, and we are designing.

- Jean Baudrillard -

Even if your first game doesn't turn out the way you'd like, it can give you ideas for other games.

– Christopher Chance -

The noise magic circles make, or of seriousness and possibility

As I reach close to the conclusions of this work, and in the effort to synthetize the observations of the three cases, a few questions should finally be explicitly attended to, at least in a tentative way, even if, as discussed at length in Chapters I and II the character of play is one inherently opposed to complete closure. Indeed, play's "magic circle" is, by necessity, permeable and pliable, thus once again echoing the character of open inquiry I intended to confer to this whole dissertation, and especially to these conclusive steps. And yet, even if playfulness permeates living and learning systems as a whole (as discussed in Chapter II), specific, ordered instances of playfulness (that is, specific games) are to be bounded in space and time, lest they cease to be games, lest they become too serious and lose their character of freedom and gratuitousness. In the same way, my "game", my work, has to find a conclusion, if only to allow my readers, and myself, to take a step back and freely ask: *"Was it a good game?"* Or even a much wider, much more important question: *"What is a good game?"*

In bringing my endeavours to a provisional closure and a tentative evaluation, I will resume my use of the "we", as it is once again my intent to address mainly those who are employed in the field of research and education, that is, those who are main, institutional responsibles of the co-construction and dissemination of knowledge in our current societal structure. What I'd like to do with my dissertation, as touched on in the Introduction, is not to "convert" or proselityze "serious" teachers

and academics that might be reading this to submit to the "cause" of games and playfulness, as, as I have also hinted in the Introduction, if I made playfulness into a "cause", an "end" or a "means", then all my work would for naught. Instead, all of my work, both in the transdisciplinary theoretical background of Parts I and II, and in the deep immersiveness of the three Cases, is meant to point a metaphorical finger at some particular phenomena which should be paramount interest of all who work in the field of knowledge-making and education, a weaving of creativity, learning and participation that appears to emerge particularly in concurrence with play and playfulness, as discussed at length especially in Chapter II, and as thoroughly exemplified in a wide variety of contexts throughout the three Cases. I will therefore, to conclude my work, propose a synthesis of the themes and contexts discussed throughout this thesis, explicitly illuminating the possible, manifold links between the making of games, education and research, while further evidencing these links as possible paths to renewed forms of social and political engagement. However, before doing this, I must once again, and for a final time, confront the the first, and the widest, of my research questions: **What can play teach us about the nature of knowledge?**

Ultimately, as discussed throughout Chapters I and II, play (and especially playful creativity, the making of games) can teach us that there is, at the same time, a big divide between the living patterns of knowledge and its institutionalized forms, and a deep link between them. This paradoxical relationship can be synthetically re-conceptualized and highlighted in its playful articulations, once again, through Postman's writings, who proposes a particular interpretation of Korzybski's discourse on the effectiveness of science in interpreting the world (Korzybski, 1947), discussing how scientists owe their successes mostly to being much more conscious of abstracting processes (Postman, 1995). As illustrated and discussed thoroughly through Chapter II and the three Cases, this same awareness of abstraction seems however to pertain also to those acquainted with the creation of games, who with due experience grow more and more knowledgeable, almost instinctively cognizant about the nature and structure of conceptual enclosures (see Mikko's interview in Case II, or PoV's interview in Case III). This peculiar awareness which "playing with play" (that is, designing games) brings on is beautifully illustrated by Nora Bateson in this Facebook post:

> *Playing with play, because it reminds us to pay attention to our epistemological frames.. to know them, to push and to pull them perhaps, but mostly to recognize their presence. Once we know where the edges are we can explore them. Then they move again, and the fun keeps on. The unsaid, unknown, unnamed limits are always there. In loosening up, exaggerating, shrinking and stretching the relationships, we can grope for*

the mappings we are within. Silliness is serious: invisible limits are found in the meta-communications that play opens.

Bateson, 2015

While it is also notable that this kind of insights are, as of today, more and more committed to social network discourse, and not to published papers or scientific literature (once again highlighting the emerging epistemological divides discussed in Chapters III and IV), let's, at least for now, keep our focus on the message, as much as on the medium: *"Playing with play"* itself is indeed what game designers do, no matter how inexperienced or amateurish their efforts, in a nowadays more and more widespread cultural reappropriation, a step up from their myriad experiences of "simple" participation in play.

As *"every schoolboy knows that maps are not territories"* (Bateson, 1980) but remain useful cognitive and communicative artifacts, so the current ecology of games is a map of maps that, as seen in the manifold, polymorphous and fragmed dynamics touched on in the three Cases, reveals a global sketch of renewed social subjectivities and productive patterns which go well beyond the field of "play proper", be them the delocalized, inclusive discourses pictured in Case I, the explicitation of the tensions betwen locality, market and creativity illustrated in Case II or the almost frantic, noisy cooperation of the Jams, as discussed in Case III. These diverse contexts and practices are in themselves generative of distinctions and relationships that the deep (if oftentimes unreflected upon) ecological sensitivity that grows within active, creative participation in the inherently systemic medium and language of games builds outside (or at the fringes of) formal learning institution. In making the spaces of learning serious (as seen particularly in Annakaisa's quandaries in Case II), in removing ourselves, as learners, researchers and citizens, from playful opportunities for systemic thinking and in embracing linear, reductionistic patterns knowledge we have renounced the awareness of complexity that comes with play, and therefore we have dangerously simplified the natural world, societies and identities to the point where the integrity of complex forms of life, society and individuality itself is at risk (see Bookchin, 1982). By expunging playful creativity from our lives we simplified knowledge, learning, narration, as we simplified interpersonal relationships, stiffening them, taking away languages and bodies (see Malaguzzi, 1995): to do this we used schools and universities, and bent both children and young adults to the machineries of Knowledge, we bent adaptation from playful, chaotic creative processes into quiescent subjection to foreseeable immutability (Fornasa & Morini, 2012).

In this very end of my work, I want to finally expose the true, underlying theoretical theme of my thesis, which can be ultimately synthetized in the Foersterian motto: *order from noise* (Von

Foerster, 1983). Eliminating the noise magic circles and their creators make is the "ultimate ecological catastrophe", as discussed in the coda of Chapter II: by removing play and playful creativity from learning we are removing possible worlds-to-be-made from our horizons of meaning, consuming possible futures, at individual, social, cultural, biotic levels. Is it still possible to re-compose, through the playful creativity that is immanent in living, learning systems, an ecology of social and cultural relations? Our task will be scientific, politic e po(i)etic: in creating, sharing and discussing games, we might achieve the systemic sensitivity to re-compose worlds, re-composing our lives and contexts in the relations that compose us. Having reached and confirmed this provisional, playful vision of living and learning systems, the next paragraphs will be devoted to discussing two "dissonant questions", and together with them the second, and most politically charged of my research questions: **What can knowledge building institutions learn from game making communities?** And, as pertaining to my biography as a young researcher in education, what did *I* learn in the contested relationship between my institutional positioning and my research contexts?

Games are not good, or the impossibility of evaluating play

There are, as I am deeply aware, a whole plethora of possible objections to the theses brought forward throughout my work, naiveties due of course to my still limited experience as a researcher and my almost blinding enthusiasm toward playful world-making, mistakes which I have tried to give an honest account of throughout the three Cases, and particularly in Case I. However, beside these genuine, if still illuminating, failures, some readers might also encounter apparent voids in argumentation, springing from deep epistemological differences between my position and more institutionalized, dominant approaches toward the validation and legitimation of learning and research. To some of the question these latter "voids" might elicit, however distant from my positioning, I will now endeavour to provide answers, as to highlight possible polemic nodes of discussions and historical transitions. These questions have been recurring encounters throughout all of my experience as a Ph.D. student, questions which have informed my inquiry, working, as in the above touched iterative playtest dynamics, as fruitful feedback on which to build subsequent, more explicitly positioned and politically engaged iterations of my work, if only to make the rules of my "game" clearer, my perspective more open to focused criticism, and my work a more accessible playground for fruitful discussion.

I will therefore, in the following pages, weave my answers to the two most recurrent of these dissonant questions with tentative answers to my above mentioned research question about

knowledge building institutions, to propose a re-structured, organic point of view toward play, games, game design and their contested relationships with knowledge-making institutions, where playfulness is, as of today (and as discussed in the last section of Chapter I) all too often expunged or distorted into tools for control and surveillance under the guise of "gamification". Indeed, by far the most frequent of the questions I have received during my research path, pointed both at the strongly explorative character of my work and at its distance from any classical scientifically constructed validation practices, at least as they are intended within the commonly accepted boundaries of the disciplinary field of education, was a question pertaining the very control of results, a question I can reconstruct as:

"How do you know that all the game design practices you discussed in a multiplicity of contexts will work in formal learning contexts?" or, in short, **"How do you know making games can be effective for learning?"**

This question, while still deserving a proper, explicit answer from me in these conclusive pages, stems from a radical epistemological and political divide I have discussed at length in Chapters III and IV, pertaining the contested relationship between playfulness and learning institutions. To provide an answer to this question, which I will conceptualize as the **question of evaluation**, I will first refer to established literature in the field, having a poignant response been already proposed, before me, by American educator and media scholar Kurt Squire, when he closes his book *Videogames and Learning* (2011) with a short coda, *On researching the Effectiveness of Educational Interventions*, where he discusses his efforts in providing a scientifically accepted validation to open ended, non-directive game literacy as a legitimate path for learning in schools, promoting an interest-driven, playful "spiral curriculum" to substitute standardized, linear didactic programmes.

Squire starts his account by recounting how teachers who had already worked with him, thus introducing playful methods and activities in their curriculum, oftentimes straight-up refused his request to submit to ordinary scientific validation processes, as those would have meant creating a control group, that is, arbitrarily excluding some children (and some teachers, too) from the possibilities of playfulness. While this inclusive intent would be, in my personal pedagogical and political perspective, in itself commendable and inherently preferable to any learning-efficiency oriented approach (as thematized in Chapters III and IV), Squire, after discussing the lack of short-term, quantitative results in standardized testing as pertaining the "experimental" classes involved in open-ended playful activities, points out an high-order theoretical perspective, highlighting the

impossibility of applying classical scientific validation methods to measure, and provide evidence-based legitimation to, truly playful learning:

> *The kinds of instruction that can be tested with these methods are limited. Anything where the teachers rework materials is out, because the "treatments" have to be standarized and compared to controls along predefined objectives. Anything that involves differential learning outcomes is out, because you are testing for sameness in outcomes in groups. In short, most of what works best through games (interest-driven learning, differential expertise, learning by design) is thrown out, because it cannot be tested under these methods.*

<div align="right">Squire, 2011, p. 229</div>

Evaluation is, of course, a troublesome node in any kind of learning oriented organization, highlighting its key political role, often discussed through the sidelining of the apparently trite but relationally and politically poignant question, *who evaluates the evaluators?,* in favour of absolutist, decontextualized discourses of objectivity. The idea of an objective, "immaculate" evaluation (Fornasa, 2001) has been in fact a mainstay of the organization of learning institutions in the 21st Century, with the *No Child Left Behind Act* enacted by the George W. Bush administration in 2002 constituting a key turning point in the modern history of schooling, the first wave of a strong world-wide push toward standardization (see Denzin, 2001, for an in-depth critical perspective): the hegemonic answer to the infinite, incommensurable diversity of learners and learning contexts was a paradoxical effort to make all learning equal, bringing to the false conclusion that through this uniformity we will be able to discern differences in learners, and subsequently order them in quantitative fashion and provide to each his or her own merit (see Young, 1958, for a seminal critique of the rethoric of meritocracy through the playful means of satire). If we consider an unavoidable, key necessity of learning practices and institutions that of measuring efficiency and quantities in learning, then all learning will be, by the same necessity, quantitative, transmissive and repetitive, expelling quality, difference, divergent thinking and creativity (as discussed by British educator Ken Robinson, 2001), thus rendering the playful learning spaces I discussed throughout the Cases completely transparent, invisible to mainstream scientific validation.

The key motivation of my critique of instrumental uses of games and their relationship with standardized, measurable, "gamified" learning (as described in Chapter I) is not, however, rooted in undermining the latter's claims of efficacy and efficiency. It is, indeed, just the opposite, as I came

to know, through personal experience and scientific literature (see, among others, Hamari, Koivisto & Sarsa, 2014), that focused use of hierarchically designed and imposed games *does* indeed work, in that gamified learning practices, be them in the classroom or in workspaces, can indeed function as a strong tool for training, controlling and directing behaviours, at least in the short term (ibid.). This particular persuasive power of games is indeed precisely the most politically relevant problem with their instrumental use, as discussed by Italian game designer, activist and culture jammer Paolo Pedercini in a famous blog post, aptly and straightforwardly titled *"Making Games in a Fucked Up World"*:

> *If your game or technology really works (in this direct and reductionist way)* ***it freaks me out****. If you actually figure out methods to control people's behavior, you can bet they will be adopted by governments and advertisers in no time.*
>
> Pedericini, 2014.

Pedercini goes on discussing the manifold ways in which games can be employed in learning, demistifying rethorics of didactic engagement and "edutainment", and ultimately coming to the conclusion that there is a much greater liberating potential in designing games than in simply playing them, an argument expressedly mutuated from the works of Brazilian educator and philosopher Paulo Freire (1970), according to whom:

> *Education makes sense because women and men learn that through learning they can make and remake themselves, because women and men are able to take responsibility for themselves as beings capable of knowing—of knowing that they know and knowing that they don't.*
>
> Freire, 2004, p.15

While through "simple" participation in games players can still witness first-hand their capability to be made and remade (sometimes even literally, with the creation of a new avatar or a new player character), through appropriation of the medium in the plurality of contexts discussed throughout the three Cases, amateur designers can demistify the language of persuasive games, and learn that they can actively make and remake worlds. Even if in a playful sense, they learn that they can became active, participatory educators in the sense that Freire proposed, as my interviewees throughout the cases acknowledged and illustrated.

Even if these open-ended, democratizing creative approaches do not (and can not, as illustrated by

Squire's inquiries) result in measurable results in standardized learning objectives, by embodying the very possibility of disrupting and existing in parallel to hierachical institutional practices of learning they can generate a much wider qualitative impact (as seen in the refusal of Squire's co-researching teachers to exclude children from play), one that, however, cannot be quantified. In the same way, the game design practices discussed throughout the Cases generate, in their participants, not only a deep awareness of their own progress and learning (as discussed particularly in the Coda of Case I, and in the "personal learnings" excerpts in Case III), but a sense of how learning beyond and beside its institutional dimensions can be diverse, embodied and unforeseeable in its aesthetical, social and political consequences and ramifications. Again Pedercini:

> *I can pull out plenty of numbers and qualitative feedback. But I have no way to measure their impact. But hey, how do you measure the impact of the first record by Minor Threat?*   Pedercini, 2014

Once again, through a key musical reference (see McNeil & McCain, 2006, for an history of punk subcultures, among which the above mentioned record constituted a key turning point in critiquing widespread practices of substance abuse), the "punk" theme so recurrent in my dissertation and in current game cultures (as seen most clearly through Zoe Quinn's inclusive efforts discussed in Case I) comes up: how can the marginal, the truly different, the ones who make critical distinctions, be included in ordinary, ordered learning processes? And indeed, is it democratic to forcefully include them through the constrictive power of institutions? While, ideally, schools and universities, in the perspective offered by this dissertation, should endeavour to be open playgrounds for creativity and knowledge sharing (echoing the diverse communities discussed throughout the Cases), given their current measurement-and-productivity influenced organizational structure culturally disruptive perspectives avoid to lend themselves to be fully included, preferring a liminal state and preserving a degree of autonomy (see Suoranta, 2011). The creator of games, the world-makers are, in this sense able to defend against games themselves, to not be "played", but indeed to be able to re-design, from the boundaries, our "games" of research and education for an ever changing world. And, speaking of defending ourselves from the control games can exert on us, I also have, as a scholar, a duty to employ my abilities in the destruction of fear (Geertz 1984), complexifying rethorics of moral panic which all to often surround games (see Jenkins, 2008), a duty which leads to the second-to-last paragraph of this work, confronting another culturally strong rethoric to which my research was subjected, that of games as a dangerous detachment from reality.

Reality is how you play it, or of realism, escapism and possibility

This question, which I will conceptualize as the **question of realism**, is a longstanding mainstay of "serious" academic criticism pointed toward marginalized, "unrealistic" narrative cultures, genres and practices (see Smith, 2012). That is to say, games are, in the current historical conjuncture, being often subjected to exactly the same mistrust and criticism that fantasy and science fiction literature incurred half a century ago, at the emergence of the first critical perspective toward learning institutions (see Habermas, 1968, for a first conceptualization and definition of critical perspectives in education). While scientific literature on "game addiction" and on the negative consequences of play is wide and diverse (Engelhardt et al., 2013; Hellman & Schoemakers, 2013), conclusive evidence still needs to be established and indeed, as discussed as pertaining the above paragraph, any standardized, evidence-based inquiry as pertaining the influence of open-ended, unguided playfulness might be incurring in epistemological errors and experimental dead ends. This notwithstanding, the second more frequent group of questions during my inquiry was:

"Won't games alienate learners from the real world?" or, even more worryingly, **"Won't they lead to addiction and even psychosis?"**

Even if developmental psychology literature has since long highlighted the fundamental role of play and games in the co-construction of functiong children's minds (as discussed in Chapter II; see, once again, Piaget, 1962; Winnicott, 1972), even if common sense realist approaches have been refuted and abandoned by positivistic science itself, this question reproposes, under the guise of a preoccupation with "our youth" (with Burman, 2007, highlighting the universally conservative undercurrent of "appeals to childhood") in fact exactly the same "realist" approach which, more than sixty years ago, brought British novelist C.S. Lewis to often joke that *"the traditional enemies of escapism are jailers"* (see Miller, 2015). The implicitly reactionary position of a reality grounded, utterly pragmatic anti-utopianism (Bloch et al., 1989) finds its most political, poignant answer in the writings of American science fiction author and activist Ursula K. Le Guin, according to which the accusation of escapism is *"the oldest argument against fiction, both the shallowest and the profoundest"*:

> *When an insurance broker tells you that Science Fiction doesn't deal with the Real*
> *World, when a chemistry freshman informs you that Science has disproved Myth, when*
> *a censor suppresses a book because it doesn't fit the canons of Socialist Realism, and so*

forth, that's not criticism; it's bigotry. If it's worth answering, the best answer is given by Tolkien, author, critic, and scholar. Yes, he said, fantasy is escapist, and that is its glory. If a soldier is imprisoned by the enemy, don't we consider it his duty to escape? The moneylenders, the knownothings, the authoritarians have us all in prison; if we value the freedom of the mind and soul, if we're partisans of liberty, then it's our plain duty to escape, and to take as many people with us as we can.

<div align="right">Le Guin, 1979, p.202</div>

Of course this statement is expressed in the colorful language of a narrator, but LeGuin's is not a lonely, naively utopian voice in supporting the liberating power of fiction. Indeed, the very title of this dissertation, as touched on in the Introduction, is mutuated from one of Neil Postman's possible, proposed "Ends of Education", as he conceptualizes human beings as world-makers, mainly through our ability to use language, and its technological extensions, to weave tales that allow us to re-conceptualize our very realities:

Yes, poets use metaphors to help us see and feel. But so do biologists, physicists, historians, linguists, and everyone else who is trying to say somethina about the word. **A metaphor is not an ornament. It is an organ of perception.** *Through metaphors, we see the world as one thing or another.*

<div align="right">Postman, 1995, p.192.</div>

If we apply this same metaphor, this organ of perception, to the medium and language that is play and games, we can glean how, while the metaphors written language provides us are, by necessity, linear, the playful metaphors amateur game design learn to share and employ are inherently systemic, thus providing a possible, higher order of perception, that of process, in turn making game design communities into playgrounds for the poetry of emergence and complexity. As I have discussed above, I do not intend, in giving such high praise to the playful creativity and imagination of game-making communities, to promote political disengagement and escape from learning institutions, nor from reality, but just to rehiterate, as Von Foerster wrote, that *reality = community* (Von Foerster, 1973), a proposition further thematized by scholar of cybersemiotics Soren Brier:

The realities in which we live in are communally made through goals that imply regulatory processes established in communication. Communal goals are the hallmark of communicative process or regulation. I will claim that what we can legitimately call

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politics is a process of regulation that allows the emergence of communal goals in order to construct the realities in which we live. Politics is, then, the negotiation and regulation of spaces of power. For power means the ability of social actors to mantain or create definitions of reality for themselves and others.

<div align="right">Brier, 2011, p.118</div>

Even if Brier's argumentations pertain a wider definition of politics, it is plainly visible, for those who have read the three Cases that compose Part III of this work, how the same dynamics of communal regulation pertain the co-construction of the playful communities encountered in my ethnographic exploration. Their heterarchic power structure, furthermore, constitutes them, indeed, as a possible paths to escape: an escape from pragmatic oversimplification and the machinistic patterns of standardization, replication and evaluation which permeate and pervade most of our public spaces, and most aggravatingly, the spaces of learning and research.

This is another key point of interest in games and the communities they create: they can create u-topical and trans-topical spaces, heterarchic project ecologies (Deuze, 2007) almost unique, within this post-ideological society, in their possibility to experiment with innovative social configurations partially detached from "real" contexts. The Cases I discussed constitute therefore a plurality of examples of what Austrian philosopher Ivan Illich would have called "convivial webs of learners", but contraddicting him in one, key point: they are, as seen particularly in Case II, possible even outside a fully deschooled society, as they exist partially ourside "reality", transcontextually crisscrossing the boundaries of institutional learning spaces and informal, interest-driven communities. The possibilities Illich saw only outside institutionalized learning, and concurrent with its downfall, are already here, however partially "virtual", both on a social and on an individual level, possibilities which lie "beside" our ordinary life, and might be quite different from it, but are nonetheless accessible.

To work in such "half-real" spaces (see Juul, 2011) with the renewed premises of the 21st century, or in the words of Eric Zimmermann, "the Ludic Century", we will need not evidence, realism or pragmatism, but a renewed inventiveness and imagination, as Norman Denzin remembers us in the closing pages of the last (as of now) edition of the *Sage Handbook of Qualitative Research*:

In the call for the practical and the pragmatical, or "what works", we may have lost sight of the fact that we are rapidly losing the means to socially construct any worlds, let alone one that is more just, more socially, economically, and culturally equitable. [...] Far from being some imaginary endpoint, we are in the fact on the edge of a new

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colonialism, a new era, one that we did not fully choose, and one that we must begin to understand more fully than we have to this point. The only meaningful method for that understanding is a refunctioned imaginary for ethnography and ethnographers. And that is yet to be invented.

<div align="right">Denzin, 2011, p. 718</div>

Indeed imagination, and its rigorous declinations through design, are paramount in the communities I explored (see, among other segments, my personal forays in game design in Case II and III), but is altogether left out of institutial learning spaces, especially out of the higher levels of educational institutions, a thing of childhood, to be left behind in tackling the real and serious challenges of adult life, and eliciting accusations of childishness (as seen in the discussion of the Cases) from those accustomed to a paradigm of learning oriented to maximizing usefulness and productivity, thus expunging the possibility of "wasting time" in the creation of beautiful, complex, and, most importantly, useless things such as games.

To allow for creation, to allow for imagination within our learning institutions means creating openings (of which the Oasis Room of Tampere University discussed in Case II and the hosting of the Global Game Jam at the Politecnico of Milano discussed in Case III are important, if still marginalized, examples) to go beyond the current, still strongly productivity oriented, "Information Age", and enter a possible "Imagination Age" (as imagined by American designer and writer Magee, 1993) an hypothetical phase of human history where, having maximized our potential for global communication and production, the bulk of human activities will be directed at playful creation, a playful utopia (echoing Suits's tractation of "utopia as the art of playing games", as discussed in Chapter I) and the conceptualitazion of a possible, playful future which leads us straight to the very last paragraph of my dissertation.

"Why will it have to be games?" , or forceful narratives of possible futures

Having reached this very last paragraph, I will once again remember the reader of the strong auto/biographical core of my choice of themes, and of methods through which to further them. Games have, indeed, given me a lot both on a personal and on a professional level, as I have attempted to convey through the narrative fragments which punctuate the dissertation. What I received from games, on a most personal level, can be aptly synthesized by the subsequent fragment of an interview to American educator Jane McGonigal, who, despite frequent flirtations with quantifiable and controlled approaches, proposes a very personal, emotionally charged

perspective which strongly resonate with my experience as a player of games:

My many years of playing games helped me build up my capacity to face tough challenges, to work more effectively with others, to invent and put into action creative strategies. It gave me the mental, emotional and social strength I needed to not give up, to keep fighting through the darkness. Games, more than anything else, have helped me be urgently optimistic even while under pressure. That's why I make it a priority to play games every day, even if just for a few minutes. Because you never know when you're going to need your gamer strength.

<div align="right">McGonigal, 2012, CNN interview</div>

This "gamer strength", this persistence and optimism which I fully share, however, still wouldn't suffice to confront the challenges of current and future education. An individual "strength", however much it is, however much games (and even making games) can give, just can't stand up to the necessarily collective, and apparently sysiphean, task of edifying a new, possible narrative of learning, an "end of education", to once again, and for one last time, quote Neil Postman:

...Schools have not and have never been organized to create forceful, inspiring narratives. They collect them, amplify them, distribute them, ennoble them. They sometimes refute them, mock them, or neglect them. But they create nothing, and this is, I suppose, as it should be. Schools, we might say, are mirrors of social beliefs, giving back what citizens put in front of them. […] Economic Utility, Consumership, Technology, Separatism are gods that come from outside the walls of the classroom. And I understood in 1969, as now, that at any given time in the symbolic universe of a community there dwell multiple narratives.

<div align="right">Postman, 1995, pp. 59-60</div>

This is why I chose, with this work of mine, to put the plurality, the marginality, the creativity and the inclusivity of playful communities in front of learning institutions, to disrupt the serious, evaluating, pragmatic "gods" of society at large and to propose new "forceful and inspiring" narratives, the "mental, emotional and social strength" that only participating in cultures explicitly founded in play can give.

I couldn't do this alone, but I had to work with a variety of communities to open up a possible future where my individual, solitary and serious role, as a teacher and a researcher, will, at last, become

obsolete, if not as a facilitator of playful meta-design endeavours, co-constructor, among a plurality of diversely skilled peers, of open interactive models and co-animator, in a democratic, global community of citizens, of open and inclusive gaming/teaching/researching communities. A new, possible configuration of learning spaces, plural, parallel and integrated with open, flexible learning institutions, liquid communities whose interests and activites could range from "mere" entertainment to the satisfaction of "simple" childhood curiosities, from an in-depth examination of complex eco-social issues to the most "hard" scientific modelization, from political participation to aesthetic sharing and expression, moving through and beyond the systemic awareness that comes from making the worlds of games to embrace a culturally engaged, distributed and more democratic model of learning.

One last concluding note, as to motivate the persistence of the play *motif* within the above, strongly politically charged argumentations, a motivation which goes beyond all the links discussed throughout this dissertation: at this point *"Why not?"* won't suffice anymore as answer to my original question, and its extension to the future which closes this dissertation, *"Why will it have to be games?"*. And the reason is simple: it won't have to. While I deem the scenarios of community based, playful learning I just described to be auspicable, it won't <u>have</u> to be games, because games are, most of all, the ultimate triumph of possibility over necessity: play, and making games, are valuable in the construction of a democratic, ecologically aware society because they are, by definition, a matter of <u>choice</u>, in the high ethical connotation discussed by Heinz Von Foerster.

I, together with millions of other world makers, have <u>chosen</u>, and we will <u>choose</u> play and make games with other people. We will choose this so that we may never succumb to necessity and to seriousness, so that we may never succumb to the inability to see that the world-that-is is not an inescapable necessity, and the worlds-that-together-we-make might, in fact, be better.

One Final Interlude: Play Another Game

Luca shoos away a mosquito and looks at the (oh so bad!) cards in his hand. It's a very warm summer evening, and it's nice to just enjoy the sunset, drink some cold tea and play rummy with his parents in the veranda. However, something bothers him. It's barely the third turn, and, as has happened in most of the matches before, his father is already down to five cards, a couple of steps for the third victory in a row.

Luca is now acutely aware that his father is somehow cheating, but no matter how close and attentively he looks, he can't fathom how. Luca knows that, having his father picked up more than passable prestidigitation skills in his years spent traveling with actors and performers, he's probably pulling those cards out of his sleeves, or who-knows-where.."Or maybe its just some palming trick when he draws, if I focus on his hands I know I can catch him..."

Luca's father lightly taps the deck with a finger before drawing, making a smooth, dramatic arc with the hand holding his cards: "See as I work my magic...Aaaand...Here's the ace I needed!".

Luca is at the same time frustrated and amazed at his father's skills. Luca's mother calls his father out: "Luciano please, stop it, it's plain as the sun that you are cheating somehow! We are playing together to have fun, not to win!"

Luciano answers slyly: "I reject this vile accusations! Lady Luck smiles on me, and that's it!". The affectation is now fully theatrical. He knows they know, it's just another smokescreen, another way of distracting us. With another smooth motion, he throws three aces and a joker on the table. It's the third joker he "drew" this match.

Luca is now getting quite a bit flustered, much more from not being able to understand his father's tricks than from losing another game. "Come on Dad, cut it out." His mother concurs, even if Luca suspects she's more bothered about the loss itself: "He's right, Luciano. That's not nice."

Luciano keeps up his sly smile for a while, then suddenly becomes almost too serious and speaks: "Ok, ok, I admit it. But I didn't even have to, we all fully know I am cheating. But still, neither of you can catch me, and you both have to admit this makes for a much more interesting game than plain old rummy".

"But it's not the game we were playing!" protests Luca.

"Well, what's wrong in changing a game while it is played?" answers his father. Luca pauses for a moment. It's not about the game anymore, there is...something important to this, even if he can't focus what.

"Ok, let's keep playing", says Luca,"at least now we know what the real game is."

"Well, learning what game we are playing might be fun in itself...Also, look more closely at what my little finger does when I draw..." Luciano smiles as he draws, his little finger doing absolutely nothing weird. Another smokescreen, another theatrical distraction. The game continues.

Luca smiles too, as he and his family resume playing their game, or maybe as they start playing a new game. Once again, he learned some very important things today, on playing beyond the rules.

First, you can never be sure of the reality of games you are playing, or if you are being played.

Second, skirting the rules requires quite a lot more creativity and skill than respecting them.

Third, and maybe most importantly, you can always try to play your own game.

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