Semiotics artifacts, space and community: a case study on pinholes

Abstract
Given the fracturing of virtual and physical spaces, young people are less involved in their local surrounding spaces. Yet, investing the community space is related to sense of community and elicits social inclusion. We explore the complex relations among social inclusion, sense of community, spaces and artifacts through a case study on pinholes. Pinholes appeared to be powerful semiotics artifacts, simple to use, that allow equally empowered groups of participants of different ages and cultures to jointly explore, produce and share meanings about their territories and identities.

Keywords
Semiotic artifact, sense of community, physical and virtual spaces, pinholes.

ACM Classification Keywords
J.4. [Social sciences]: Psychology, Sociology; J.5. [Arts and humanities]: Performing arts (photography).

Introduction
Young people think, talk, communicate, exchange in very different ways today than before. As Prensky [7] points out, they think and process information fundamentally differently from their predecessors. They are "digital natives" as "native speakers" of the digital language of computers, video games and the Internet. For the majority of young people, cyberspace becomes
an integrated part of their experience of spatiality. However several studies underline the fracturing of physical and virtual spaces, and stress the fact that the children of today have more difficulty to get into contact with their physical local surrounding and spaces [4, 8], due to the decrease of opportunities of exchanges with them. Though, involvement in the community space is a crucial way to develop social inclusion, particularly through fostering sense of community, i.e. the “sense that one is part of a readily available mutually supportive network of relationship” [9]. Our assumption is that inclusion of marginalized groups in community life should seek to: 1) assemble different social groups (and a fortiori digital natives and migrants), around a common goal that reposition them as valuable member of a same community; 2) elicit people’s creativity, reflection, expression and self-esteem; 3) rebuild individual and collective identity related to common places thanks to rich “experiences-in place” [6] and develop positive image of neighborhood [5].

Within the European project “Puente”, we address the issue of social inclusion and cohesion by bringing newcomers and old-timers together in mutually enriching ways. Puente identifies conditions that may draw folks who wouldn’t otherwise meet to do things they couldn’t otherwise dream of (learn from each other, respect one another, broaden their views) [1]. The research questions that we explored through a case study on Pinholes and community are: 1) how to reconnect old-timers and newcomers; 2) how to sustain engaging experiences of the physical space and places where people are living, create and share meaning; 3) what could be the role of digital technologies and artifacts in these processes; 4) what guidelines could be drawn for the design of technology mediated environments in which newcomers and old-timers can grow in connection.

Case study: Pinholes workshops
The pinholes workshops, an experience that continues after more than two years in our city, bring together people from different ages and socio-cultural backgrounds (refugees, locals, unemployed persons, children, teenagers, and seniors). The pinholes workshops aim for a group of participants, to individually and collectively discover and tell stories about their quarter, neighborhood, habits, living space, cultural differences by producing pinhole images and narratives. Hands-on laboratories, or ateliers, these workshops let participants build their own artifacts (pinhole camera) from inexpensive and readily available materials. Participants observe their environments, explore their ideas, shoot, develop the photographs (see figure 1). The final photographs, assembled into a collective fresco, have been part of an exhibition in the frame of the city Photography Biennale (www.biennalephotoliege.be) under the title “Territories and Identities”. A book compiling the artistic productions (photos and narratives) of the participants has also been created. Children, teenagers, adults and older people were engaged in this informal learning activity, recreation, photo festival and exhibition. One major interest of these pinholes workshops is that participants meet to do something together and make up a common project.
**Figure 1:** Pinhole camera, participants exploring local environment and then discussing about their photographs.

Although pinholes are low technological artifacts, we explore them 1) focusing on their semiotic and spatial affordances, that is how they open ways to produce and share meaning; 2) investigating what lessons could be drawn from their use, in order to define guidelines for designing different kinds of ICT that would serve social inclusion. Hereafter we present the results that best encapsulate the potentiality of the pinholes experience as inclusion practice. Data were collected from observations, interviews and focus groups.

**Pinhole as a semiotic artifact**
Three main features characterize the use of pinhole cameras: simplicity, openness, and externalization: 1) Camera is simple to build and to use, and offers a joyful experience that leads youngsters and older people to experience flow [3]; 2) It is an “open” artifact: participants are physically involved in, and control the different steps of the process leading from the camera to the photography (building the camera, shooting, photo development). Then, they experience a sense of responsibility and pride that follows from their successful implication in the process of photo production. Moreover, the different steps leading to the photography elicit communication between participants as they represent opportunities for interactions and cooperative behaviors; 3) The production of an external shareable result (among the participants and with public audience) is a crucial characteristic of the workshops. Interacting and discussing about external results (i.e. being confronted to other’s appreciation), give participants a feeling of recognition of their work and consequently, of their personal value. They gain pride and self-esteem from having expressed and created something that is considered worthy to be shared. Finally, externalizing joint products into “œuvres” produce and sustain group solidarity and help making a community of mutual learners [2].

**The role of space and place**
Spaces and places are at the core of the pinholes workshops as the allow to explore identity and territory. The workshops give people a chance to express themselves (through photos and narratives) in order to let them share the space of the community again. Their opinion on community critical issues (identity and territory) is heard and valued. The workshops also give the opportunity to explore the public spaces. It is a way for each participant to (re)discover the environment and (re)create an emotional relation to spaces and places, as they are associated with rich interactions, inclusion feelings (sharing together a pleasant experience, being part of a community), and personal development (personal growth, self-esteem) [6]. More specifically, the role of the pinhole-artisan in the appreciation of spaces and places can be seen at three levels: 1) pinhole allows physical/geographical discovery of the environment; 2) pinhole mediates the sensorial relation to the environment and “reveals” its physical properties; 3) pinhole also allows to appreciate the familiar places differently, as participants, individually and collectively, rediscover their neighborhood.

**Discussion**
From these two aspects of the pinholes experience, our results indicate that Pinholes experience: 1) Fosters fruitful interactions between diverse populations, which develop a better knowledge of each other and feeling of being part of the same community. It promotes
expression of each individual as equally valuable member of the community. It gives the same weight to young peoples’ opinion as to adults’ one, and empowers youngsters, and other marginalized audiences, as complete citizen fully able to take actively part in the community life; 2) Elicits reflection about the common environment and fosters new positive relationships to the community space. It (re) connects marginalized young people and other to their local environment, which is a first step for them to involve and feel included in the community life. Reinvesting the physical space, young people feel that they belong to this physical world and that they can act on it. Based on these observations, we formulate recommendations for the design of technological artifacts to be introduced in digitally augmented environments for social inclusion. They should: 1) Elicit interactions between groups from different ages and social backgrounds. 2) Be simple to use so that interacting with it is a comfortable and joyful experience for any audience. 3) Allow “externalization” and “responsabilization”, so that it develops self-esteem and feeling of self-worth for each individual as significant member of the community. 4) Offer a chance for exploring the physical spaces, so that virtual and physical spaces are seamlessly experienced. 5) Represent opportunity to exercise skills related to environmental and spatial competences (e.g. knowing important landmarks and finding your way around), in order to foster (re) appropriation of local community spaces.

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References