Pragmatic semiotics studies the relations between signs and their uses, including psychological effects and corresponding behaviors. As designer and educator, my design research combines qualitative methods from many disciplines such as product semantics, social psychology, anthropology and semiotics to better understand complex problems and stakeholders, expand design concepts, and test propositions. Currently working on a PhD on gender and technology through the artifact of video games for girls, my research is being carried out at the Video Game Center of the Gaité Lyrique, a new media cultural center with a strong pedagogical mission in central Paris. The Video Game Center’s mission is to introduce the general public to state of the art and innovative video games, a medium that suffers from many negative stereotypes. Using pragmatic semiotics to analyze the physical space and video game selections, I would like to show how the Video Game Center manages to create a gender-neutral environment that is welcoming to everyone even though video games are considered a “masculine” pastime.

Keywords: Pragmatic semiotics, semiotics, Pierce, design research, Gaité Lyrique, video games, design analysis, qualitative research, nobrow culture

1 PRAGMATIC SEMIOTICS IN DESIGN RESEARCH

As a product, software and user experience (UX) designer, my design research methods often originate in a variety of different disciplines. Pragmatic semiotics originates in linguistics and can be used to deconstruct the invisible elements in a design, space, system or visual representation and its potential repercussions on people’s psychological well being, motivations and behavior. It is a particularly useful design analysis method that explicates the cultural connections affecting sense making.

1.1 PRAGMATIC SEMIOTICS

Semiotics is a theory of signs on how meanings are made and maintained. “A sign is anything that stands for something else.” (Parsa 2004) If semantics focuses on what words mean, semiotics focuses on how words mean.

People may be familiar with Ferdinand de Saussure (France 1857-1913) and his dyadic sign system whereby a sign (i.e. anything that conveys meaning) is comprised of the signifier (i.e. artifact) and the signified (i.e. its meaning). The relationship of the signifier and signified is arbitrary and conventional. (fig. 1a)
Pragmatic semiotics comes from de Saussure’s contemporary, Charles S. Peirce (U.S. 1839-1914) and is a triadic system of meaning comprised of the representamen (the original artifact), the interpretant (sense making in the mind of the audience) and the object (what the sign stands for). The relationship between the three is called semiosis. (fig. 1b) The importance of the sign to the interpreter differentiates it from its dyadic cousin. Interpretants that links the representamen and object is a mediator used by a person to achieve an interpretation and can include norms, rules, beliefs, habits, experiences, and stereotypes. (Darras 2006) Interpretants are heavily influenced by culture and explains how something can mean one thing to a particular audience but something else to another.

Among Pierce’s typologies of signs, the most familiar one is the three ways of denoting meaning in the object:

1. Iconic: apparent likeness between the representamen and object. (e.g. a dog and representation of a dog)
2. Indexical: the relationship is obvious and inherent (e.g. smoke and fire)
3. Symbolic: the relationship is conventionalized, arbitrary and learned. (e.g. scales and justice)

When signs string together, they produce more sophisticated meanings such as codes (Hall 1980) or mythologies (Barthes 1973). These are meaning systems shared by members of a group.

Contemporary semiotics looks at signs in specific social situations. Semiosis is not a stable, fixed relationship but an active process of sense-making and interpretation by culture. In pragmatic semiotics, semiosis serves to accomplish interactions in a specific context. (Darras 2006)
Finally, stereotypes are defined as “a widely held but fixed and oversimplified image or idea of a particular type of person or thing.” (Oxford 2014) Stereotypes are reinforced through repetition in media and conversation and can connote either a positive or negative image. Stereotypes come into play as interpretants in semiosis, and my paper focuses on negative video game stereotypes that have to be examined and confronted when designing for social change.

1.2 METHODOLOGY

Pragmatic semiotics will be used to analyze the facilities where my PhD research on design, gender and technology is taking place: the Gaité Lyrique’s Video Game Center. Video Game Center’s self-defined mission is to introduce video games as a creative medium to the general public.

In order to fulfill its mission, the Gaité Lyrique has to confront negative stereotypes of video games and gamers: a time-wasting activity for teenage boys that glorify violence while numbing players in the process. The Gaité Lyrique addresses these negative stereotypes on multiple levels and in different ways, so my analysis follows a macro-to-micro focus by looking at:

1. The Gaité Lyrique as an institution,
2. The video game center itself,
3. The video games selections, and
4. Finally on the micro scale, a video game case study.

2 THE GAITÉ LYRIQUE

The Gaité Lyrique is a digital arts, music and street culture center opened by the City of Paris in December 2010 in Paris’s 3rd Arrondissement. The Gaité Lyrique is a modern renovation in an old space, the former Theatre de la Gaité (1862 by Hirtoff and Cusin). Its specialty was the operetta, a light version of opera or a form of musical theatre aimed at larger, more popular audience; Jacques Offenbach was its director from 1873-74. The 20th Century was less kind to the building. In the 1980s, the building was largely gutted and transformed into an indoor amusement park called Planète Magique, by the creator of Inspector Gadget Jean Chalopin. The main auditorium and the orchestra pit were destroyed. The amusement park was only open for a few weeks, and closed after costing 61 million euros and most of its historic interiors. (Gréco 2011, Gaité 2014).
Financed by the city of Paris, the 85 million euro renovation by Manuelle Gautrand Architectes (2003 to 2010) restored the historic façade, entrance and foyer. Gautrand conceived the cultural center as a series of high tech multi-functional plateaus or “toolboxes” (Gaité 2014a). It is a total work of art in the avant-garde tradition, including movable floor and wall elements down to the custom-made, combinable multi-purpose units, called "éclaireuses" and white dodecahedral pods that form desks and wall dividers around the center.
Pragmatic Semiotics In Design Research: La Gaité Lyrique Video Game Center

Krupa, F.

Figure 3: Historic entrance renovated by Manuelle Gautrand Architects © Philippe Ruault/Gautrand
When wandering the space, one never wonders if something is historical or contemporary because there is no nostalgic historicism trying to sugar coat the present. The brutal juxtaposition of hyper-modern and neo-classical is intentional and heightens the center's contemporary edginess. Entering the building is an intimidating experience.

If the relationship of sign to interpreter is important in pragmatic semiotics, we first need to define who is interpreting by using what codes.

The Gaité Lyrique aims to be for the general public, and the bulk of its visitors are between the ages of 15-50, a slight majority of males, with a demographic make-up similar to the rest of French society. What unites its core audience is an understanding, appreciation and respect of digital and street culture's value: "nobrow" culture (Seabrook 2001) like skateboarding, graffiti, and contemporary music. Nobrow culture rejects high/low culture's traditional obsession with quality in favor of authenticity. Nobrow culture does not determine the quality of something and does not reject something in popular culture out-of-hand because commerce and art do not need to be mutually exclusive. A nobrow audience thinks of culture as a selection process that accrues to form one's identity, resulting in membership in multiple subcultures. A nobrow audience curates culture to create individuality. For example, a person can identify themselves as a designer, a parent, surfer, video game player, and fan of contemporary dance and electronic music. These different self-identified traits can mix culture and consumerism seamlessly.

So what codes makes the space intimidating to both nobrow and high-low cultures? The space has neo-classical beaux-arts proportions but its colors have been played down to a neutral grey favored by contemporary architects. (fig. 3) The grey is the representamen, or the sign’s manifestation, that achieves a tabula rasa on the flamboyant aspects of beaux-arts architecture as illustrated in the foyer upstairs (fig.2). The grey’s intrepretant, or sense-making by the audience, tells you that a contemporary designer had a hand in creating this space but has made decisions to highlight the volume and forms while downplaying color and materials. Design history can trigger a recollection of previous use of these types of grand proportions and volumes. The object, or what the sign stands for, brings to mind the grandiose public works projects of FDR’s Works Progress Administration (WPA) in 1930s.

Manuelle Gautrand’s light fixtures (fig. 2 & 3) achieve a second layer of semiosis. The two light fixtures are made up of huge translucent plastic and metal nested tubes, brutally simple in form, where traditional chandeliers once stood. The interpreter once again becomes aware that this is contemporary, custom-made lighting because the materials didn’t exist in the beaux-arts period or in the 1930s, but using design history again, the forms are reminiscent of Art Deco. The object recalls the same 1930s machine age aesthetics that were also found in the grandiose, publicly funded WPA project. This is a suitable, awe-inspiring legacy to appropriate for a socialist city government; however, mixing beaux-art with the 1930s could just as easily bring to mind the work of Hitler’s architect Albert Speer.
3 THE VIDEO GAME CENTER

On the first floor, a large resource center functions as a modern library specialized in: digital art, contemporary music, new art technologies, video games, dance, set design, street art, skating, and graffiti. Glass and metallic mesh panels separate it from the video game center run by two video game experts, Oscar Barda and Theo Kuperholc. There are 7 stations in public access made from Manuelle Gautrand’s "éclaireuses" and custom aluminum seating by ENSCI students Arthur Hoffner and Chemsedine Herriche.

People that still differentiate "high" and "low" art consider video games a "low-brow" artistic medium for young males. The negative stereotype of gamers - awkward teenage boys zoning for hours in front of a mindless, sexist, violent video game - has endured longer than what video game statistics now attest. More middle-aged women play and buy video games than teenage boys. (ESA 2013) Regardless, gamers’ negative stereotype persists. The center’s mission statement states: “Video games, born just 30 years ago, enables players to share rather than show, offers the possibility of doing rather than watching, of creating possibilities even beyond known space and time, to survey illusions alone or together. It proposes challenging experiences defying the imagination.” (Gaité 2014b)
How does the video game center’s design counteract these negative preconceptions? It uses design codes that reinforce the uniqueness of the gaming experience. Glass wall panels (representamen, fig. 4) enclose most of the video game center but do not connect to the ceiling, so sound has to be kept to a respectable volume (interpretant) with the open-space library next door. The video game center’s eye-catching turquoise anodized-aluminum furniture (representamen, fig. 5) lures the public in with its color and form. The furniture seems to hover delicately in place, but it provides no backrest or padding. The seating is just small, hard, delicate and uncomfortable enough to encourage players to move on (object) when their discomfort becomes noticeable (interpretant). The seating functions like the bad coffee at McDonalds to encourage patrons to liberate tables or the classical music in 7-Eleven parking lots to ward off loitering teenagers (Hirsch 2012). The open-space and seating are mild behavioral deterrents operating on a subconscious level. The physical space’s object can be summed up as: “This is not your living room. This is not your Lazy Boy recliner. Everyone can see and hear you. Sit straight, and give the medium some respect.”
Stereotypes about "state of the art video games" form a continuum with gamer geek stereotypes: AAA video games with large development and promotional budgets aimed at young men on high-end gaming consoles. AAA games like Grand Theft Auto V, Assassin's Creed IV, Call of Duty (11 major releases), or FIFA 15 tend to push photorealism and favor predictable sequel-based intellectual property. AAA games' aesthetics are often judged by how realistically they achieve visual effects, such as cloth, hair, shadows, water, glare, facial expressions, etc. This quest for realism is labor intensive and expensive. Violence and adult content are usually associated with the stereotypical AAA titles, and masculine genres such as first person shooters (FPS), sports and racing games tend to overshadow the more gender-neutral and innovative genres like sandbox, arcade or puzzle games. AAA games take hours to complete and may not be obvious to pick up for 10 minutes of casual gameplay.

Independent games can afford to be more experimental in both gameplay and aesthetics because high investments in AAA titles that rival Hollywood blockbusters tend to encourage safe, formulaic game licenses that have already proven successful and have found their (mostly male) audience. Successful independent games are usually made with small teams and budgets and tend to emphasize a game's aesthetics using innovative styles such as stop-motion, cartoon rendering, pixel art, collage or film noir. Independent games often take more risks in narrative structures, gameplay, and mixing/creating new game genres. Independent games both reinforce the concept of games as art and broaden the audience for video games.

In operation, the video game center offers a game selection chosen among current and older titles highlighting independent games. AAA video game stereotypes are usually in direct conflict with the game center's mission and modus operandi. The criteria for selecting games in the video game center is based on the constraints of:

- Its location: Sound must be kept to a minimum due to the open-plan resource center, so sounds games are rarely enjoyed at optimal volumes.
- Length of play: In a short session, you need to quickly understand how you interact with the digital world and what you have to do.
- Accessibility to the general public: They hold weekly sessions for children and seniors, so graphic sex or violence is proscribed.
- Education: Since the point is to spotlight relatively unknown games, innovative titles that have achieved significant market success like Minecraft, Little Big Planet or Mario series rarely appear unless they are part of a theme.

This means that the video game genres favored by the center are more often casual, puzzle and arcade games to avoid potentially offending audiences and reinforcing video game stereotypes, often at the expense of well-known games or those with expansive narratives that cannot be fully appreciated in short play sessions. Let's analyze at a perennial favorite, the horror puzzle game Limbo.
Stereotypes linking violence and video gaming have a long track record. (Carey 2013) News media and politicians are quick to link gun-related mass killings to violent video game consumption, but every new media has been ostracized from Elvis’s swinging hips to the Columbine shooters’ love of the FPS game Doom. Media does not operate in a vacuum. Values found in video games are also found in print media, television, music and the Internet; they are reinforced in cultural values relating to gun-laws. Causal links between video game play and violence can be countered via youth violence statistics and by looking beyond national borders at cultures with different social values but similar media consumption. However, the stereotype of violent video games as an acclimation process for young, impressionable audiences is firmly rooted.

To understand how an independent game can work against the restrictive preconceptions of video games and violence, we will use pragmatic semiotics to analyze the genre–transgressing video game Limbo by Danish game developers Playdead. Released in 2010, Limbo is a 2D, side-scrolling, horror-puzzle game. You follow the trials of a young unnamed boy searching for his sister in a hostile environment filled with deadly traps. Puzzles are discovered by getting killed over and over again in violent deaths such as: immolation, bear traps, electrocution, getting crushed by boulders, trees and in presses, drowning, and being impaled by giant spiders. The protagonist uses corpses to set off traps, cross rivers, and as shields against dart-wielding wildlings. So how does Limbo escape the violent video game stereotype?

If we start with the opening credits (figure 6), we see a stark black background with white letters using multiple fonts (representamen) that might trigger flashbacks to 1950s film noir (interpretant). This suggests that we are not heading into an epic romance or light-hearted fairy tale (object). The title Limbo (representamen) does a second semiosis, translating for some people into Dante’s first level of hell, or to Roman Catholics as a region on the edge of heaven and hell for unbaptized infants and pagans (interpretant). Once again, both interpretations are linked to death (object). Interface background images add a third semiosis by using menacing images (representamen) of derelict playgrounds (fig.7) and enormous, creepy spiders (fig. 8a-b) to trigger phobic reactions (interpretant), which once again reminds us of danger (object). Limbo’s title and user interface mentally prepares us for the torments ahead.
Pragmatic Semiotics In Design Research: La Gaité Lyrique Video Game Center

Krupa, F.

Figure 6 and 7: Screenshot of Limbo’s opening title credits and menu

Figure 8a and 8b: Screenshot of Limbo’s chapter selection and trial version ending screen
After this ominous introduction and description, Limbo may seem like a game for adults only. Even with its Teen and 12+ age ratings, Limbo is very popular with kids and has won numerous awards, achieved through its aesthetics and sound. The imagery is poetic, abstract and restrained: black and white silhouettes, a gray scale color palette, and beautiful, backlit, scary decors (representamen). Only the ambient sound is realistic and scary and fills in most of the narrative (interpretant), warning of danger and imminent death (object).

When the first death occurs within the first few minutes of gameplay, it is usually with a bear trap that snaps shut beheading the boy. We think we see some liquid spurt at the zone of impact, then the head rolls away. (object) What we really see is a black oval lose two white dots that represent the eyes, and the silhouetted body is replaced by a larger black semi-oval. Some action lines appear right after the transition between two shapes. The oval then rolls to the side, landing on a dark shape taking up the bottom part of the screen. (representamen) We hear a metallic “schling” sound, and hear the sound of liquid spurting and something heavy landing and rolling on grass. (interpretant) We have instantly translated an abstract image into a terrible scenario.

As soon as the death occurs, the screen fades to black a few seconds before restarting the game before the fatal incident. Fading to black (representamen) is a classic movie ending (interpretant). In action/adventure and FPS video games, it also implies getting killed and potentially losing the game (interpretant). The first time it occurs, the player understands they have died and have to contemplate whether they have a limited number of lives. (object) As soon as the game fades back in (representamen), we understand that there is little negative impact in the game. We see no points lost, time added or lives subtracted (interpretant). This is not a competitive experience but one of survival. (object)

The reappearance of the boy at a stable point prior to the last death (representamen) could be described relative to time or space (interpretants). The boy either appears a few seconds prior to death or a few meters before the trauma. Time as interpretant implies appearing at some point in a linear narrative like a story or film, but we are not restricted by time in the game. If we use space as an interpretant, we understand that the boy is a character in an interactive environment and is no longer dependent on time. Technically, each puzzle is broken up into a level, and the boy’s reappearance is at the beginning of a level. (object)
Pragmatic Semiotics In Design Research: La Gaité Lyrique Video Game Center

Krupa, F.

Figure 9 and 10: Screenshot of Limbo’s death by electrocution and escaping the rotary saw

Figure 11 and 12: Screenshot of Limbo: corpses in the decor that will later be used as props.
Finally, interactions with living things are generally life-threatening (object). The first interaction with a live giant spider results in getting impaled by its leg. Giant spiders (fig. 14), like monsters, inspire fear and repulsion on their own. (interpretant) However, the first interaction with the wild boys is much more surprising and generally results in being killed by darts. Before you run into the wild boys, you run across corpses (fig. 11-12) that you can progressively interact with, i.e. to help you float across bodies of water. Nothing is inherent in the living boys to warn you of danger besides a cane (fig. 13), so when the player sees the two boys for the first time (representamen), a player might fall back on recollections of young boys fishing (i.e. Tom Sawyer) or the gameplay conventions of cooperation (interpretant) and seek out the boys to become allies that might help them progress in the game (object). Quickly, the boys attack by shooting darts with their cane (representamen), and like a morbid but cautionary fairy tale (interpretant), players learn to be wary of strangers. (object)

In this game, death is the object that is lived vicariously, over and over again, reinforced through multiple semiosis. In stereotypical violent video games, the object is often to bring death onto others. Limbo uses the hero’s death as a learning process to guide the player away from unsuccessful solutions. Having observed numerous boys and girls play this game, they all exhibit a nervous laughter when their protagonist is first killed. Regardless of gender or age, players react the same way. Even using a third person viewpoint, the player’s identification with the young silhouetted boy is surprisingly intense. Limbo exploits both the spectatorship of death and the thrill of endless reincarnation. By its rapid repetition, death becomes an educative, risk-taking process. Quickly, players grow accustomed to trying something, dying and trying something new. So while some critics may focus on violence in video games as a numbing or acclimation process, Limbo encourages penalty-free risk-taking.
6 CONCLUSION

Designers are culture workers, and pragmatic semiotics – with its insistence on
seмiosis via contextual interpretants - brings to light the information decoding
process of a design's audience. Pragmatic semiotics provides a useful analytical
tool to question how and why a thing means something to a particular audience
but something else to another. This understanding can then help designers focus
their efforts on desired results, whether controlling the behavior of video game
players in public or changing social expectations about who plays or makes video
games. By understanding how an audience decodes a design, it becomes
possible to address how meanings are encoded by culture. Social design that
strives to change a situation often has to address entrenched codes that are
beyond its control. The Gaité Lyrique, its video game center and their game
selection make a constant effort to undermine negative, reductive stereotypes
concerning digital media, video games, and the people who consume them by
specifically addressing and altering expectations at every turn.

7 BIBLIOGRAPHY

Culture: The Reader. Sage Publications.


playing-violent-video-games.html?_r=0&pagewanted=all (retrieved 20/09/14)

(retrieved on 02/09/14)

(Eds.). Collection #3 Art + Design/ Semiotics; Paris College of Art, Summer 2011,
7-23.

Publications de La Sorbonne.

Entertainment Software Association (ESA) (2013). "Essential Facts about the Computer
(retrieved 20/03/14.)

(retrieved 20/08/14.)

http://www.lejdd.fr/Culture/Actualite/Reouverture-de-la-Gaite-lyrique-a-Paris-
devenu-temple-de-l-art-numerique-274643 (retrieved on 02/09/14)

Hutchinson.
Pragmatic Semiotics In Design Research: La Gaité Lyrique Video Game Center

Krupa, F.


http://faculty.georgetown.edu/irvinem/theory/Semiotics_and_Communication.html (retrieved 20/4/14.)


La Gaité Lyrique Espace Jeux Vidéo (2014b), four page brochure.

Oxford Dictionary (2014) http://www.oxforddictionaries.com/definition/english/stereotype (retrieved on 19/05/14)

