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Participation at the Global Game Jam event: a bridge between consumer and producer worlds in digital entertainment.

Keywords: Global Game Jam, cooperative learning, prosumerism, punk-capitalism, Communities of Practice

Abstract

Videogames have rapidly changed people's behaviour, introducing new experiential relational and intellectual models. The relationship between content production and fruition is becoming increasingly tight, empowering *gamers'* with influence on the *game* product itself, as it happened already for mainstream media. An example of such mixture of users and developers is the Global Game Jam (GGJ): an event in which aspiring game developers with different expertise, meet together in order to and prototype complete games over a limited time.

Initially targeted to *game developers* only, GGJ has become over the years a new collective ritual to strengthen practice communities and share videogame culture, open to the participation of more subjects even when qualified as simple *players*[1].

1. GGJ and prosumerism

The term '*prosumer*' comes from the fusion of the words "producer" and "consumer", identifying a major change of current society. The consumer is no longer a mere target, a goal to reach: he regains its central role, requiring more space and attention and claiming freedom of judgement. Society is currently providing ex-users with increasing efficient tools to be used for reaching such goals. Consumers can easily communicate through social networks with brand owners, influencing decisions about development of services and products, organizing official beta-testers groups, and eventually even financing through crowdfunding platforms [19].

Considering consumers as new producers requires a short step: from these new capabilities was born indeed the Makers' Revolution, aiming at transforming the world by the alternative use of common objects. The digital industry and videogames world are main witnesses of this revolution, main example being the MOD phenomenon, as the structural modification of games or main assets, such as graphics weapons or maps, by the work of fans strongly supported by videogame industry professionals [4].

Videogames are forerunners of current media industry for introducing the concept of interactivity as deeply rooted as we experience daily through our favourite media. Videogame industry is full of tools to simplify developers' hard work, several software and middleware significantly simplifying the creation of interactive worlds, with ready-made patterns and environments ready to use and easy to modify through visual editors. Such tools have made game development more accessible to collective imagination and game fruition becomes more and more similar to game production.

The scholar James Paul Gee splits videogame investigation in a four-section process, as the player: investigates, speculates, re-examines, and rethinks. The author theorizes a clear parallel between players' interaction between videogame practices and the scientific method. Games actually require players to

make assumptions about operations, narrative structure, roles and protagonists, challenges to be faced and overcome and use the tools provided within the simulated world [3]. When the player fails to understand the basic game mechanics, he is strongly penalized. Furthermore he is given opportunities to try again until the reach of proper mind sets and methodologies to meet the challenge requirements. Playing videogames means mostly finding order and meanings in the world and make decisions that help creating that order. Two worlds have come together: game consumers and game producers belong to the same community. This new trend has been exploited by worldwide events focusing on prosumers and aspiring professional, so as GGJ does. The media landscape will be "reshaped by the bottom-up energy of media created by amateurs and hobbyists as a matter of course. The resulting output will overrun the institutions and strategies created to organize and navigate an era of great scarcity of media equipment and products. Images, ideas, news and points of view will come from everywhere and travel along countless new routes to an ever growing number of places where it can be viewed." [5].

2. GGJ and punk capitalism

The "Global Game Jam" phenomenon fits perfectly into a social and economic context of rapid change. As we have already mentioned by the concept of prosumer, GGJ event is the focus of several revolutions involving both use and production of digital media. The notion of production has changed in line with the punk capitalism manifesto. The cry of "1. This is a chord 2. This is another chord. 3. Now make a band" [2] led to the creation of several punk bands in the 80s; in the same way today, new development teams come out of GGJ and similar events, ready to face the market striving to become professionals.

The punk movement was a precursor that has imposed itself as a law for new economy. Such cultural model was inspired by spontaneity, innovation and unauthorized use of images; later on hip hop, rave parties, urban graffiti and street art, and finally the videogame industry have done likewise. [8] The birth and growth of alternative channels of production and distribution proves game development as the leader of this revolution. As fruition and development has changed, the same goes for distribution and access to markets.

Once again developers born and raised thanks such events, who have acquired knowledge and skills directly from their peers, have certainly transferred their innovation and their alternative practices even to the distribution of their game products. GGJ board is strongly encouraging such dynamics by publishing the games produced during the event under Creative Commons rights, leaving the property into the hands of developers who can keep working on their projects till possible later releases and upgrades. The alternative distribution channels are mostly made of digital delivery platforms, such as Steam for PC games, or App Store for iOS devices, and Google Play for Android platforms.

Indeed many videogames developed during GGJ, and later on published into marketplaces, follow this line. Digital delivery is a recent revolution allowing developers to avoid the mediation of traditional

publisher to enter the market. So the circle closes: fruition, semi-production (typical of prosumers), production and distribution are all part of a single alternative channel that is growing in strength and importance, influencing traditional business practices. Behind this alternative economy lie a better access to the products on the one hand and a free access to the market on the other, as a response to a the strong demand for democratization inspired by social networks and the paradigms of Web 2.0 [8].

3. Relations between GGJ, game industry and education

The dream of becoming become a game developer is affecting an increasing number of people: many “wanna-be” developers that learn, meet, compete, and hence grow together. All developers of this generation know and well understand the value of grouping, networking, sharing information as much as successes and failures with their peer groups. For this reason there are more and more events and festivals rewarding independent developers and giving visibility to "indie" game authors, meaning those developers who are not funded by publishers: *Independent Game Festival* and *Indie Cade* are among the most famous events as such.

A trend of highly specialized training courses for young game developer, who have motivation and the skills to learn, is growing next to events and festivals. In old Europe and even in reluctant Italy, are to be counted tens of courses more or less specific, more or less relevant, promoted by public and private universities to their learners. The connection between events, festivals, schools and crowdfunding platforms are innumerable.

Hereby a short mention of products created during the GGJ and later on awarded within such kind of events: "Mirror Moon" (GGJ12 - GGJ Genova, Italy), by the Italian indie developers "Santa Ragione" - "Polygon Lovers in a Dangerous Spacetime" (GGJ12 - GGJ Toronto, Canada) by "Asteroid Base" team. Other significant connections is represented by GGJ videogames that have been funded later on: "Mushroom 11" (GGJ12 - NYU Game Center - New York, USA) developed by Itay Keren, "Something Fragile" (GGJ13 - St. Louis, USA), "Proppa" (GGJ12 - De Paul University, Chicago, USA), "LangGuini" (GGJ11 - IGDA Philadelphia | IndyHall, USA), "Gnilley" (GGJ10 - GGJ Sydney, Australia) [6]. All this shows clearly how GGJ event is both an important step for young developers education and a good showcase for those who already have tools and skills to deal with the market. [10].

4.Global Game Jam: a Community of Practice

GGJ is a worldwide jam session of game development, taking place every year during the last weekend of January, hosted simultaneously by hundreds of volunteer locations all over the globe. The event structure is simple: participants register themselves no later than Friday afternoon, a welcome keynote video produced by the main organizers is shown, where professional videogame developers offer tips and

motivation talks regarding methodology and goals. At the end of the keynote the theme around which all games have to be designed is revealed: there the forty-eight hours developing marathon starts. Few hours before the event GGJ main organizers communicate to local organizers the theme, issues and micro-goals to help diversifying the development. GGJ is the most important event among those themed as "Game Jam". Basically GGJ is structured as an *hackaton* event focused on game development.

During these hours game developers explore their strengths and limits, acquire professional skills through informal learning, information is communicated and consumed by the community of peer groups by osmosis: such structure allows to easily learn multidisciplinary skills needed to the creation of videogames. Participants learn the development model applied to their individual skills, being them programming, graphic production, interactive media design, writing narrative texts, creating sound effects or soundtracks. GGJ format does not provide competitions: no winners, no prizes. The whole event is designed to bring participants together, to stimulate creativity and collaboration rather than competition.

Global Game Jam shows the characteristics of a true social experiment. The event has proved to enhance the spread of videogame culture and to create a real "community of practice".

Quoting Lewin the jammers are dynamic sets made up of people who perceive themselves as mutually interdependent. The goal of creating a videogame in 48 hours makes members mutually dependent on each other, as they recognize their limit in achieving the goal all by themselves [11]. Group members become aware since the beginning of the experience that only the exchange and sharing of personal resources (ideas, knowledge, skills) will result in higher levels of performance, indeed higher of the possibilities of each single member. Everyone plays a specific and recognized role, ensuring the well-being of the individual and aiming, at the same time, to the development of the individual components and of the group itself.

Hereby the properties that contribute to building a good working group in this context:

- Common Goals: clear and explicit, motivating and inspiring, help to achieve maximum performance.
- Interdependence: made possible by the possession of complementary skills and by coordinated actions and complementary components.
- Operational procedures aided by common rules and shared procedures and processes. The jammers decide together which software, development tools and instruments to use in order to realize their own games.
- Personal and shared responsibility in order to achieve specific results. Roles and responsibilities should be outlined from the beginning in order to achieve a satisfactory result. [12]

By analysing GGJ distinctive and peculiar characteristics we propose to define it as a community of practice, intended as a group of people who play a similar activity and interact with each other in an informal way. The merging element between these social gatherings is the strong cohesion and team spirit.

Etienne Wenger, top international expert on the subject, outlines the edges of communities of practice using three indicators:

1. engagement in a specific activity;
2. strong social cohesion that links the community members;
3. sharing a specific "culture".

The bond between the people who are part of the community comes from the fact that all the jammers believe in what they do: they engage in a collaborative activity because they share a common interest, a goal or a need to be faced. The passion they put in reaching a common goal is not limited, however, to the reaching of a pre-set achievement. The real reason why these people are willing to cooperate with each other is given by the desire to undertake a process of mutual growth [12].

Strictly speaking we can therefore consider communities of practice those community of professionals sharing knowledge through a social process of mutual learning: they produce and share new knowledge.

The assumption on which everything rests is that learning is an inherently social and not just individual process: more or less consciously, each subject owns a capital of experience that can be shared during the process of collaboration between the members. Learning is also "located" in a well-defined context and at a specific time [12].

The effectiveness of the process comes from the fact that the content discussed within the community of practice meet operational needs, timeliness and contextualization of learning.

GGJ participants mobilize a large amount of resources, which enhance the overall professional development of the entire community, especially in its less experienced members. Each member using all that is made available by the other participants can devise own paths of research and study, as a process of self-directed learning and may finally seek the help of the other members. Communities of practice are based on the theoretical assumption that information has a value only when accessible, and that the willingness of individuals in order to create a common knowledge base and work practices should be encouraged.

Practice is clearly the core of GGJ. In other words the real value of communities of practice, their shared heritage, it is the participants' shared expertise, their knowledge acquired in the field. This knowledge is often made of silent aspects, not always revealed or clearly expressed.

There is a real "heritage" of tacit knowledge that is commonly called "tricks of the trade" that makes the real difference. Such information is not easy to be transferred, as is also rooted in daily actions and past experiences that each an individual brings. This know-how is not simply made of technical skills, but composed of a series of very subjective perceptions [14].

GGJ turns out to be an "affinity space" as defined by James Gee, set for cultures of informal learning in the landscape of nowadays participatory culture. Within this space the parties are confident of the importance of their own contribution and feel somehow connected to each other.

This new culture is an ideal environment for learning. Affinity spaces offer many learning opportunities because they are ruled by common efforts that exceed all kinds of differences (age, sex, and class level of education). People participate in different ways according to their interest and ability, they learn by a peer-to-peer teaching experience, where participants are motivated to acquire and increase their own expertise taking advantage of the experience of others. A highly innovative and experimental environment, that creates new aesthetic experimentation and where innovation emerges.

In this kind of context interaction is positive. Although part of the group work can be divided and performed individually, it is necessary that the members of the group work in interactive mode, checking with each other the chain of reasoning, conclusions, difficulties and providing one another with feedback.

An accurate use of skills is essential for collaboration: within the group jammers are encouraged to develop confidence in their abilities, leadership, communication, make decisions and defend them, managing conflicts in interpersonal relationships [16].

Main characteristic of the event is the grouping of several different developer profiles into teams. They may form before the event or during the first day. Team members have different skills, training and experiences and come from different parts of the territory as we will see in next part.

Graf. 1 –2013 GGJ hosts around the world



Note: Source CartoDb

5. Jammers: features and segmentation

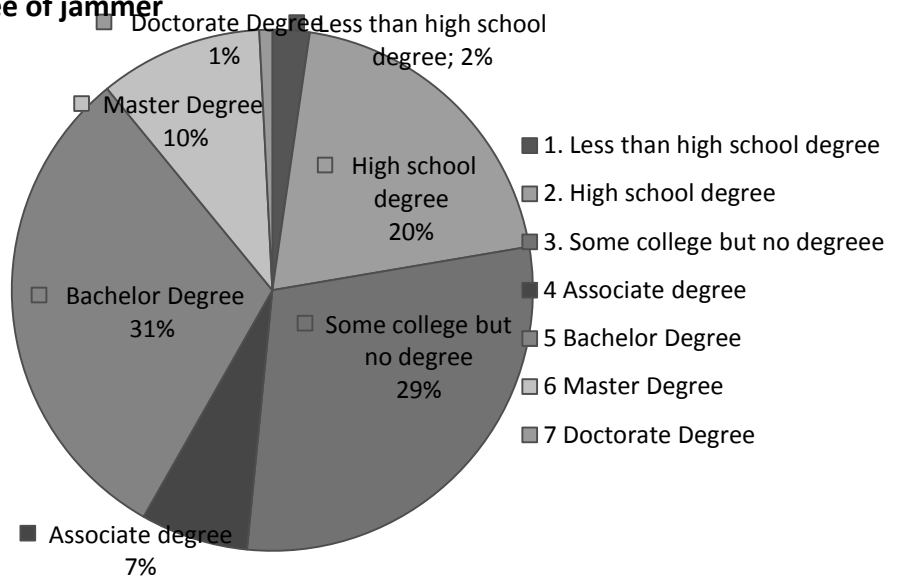
Diffused across the world and addressed initially to game developers, the GGJ has turned into a new collective ritual in a short time, able to strengthen a community of practice and to animate the game culture. Created by Susan Gold, in close collaboration with Gorm Lai and Ian Schreiber, the event was born in 2008, clearly inspired by previous Game Jam events of such as *Ludum Dare* and *Nordic Game Jam*. GGJ

is a project created and organized by IGDA or International Game Developer Association in 2009. Starting in 2013 the main board of the event has formally become Global Game Jam, Inc organization. In a few years, the numbers of events and participants has quickly strengthened. In 2009 the first GGJ took place between January 29th and February the 1st. A total of 1600 developers coming from 23 countries worldwide attended the event, producing nearly 370 games. The amount of participants reached 4300 members already in 2010, with 900 games released. In 2011 participants were more than 6500, coming from from 44 countries and over 1500 the games created. In 2012 242 locations were registered, divided between 46 countries and more than 10,000 developers took part in the activity with 2100 videogames developed. The latest event represents another leap in quality: several economically marginal countries joined the event (Bolivia, Chile, Egypt, Greece, Hungary, India, Latvia, Macedonia, Morocco, Nigeria, Serbia and Tunisia) that reached the quota of 319 simultaneous hosts in 63 countries around the world, and a number of games higher than 3200, setting the Guinness World Record™ for Being The Largest Game Jam in the World [details [20]: http://globalgamejam.org/sites/default/files/news_attachments/GGJ_Guinness_Book.pdf]

The study allows to build a profile of the participants in 2013 edition, (that reached the number of 16705). The data collected during this latest edition - through a questionnaire using CAWI [18], regarding all locations around the world that have attended the event, allow to highlight the participants' sociodemographic profile and to investigate whether the jam is still the meeting place for aspiring, professional game developers and players, as intended by the original spirit. The enhancement of the latter is highly dependent on the main GGJ value which is the mutual support: through a deliberate and structured cooperative process - working together and task sharing - it is possible to add value and to create new and different things. The heterogeneity of the groups, being part of the initial philosophy, is a positive value: each participant has personal characteristics, has its own history and different skills compared to his teammates. In addition, each jammer is not only responsible for his own actions, but also for those of all other members of the group, given that leadership is "distributed" and there is no manager who directs others.

The analysis of participants profile reflects the spirit of the initiative returning a structured composition of users and is able to detect the segmentation of jammers, for origin, gender, training and experience. Data say that the jam is still characterized by a predominance of men and young people. Women [17] still constitute only 12.6% of the total. If we put together the first two age groups 18-20 (23.9%) and 21-29 (56.5%), we get over 80% of the participants, even though 15.5% of the 30-39 class shows that video games are not "kids stuff."

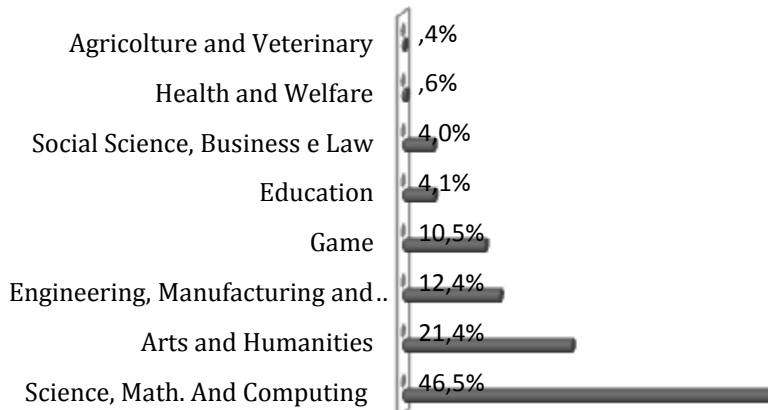
Graf. 2 The highest degree of jammer



The interest in games not only spreads across all generations but also across educational levels (Graf. 2) with approximately 50% of subjects with degree or higher qualifications (Bachelor, Master, PhD). In many cases, high-level courses are in the training of specialized personnel in the videogames creation. The distribution of university study areas, reveals the presence of training paths focused on game design that is selected by 10% of participants. Specific courses, together with scientific and popular publications on the topic, associations and journals and conferences, highlight an advanced process of profession institutionalization. As many as 10.5% undertook studies on game design, however, they don't represent the range of educational resources necessary for the development of games (Graf. 3). Among the participants there is a significant portion of those who have a background related to the studies of mathematics and computer science (computing) (46.5%) and of those who come from Arts and Humanities (21,4%).

The analysis of further elements (Tab. 1) shows that the Jam is primarily a meeting place for lovers of video games whether indifferently from the fact of being simple users, scholars of the phenomenon or producers of games. An analysis of the employment status indicates that just under 73% of the participants works: the 65% are full-time, the part-time is 0.7% while those who work on their own or in a family firm are 7% of the participants. In remaining portion, those who are looking for a job are prevalent (23.1%). However, only some of those who work are employed in the production of video games - particularly programmers, Game Designers and 2D and 3D Artists - since 63% are employed in other sectors. The presence of the world's production is surely a point of interest for those looking for a job and who define themselves on the basis of to the professions of the Game Industry (8.5% of total): the event offers networking opportunities in the industry of video games. Those who do not have a direct link with the world of production are greater in number, 63.8% of the participants.

Graf. 3 Field study of which have attended o are attending university



Tab. 1 Employment status and occupation in Game Industry

| | Which of the following categories best describes your employment status? | | | | | | | | Tot. |
|-------------------------------|--|-----------|--|-----------|---------|------------------|-------------------------------|-------|-------|
| | Full time* | Part time | Working in own o family-member's firm o farm | Pensioner | Disable | Looking for work | Not looking for work/ Student | Other | |
| 2D e 3D Artist | 8,1* | 16,7 | 1,9 | 0,0 | 66,7 | 10,3 | 12,0 | 0,0 | 8,6 |
| | 5,3** | 0,1 | 0,1 | 0,0 | 0,3 | 2,4 | 0,4 | 0,0 | 8,6 |
| Producer | 40 | 1 | 1 | 0 | 2 | 18 | 3 | 0 | 65 |
| | 1,2 | 0,0 | 1,9 | 0,0 | 0,0 | 1,1 | 4,0 | 50,0 | 1,5 |
| Business/ Legal | 0,8 | 0,0 | 0,1 | 0,0 | 0,0 | 0,3 | 0,1 | 0,1 | 1,5 |
| | 6 | 0 | 1 | 0 | 0 | 2 | 1 | 1 | 11 |
| Programmer | 2,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 1,3 |
| | 1,3 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 1,3 |
| Game Designer | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 |
| | 16,5 | 0,0 | 17,0 | 0,0 | 0,0 | 17,2 | 4,0 | 50,0 | 16,2 |
| Writer | 10,7 | 0,0 | 1,2 | 0,0 | 0,0 | 4,0 | 0,1 | 0,1 | 16,2 |
| | 81 | 0 | 9 | 0 | 0 | 30 | 1 | 1 | 122 |
| UI Designer | 6,9 | 0,0 | 9,4 | 0,0 | 0,0 | 6,9 | 4,0 | 0,0 | 6,9 |
| | 4,5 | 0,0 | 0,7 | 0,0 | 0,0 | 1,6 | 0,1 | 0,0 | 6,9 |
| QA/Play Tester | 34 | 0 | 5 | 0 | 0 | 12 | 1 | 0 | 52 |
| | 0,6 | 0,0 | 3,8 | 0,0 | 0,0 | 0,6 | 0,0 | 0,0 | ,8 |
| Not Employed in Game Industry | 0,4 | 0,0 | 0,3 | 0,0 | 0,0 | 0,1 | 0,0 | 0,0 | ,8 |
| | 3 | 0 | 2 | 0 | 0 | 1 | 0 | 0 | 6 |
| Count (A.V.) | 0,4 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | ,3 |
| | 0,3 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | ,3 |
| Column% | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| | 0,6 | 0,0 | 1,9 | 0,0 | 0,0 | 0,6 | 0,0 | 0,0 | ,7 |
| Total | 0,4 | 0,0 | 0,1 | 0,0 | 0,0 | 0,1 | 0,0 | 0,0 | ,7 |
| | 3 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 5 |
| Total % | 63,5 | 83,3 | 64,2 | 100,0 | 33,3 | 63,2 | 76,0 | 0,0 | 63,8 |
| | 41,2 | 0,7 | 4,5 | 0,1 | 0,1 | 14,6 | 2,5 | 0,0 | 63,8 |
| Total % | 311 | 5 | 34 | 1 | 1 | 110 | 19 | 0 | 481 |
| | 490 | 6 | 53 | 1 | 3 | 174 | 25 | 2 | 754 |
| Total % | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
| | 65,0 | ,8 | 7,0 | ,1 | ,4 | 23,1 | 3,3 | ,3 | 100,0 |

Note: * Column % ** Total %

The Jam confirms the philosophy of its constitution: to be the meeting place between a plurality of worlds and therefore personal goals. When asked "What is your main motivation for attending the GGJ?", the participants argue for reasons related to the expressive dimension: the value of experience (22.2%), entertainment (24.3%), the challenge (9.3%). The instrumental value of the investment is less intense overall: 19.9% mentions the possibility to learn something and 8,3% reported the possibility of networking. The event is set up as an example of prosumerism [19]. Through the convergence between the world of production - in this case videogames - and that of consumption, video games are becoming closer to the desires and motivations of end users.

Conclusion: from project to outcome

The study of GGJ event shows how to meeeting, inially targeted to game developers only, has become a new collective ritual for those who love video games in a few years. As provided by the organising Committee , event has become an opportunity to strengthen communities of practise and share video game culture, opening to the participation of subject even qualified as simple players.

The analysis demonstrates not only the diversified character of the audience of the event but also the complexity of the motivations and individual interests that drive people to participate. Precisely for the prevalence of expressive motivations, the GGJ is an accomplished example of prosumerism and indicator of the considerable attention of the entertainment industry to consumer tastes: through the convergence between the world of production - in this case videogames - and that of consumption, video games are becoming closer to the desires and motivations of end users.

References

- [1] The research group has participated in the research call promoted for the 2013 edition by the GGJ Research Committee, which provided the selected groups with technical assistance for the set up of a research dedicated to the event participation. Among the data provided by the Research Committee are the Global Survey results of which we hereby provide some abstracts. The research is based on three surveys that have had answered respectively by 875 jammers the first, 2218 the second, 2050 jammers the latter
- [2] Philopat, M. (2006). *Costretti a sanguinare, il romanzo del punk italiano 1977-1984*. Torino: Einaudi.
- [3] Gee, J. P. (2003). *What videogames have to tech us about learning and literacy*. New York :Palgrave.
- [4] Kushner, D. (2003). *Masters of doom*. Terni: Multiplayer.
- [5] Blau, A. (2005). The future of Independent Media, *Deeper News*, 10, 1, 3
http://gbn.com/articles/pdfs/gbn_Future%20of%20Independent%20Media%20DN.pdf.
- [6] Russo,M., Zambardino, V. (2009). *Eretici digitali*. Milano: Apogeo.

- [7] Johnson, S. (2006). *Tutto quello che ti fa male ti fa bene*. Milano: Mondadori.
- [8] Mason, M. (2009). *Punk Capitalismo*. Milano: Feltrinelli.
- [9] *About Global Game Jam* (n.d.) retrieved from <http://globalgamejam.org/about>.
- [10] The theme is decided by the "[Theme Committee](#)": a team of game industry professionals. In chronological order: 2009: "As long as we have each other, we will never run out of problems"; 2010: "Deception"; 2011: "Extinction"; 2012: An image of "[Ouroboros](#)"; 2013: [The Sound of a Heartbeat](#).
- [11] Lewin, K. (1936). *Principi i psicologia topologica*. Firenze: OS.
- [12] Hertz - Lazarowitz, R., Miller, N. (1995). *Interaction in cooperative groups: the theoretical anatomy of group learning*. Cambridge: Cambridge UP.
- [13] Wenger, E. (1998). *Communities of Practice. Learning, Meaning and Identity*. Oxford: University Press.
- [14] Lave, J., Wenger E. (1990). *Situated learning: legitimate peripheral participation*. Cambridge: Cambridge University press.
- [15] Jenkins, H. (2010). *Culture partecipative e competenze digitali*. Milano: Guerini.
- [16] Stewart, T. (1997). *Intellectual capital: the new wealth of organizations*. New York: Bantam Doubleday Dell Publishing Group.
- [17] Bryce, J., Rutter, J. (2003), "Gender dynamics and the social and spatial organization of computer gaming", *Leisure Studies*, 22, pp. 1–15; Hartmann, T., Klimmt, C. (2006). Gender and computer games: Exploring females' dislikes. *Journal of Computer-Mediated Communication*, 11(4), article 2.
- [18] Piattaforma Survey Monkey
- [19] Sassatelli, R. (2004). *Consumo, cultura società Bologna: Il Mulino*; Jenkins, H. (2006). *Fan, Blogger e Videogamers. L'emergere delle culture partecipative nell'era digitale*. Milano: Franco Angeli; Arcidiacono D. (2013). *Consumatori attivi*. Milano: Franco Angeli.
- [20] *About Global Game Jam* (n.d.) retrieved from <http://globalgamejam.org/about>.