The Invisible Side of Braille: A Graphic Design Approach to Reveal More Layers of Meaning beyond the Individual Dots and Words

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Abstract
Nowadays, audio books and other current technological devices have gained a relevant space on the blind people’s life. These developments together with several problems related with the use of braille have been responsible to discourage the reading practices and to underestimate the importance of the tactile alphabet in the blind society.

This paper shows that bringing graphic design techniques to the subject has the effect to explore and promote braille, revealing more layers of meaning beyond the individual dots and words. It can act as a catalyst of new conversations about accessibility and visual impairment, and confront the boundaries of graphic design in the course of its applicability.

1 Introduction

This paper is part of a post-graduate research project. It intends to transpose the way graphic designers think about visible text into braille, with the aim to promote the tactile alphabet. Braille will be explored within a playful and creative perspective, bringing the guidelines to work visual text to a tri-dimensional world of textures, tactile shapes and different materials. This graphic design methodology will extend braille in the course of its applicability, as a vehicle of information, as a code and as a symbol.

During this research, contacts established with visual impaired persons as well as organisations on the field, such as DBPSS and the RNIB, made it clear that nowadays braille is a very controversial theme to discuss. The idea that braille is old-fashioned and outdated due to the arise of new technological devices like audio books or text-to-speech softwares, led to a vigorous debate about its importance on the life of blind people. Ironically, the same statements that were used to contest its eradication drove experts to a deeply discussion which was responsible to reveal the magnitude of braille and value. This reflection brought together individuals from different areas, with different backgrounds such as social, educational and cultural, which connects to the implications that braille has within the blind society (Aviv, 2009).

This discussion was also positive to stimulate conversations and considerations about the accessibility of blind people, making this reality more tangible to everyone. Advantages must be taken from this debate with the aim to accomplish equal opportunities between blind and sighted persons. Braille allows blind persons to be literate and independent (Rex, 1989; Ryles, 1996; Schroeder, 1989) and therefore enabled to compete with sighted peers.
However, despite all the problems that visual impairments represent, a social change must be achieved with the aim to accomplish a proper inclusion in its real meaning. Blindness is not synonymous of incapacity, and braille could be used not only as a path to access information but also as a symbol of a social revolution to change mentalities (Schroeder, n.d.).

The graphic design approach, advanced within this research project, could trigger the social revolution pointed out by Schroeder. Braille is already part of the design and the printing processes, however, many problems continue to happen in this functional and mechanical practice. What happens if braille started to be explored within an emotional and playful ambition?

Prototypes have the purpose to act as a catalyst of new conversations about visual impairments and accessibility. This research project aims to follow the same guidelines as this model has been used successfully by several art and design projects. As previously accomplished, they are known to challenge prejudices and to change mentalities (Pullin, 2009, 113).

1.1 Graphic Design Methods for Making Braille Visible

There are two million people in the UK with visual impairments. People who are totally and partially blind have serious constraints in their life to access information and to perform their basic daily tasks. Since 1999 the RNIB developed a campaign called "See it Right" that seeks a democratisation of the information. This promotion tries to stimulate all the communication agents to attend the demands under the Disability Discrimination Act (DDA), and therefore the needs of people with visual impairments (RNIB, 2006).

Furthermore, the notion of Universal Design connects the worlds of disabled and non-disabled people on projects that suit the needs of both realities (Pullin, 2010). Graphic design is, in its basic essence, the field where information and communication is conveyed. In this way should be plausible to take into consideration the inclusion of braille into the design briefing. This reality is, however, far to be accomplished without an effective social change.

Graham Pullin (2009), in his inspiring book “Design Meets Disability” advances that one of the biggest problems related with the implementation in buildings of braille signage is the fact that, in the majority of the cases is not part of visual communication. It is an obligation treated as a distinctive procedure by a team certified in disabilities, and not as part of the project developed by the design company. Albeit the fact that it is following the demands of the DDA, braille signs are usually apart of the overall communication, being easily identified as something that is completely excluded of the building environment.

Furthermore, braille as a strong iconic and visual symbol, conducts all the people to connect the tactile signage to the accessibility for the blind. However, also illustrates how this attempt for inclusion is being undertaken, and in this case just reveals and reinforces that people with visual loss continue to be treated from a different perspective and therefore excluded from the mainstream procedures. This is the antithesis of the guidance’s for Universal Design, and it is highlighting the opposite concept of social equality.
Nevertheless there are examples pointing to a different direction. The environmental graphic designer company Whitehouse & Company in New York represents an innovating manner to communicate using tactile signs (Bowen, 2009); Cottin and Faria (2008) proved, with their award winning book "The Black Book Of Colors”, that the knowledge in graphic design and illustration could suit visual and non-visual audiences; the tactile map of the London Underground by McGill represents an important piece of communication and mobility for both realities (Evamy, 2004); and finally the critically acclaimed stamps of René Put, celebrating the 200th anniversary of Louis Braille, crossed typography and braille in a playful exercise of words (Put, 2009).

However, these projects only represent occasional and specific moments of the entire communication for the blind. Besides, and not diminishing the importance that they have to connect the worlds of visual and non-visual persons, the graphic design knowledge to work typography is not applied to explore braille. Braille is just used as a code, with a functional purpose, and not within an emotional, creative or even decorative direction. In this way Pullin suggests:

"(…) we need designers to explore new visual languages that might involve Braille: new ways of combining Braille with visible text or lending Braille a decorative quality… Braille might suddenly proliferate and be celebrated, rather than be kept at a grudging minimum in order to satisfy mandated accessibility legislation (…)" (Pullin, 2010, 106).

The sculptor Anton Parsons works in a consistent way with this statement. Some of his projects consist in sharing braille with the public domain, through an artistic expression (Lister, 2003; Parsons, n.d.).

Furthermore, this creative approach without legibility constrains, might be also useful to involve persons with visual loss in the learning process of braille and tactile stimulation. In 2007, the graphic designer Thierry Wijnberg applied his knowledge to work typography, in experiences that changed, in its plenitude, the way that blind persons interact with braille. The dots gained new shapes and sizes, new surfaces and also temperature. This innovative approach revealed extraordinary results and feedback from the ones who experienced braille in these pioneering circumstances (Wijnberg, 2007).

1.2 Revealing the Invisible Side of Braille

As previously mentioned, the present research project intends to make braille visible for both sighted and non-sighted persons. Purposes to explore the tactile alphabet without constrains, from a playful, critical and universal perspective, with the aim to contribute for the desired social revolution advanced by Schroeder. The mentioned projects prove that a graphic design methodology could influence the braille promotion and improve the accessibility. It does not intend to re-design the code; however the research suggests that new perceptions might be undiscovered and hidden behind the functionality stigma.

Transferring the concept of typography into the field, to a tri-dimensional world of different materials and surfaces, represents vast possible scenarios and conclusions. In the New York Times article “Listening to Braille”, the tactile alphabet at some point is compared to Guttenberg, from a human evolution perspective (Aviv, 2009); from the point of view of graphic design, it could be juxtapose with the Helvetica typeface, through the implicit concepts of communication, legibility, form, beauty and proportionality.
The story about Helvetica (Helvetica, 2007) could inspire braille’s encouragement. When Helvetica was applied in the United States it represented a turning point in the graphic designer’s life in the late 50ies. In this so-called Modernism period, there was a need for rational typefaces to convey the contemporary information and to organise the visual communication. Helvetica fulfilled this desire and proliferated to every single layout. Outdoors, adverts, logo brands, signage, it was everywhere. "(...) Helvetica became the perfume of the city (...)" – Lars Müller (Helvetica, 2007). What if braille proliferates in the same way through the spaces, buildings and streets? At which level this could change the way society sees visual impairments?

Moreover, analysing further the graphic design timeline and the arise of Helvetica, the Post-Modernism style is also of worth relevance. In the 70ies, particular in America, graphic designers felt the urge of diversity in their layouts. Everything was influenced by the style carried on by Helvetica, and again, there was a need for change. In this period typography gained expression and personality. It was a moment of experimentation where communication does not have to be 100% legible to be understood. Layouts were much more about interpretation, emotion and expression. What if braille was explored with the same guidelines, using the sensibility of a finger to invoke distinctive emotions and experiences for blind people?

The history tells us that the concepts of graphic design have been changed throughout the past years. This is called evolution, and today the majority of persons acknowledged the principles of visual communication and use it as a personal expression of their own identity. One typical example is the social networking on the web, such as Facebook, MySpace, Blogs and others, where everybody can create and modify their own profiles. People can change the background colours, upload pictures and choose different typefaces (Helvetica, 2007). However, according to Schroeder (n.d.), visual impaired people do not have the time to wait for a social evolution. Hence, graphic designers could have an important role in the field through the application of the mentioned movements into braille and, as such, to start the aimed “revolution”.

This research project encounters connections with the sculptures of Anton Parsons and the playful experiences of Thierry Wijnberg. On the one hand, this study intends to involve people with visual special needs with braille. The newborn prototypes allow the possibility to interact with text in the same way sighted persons do with visual letters and words. Stimulates the touch sensitivity and could have an important role to engage blind people into the reading and writing practices. On the other hand, intends to make braille visible to everyone and release it from the DDA legislation rules, to become part of the universal world.

Overall, the prototypes will uncover new perceptions and insights, generating debate and decision-making about problems related with accessibility and visual impairment.

The last conductive line of thought could find affinities with Critical Design. The term was first introduced by Antony Dunne (1999) on his book “Hertzian Tales”. Today is provoking public debate about the ethical and social implications of new technologies rather than providing solutions. However, this research project is being developed through a perspective of graphic design and not under the
guidelines of Critical Design. Nevertheless, similar reflections are worth to be made in the visual impairments field, by the fact that audio books and other technological developments are responsible to underestimating the importance of braille.

Finally, the current study echoes what Pullin (2009, 1) addressed in his book, that “design inspires disability and vice-versa”. Graphic design techniques help to explore and promote braille, with non-conventional approaches. Nevertheless, the opposite is also true. The methods and tools used in this research are not the same applied among the visual communication such as computer softwares, displays and paper printers, swap with embossers, laser cutting and vacuum machines. Typography exchanged with braille, colours became textures and paper was replaced to ever possible surface where dots can be raised. Thus what new forms of communication could be born in the future if tactile stimulation become part of the graphic design processes?

2 Conclusion

This paper reveals different layers of meaning for braille. During the last years, the idea that the new technological development in the field was making braille obsolete generated a controversial discussion. Braille has an important role in the literacy, the education and in the independence of people with visual special needs (Rex, 1989; Ryles, 1996; Schroeder, 1989). Moreover the pleasure of reading a book is not replaceable (Millar, 1997, 13). However the reality is that braille has many problems involved, such as cumbersome books, expensive production (Aviv, 2009), low number of qualified teachers on schools or people with additional disabilities which prevents its learning (Keil, 2002). As such, most research in the field suggests that all the previous facts contribute to less than 10% of visual impaired people reading braille in the UK and in the US (Aviv, 2009; DAC, 2004; RNIB, 2006).

Nevertheless this paper shows that including graphic design in the visual impairment communication is positive to promote and to develop braille. This approach involves blind persons with the tactile alphabet within more playful and creative interactions, motivating the tactile stimulation and the learning practices (Wijnberg, n.d.).

Moreover, assuming this perspective without legibility restrictions proved that braille could embody a decorative or even provocative approach. This unusual use, promotes the visual side of braille as an iconic symbol, encouraging sighted persons to include it in their lives. Furthermore, it acts as a reflection reagent about visual impairments and accessibility, facilitating discussions to make the problems tangible and visible.

The outcome for this research project is to present the prototypes in workshops and exhibitions embracing sighted and non-sighted people to discover braille. Both worlds will be tempted to engage an odyssey with visual and tactile stimulus, gathering citizens with blind organisations, design companies and art galleries. Contacts established with the Scottish National Gallery of Modern Art, under the Visual Impairment Programme, the DBPSS and the RNIB represent the front line of possible stakeholders to support this project.
To conclude, this paper shows that a graphic designer approach may inspire the world of visual impairments in the same way that braille could challenge its visible dimension. Braille, being part of Universal Design, will push the boundaries of graphic design in the course of its applicability, changing the 2D visual reality to a new tri-dimensional world.

References


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