A Digital Application Project Allowing the Personalisation of the Museum Visit

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The potential of digital devices and services is still underutilized by museums. An analysis of the latest digital mediation projects shows that three main avenues are considered to turn the museum visit into an "experience": 1) digital devices that develop the active participation of the visitor in his discovery (e.g. via game and immersion), 2) digital devices that develop the opportunity for the visitor to share his experience and knowledge with other visitors (idea of a "forum museum"), and finally, 3) digital devices that propose a personalised tour, adapted to the visitor's profile and desires. Among these three tracks, most digital tools aim to active visitor participation and sharing. While personalization has been studied, it is often reduced to simple predefined or stereotypical scenarios that are proposed to visitors, and has seldom been implemented out of research projects.

However, the museum has historically always sought personalisation because it allows taking into account the interest of individuals, identities or diversity (Eidelman, Gottesdiener & Le Marec 2012: 101) and it proposes a mediation that could be accessible to everybody (Vidal 1998). The first computer databases of collections have allowed the first personalisation attempts (Andreacola 2014) and now, the rise of digital devices however enables more effective personalisation: complex algorithms, management of large data sets or geolocation could allow to orient the visitor in real time by providing mediation and contents that suit him. This further allows to offer guided tour tailored to the multiple constraints of the visit according to criteria which, once declared by the visitor or observed during visits and statistically treated, offer him the best possible visit (Shapley & Roth 2012). Nevertheless, personalisation is technically difficult and theoretically problematic (e.g., how to develop truly relevant content for different visitor profiles and how to obtain these profiles?). Furthermore, philosophically, the museum is considered as a place of discovery and surprise, which is opposed to the very idea of satisfying the visitors expectations (Andreacola 2014; Gob & Drouguet 2006). Our (exploratory) questions are also the following: what can we observe from the actual mobile applications allowing personalisation of the museum visit (1)? And how can we possibly rethink the approach (2)?

(1) In this communication, we propose a rapid presentation of the most known mobile digital applications that offer personalisation: *Magic Tate Ball* at the Tate Gallery (London) chooses an artwork corresponding to the user location, weather, date, time and sound atmosphere; *Mood App* at the Stedelijk Museum (Amsterdam) offers comments and selection of artworks based on the user

mood, or *Visite +* at La Villette (Paris) offers a tailored tour according to certain of the visitor criteria (age, sex, etc.). We will see that such personalisation is often based on assumptions (a woman prefers anecdotes; an old person would rather read than watch videos, etc.). Then, personalising is often based on sociological criteria even if these are not the only ones who can play a role on the experience, expectations or tastes (Gottesdiener & Vilatte 2012; Schmitt 2012). Finally, we will see that this approach questions the culture and museum stakes. Openness to the outside world (that should be a purpose of the museum) could be antagonized by a tendency to inward-looking attitude, which seems to be – after a first analysis only – a relatively "narcissistic" approach.

(2) We will finally briefly present a project being investigated by University of Luxembourg, University of Avignon and Luxembourg Institute of Science and Technology (LIST), which aims to create a mediation device based on personalisation. After a first prototype developed by LIST (*Experimedia BLUE 2016*), a transdisciplinary team specializing in personalisation issues in museum plans to personalise the tour while promoting the discovery (serendipity) and contact with other visitors: in particular, this work involves firstly to statistically map socio-demographic traits (age, gender, educational level, etc.) and personality traits (openness to novelty, extraversion, etc.) with preferences or expectation regarding the mediation and the visit path. Extensive surveys observing visitors in real conditions are necessary to obtain these mappings. This is a prerequisite to design and assess efficient algorithms that can infer visit preferences and visiting style from visitors' traits. The resulting personalization device should also adjust and evolve according to the actual visitors' actions. We plan to conduct this research using a participatory and user-centred design approach, where the device would be assessed all along its implementation. The introduction of surprising elements in the visit proposed by the device, as well as means to foster visit sharing between users, can be though by-design. We will work on introducing them progressively to observe user acceptance and their actual effects, linking them to the visitor's traits.

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