

Mobile Social Hybrids and Drone Art

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ABSTRACT

Contemporary global society is not just intercultural, but also mobile. On one hand, a plurality of social actors originates from different societies and cultures (citizens, tourists and immigrants). On the other hand, many of them are economically and geographically mobile, and their cultures tend to hybridize. Moreover, these social processes are more and more achieved by using technological devices, such as mobile devices and drones. This last apparatus/appliance is becoming so ubiquitous, that we are entering into a society no more supervised by the internet, but mainly by drones, a *dronic society*. The present text aims to discuss some social and cultural processes and arenas where such transformations take place, and to give some examples of concrete works of art that represent or present such issues. For this purpose, firstly the contemporary mobile society, culture and arts are discussed, and related to a reflection on the hybrid nature of numerous current entities. Secondly, some exemplifying case studies of technological art that underlies such context are shown, e.g. Sociological Games and Drone art.

CCS CONCEPTS

Applied computing, arts and humanities

KEYWORDS

Mobile social hybrids, Intercultural, Sociological games, Drone art, Dronic reality/society.

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Introduction

Our world is both intercultural and mobile. In fact, some of its most significant social actors are not just citizens, but also tourists and immigrants [13]. They often are economically and geographically mobile, and their cultures become more and more hybridized. At present, this interculturalism happens either within peripheral countries (e.g. via tourism), or inside central countries (though immigration, among other means). Furthermore, such social processes are progressively undertaken by using technological devices, e.g. mobile devices such as smart phones [1]. And a very recent and somehow intrusive instrument of such tech reality is the drone. This apparatus/appliance is becoming so present worldwide, that it is conceivable that we are leaving a society mostly regulated by the internet, and entering into a society partly supervised by drones, a *dronic society* [2].

Arts, and in particular digital arts, testify, in a more or less profound way, such phenomenon. The next sections present a debate and examples about issues where these transformations occur.

1. Mobile Culture/Arts

According to John Urry [12], within contemporary mobile societies, all processes, capitals, technologies, actors and things, or the nature of culture/art itself, are permanently on the move and being transformed. Mobile culture/arts are a recent mode of fruition and knowledge in what regards cultural heritage, articulated to mobilities and discourses on the urban and tourism [9]. Nowadays, inside the public space of streets, museums and galleries, citizens and tourists activate multimodal strategies of urban cultural and art communication. These are often based on digital media [10] and mobile cyberspace and cybertime, in order to know and taste both material heritage (monuments, works of art) and intangible heritage (music, 'e-cultural heritage').

Mobile phones enable applications including Mixed Reality (a fusion of Virtual and Augmented Realities), for consumer profiles such as youngsters and tourists : i.e. they show real locations in images, video or 3D, and 'real-time' information about them. This trend inaugurates an '*augmented' urban culture*' and an '*augmented tourism*', where the reality of leisure ('free time' from working hours) is enhanced by the articulation among spectacular entertainment, relevant information on visited places and cultural events [3].

Worldwide cities have been supporting such 'intelligent development' strategies for mobile culture and arts, e.g. through programs UNESCO Creative Cities and Smart Cities. Besides that, in the context of contemporary risk societies [6], it is urgent to reflect on risks such as the fetishism of digital culture and the reification of the tourism market. Or consider their potentialities, e.g. a more intense inter/transcultural exchange and a better knowledge of visited societies and cultures by tourists and immigrants.

Within such perspective, some questions may be raised : which is the extension of mobile culture and arts, within our transcultural cities ? And how such mobile processes mobilize the nature and quality of cultural, artistic and touristic activities ? One hypothesis suggests that social and digital processes, methods and devices, associated with mobile culture and arts, may encourage and 'augment' inter/transcultural communication among citizens, and among these and tourists and/or refugees. For instance, via the following strategies : lifestyle and leisure mobilities, mobile togetherness, slow arts and slow cultural tourism.

2. Hybridology

Mobile culture and arts aren't possible without a context where everything seems to mix with its other or with its opposite.

Based on heterogeneities, interstices and crossbreeding of entities or processes of different nature, the hybrid is a contemporary mode of action and knowledge related to mixtures. Hybridology consists in the study of such fusional manifestations. In the era of digital social networks, users often merge their essences and experiences through mashups (mixes of software) and moddings (adaptations of computer hardware).

One of the central mergers that characterize the coeval world is the hybridization between, on one hand, expert knowledge, and on the other hand, the knowledge of ordinary citizens. E.g. the Internet user, when searching for content and its sources on Google, or when defining a concept within *Wikipedia*, practices a sort of 'ordinary research', which is a common search / research that can lead to a genuine 'Research Society'.

Within a philosophical dimension, 'geo-neo-logism' means a way of thinking about the hybrid. This mode of reflection is founded on the philosophical concept *deixis*, that can be defined as the process of hybridization between space (hence the prefix 'geo'), time ('neo'), and language, reason and discourse (*logos*), produced and shared by the subjects circulating within such space-time process.

On the epistemological level, *hybrid hermeneutics* denotes the mode of interpretation which articulates various forms of exegesis, sometimes opposed in their nature. In particular, *social hybridology* is one of the figures of experimental sociological writing, notably in the form of *semantic-logical sociology*, a paradigm of interpretation that hybridizes deep social meanings.

This is done partly through an *alphabet of interconceptual logic relations*, which is a heuristic tool that synthesizes several types of social, cultural and artistic reasoning : formal, analogical, dialectical, Boolean and fuzzy logics, etc. In this

perspective, sociologists and artists often practice *hybrimedia*. That is, they hybridize originating media (i.e. initial media in a given process), to produce an original (innovative) and unifying medium. Thus, for example, multi-tactile interactive tables in museums, present and combine sight and touch within interactive works of art.

If the hybrid is both a challenge and a millennial cultural practice, the study of fusional entities is relatively recent. Hybridology prescribes a specific posture, theoretical or practical. E.g. in the case of artists practicing *hybridart*, which means an artistic style that mixes content, methods, techniques and materials of different nature. In fact, experimental art and writing often are opposite to univocal arts and writings, which are refractory to the contamination of contents and styles. Moreover, in the Internet, a *hybridsphere* exists, that is, a public sphere of sociability, dialogue, opinion and responsibility, based on hybrid sites and networks. For example, *Hybrilog* is a blog created in 2006 including six different types of blogs, each of them built based on a specific media genre : a traditional blog using text, a vlog including video, a pvlog with video poetry, an artlog showing art, a hyplog introducing hypermedia, a gamelog displaying digital games. For more details on this debate on socio-cultural hybridizations and Hybridology, see [4].

Another application of the hybrid is *sociological games*, that articulate several styles of innovative digital games of different nature (social games, artistic games, etc.).

3. Case Study 1 : Sociological Games

Sociological Games may be defined as digital dispositifs and devices that suggest a platform for people not just to participate in social processes, but also to interpret or transform these social phenomena via playful strategies and tactics (see Figures 1 and 2). They present and represent, simulate and stimulate social realities in multiple manners, engaging the player as a social and knowledge agent. Therefore, Sociological Games propose profound reflections and criticisms on society, progressively inside innovative knowledge flows that circulate via social networks at Web 2.0 or Social Web (Facebook, etc.) and through social-semantic networks at Web 3.0 or Semantic Web [2].

Sims simulation stayed for several years as the most successful digital game. Nevertheless, even if it may be considered as a "social game", it cannot be included in the "sociological game" genre. In fact, *Sims* does not allow enough reflections or deep criticisms on society through its utilization. Differently, recent sociological digital games are capable of metamorphosing any dimension of society into playful gaming, by applying multiple interpretations, or proposing a social or political critique. In 2006, the game *Major Vaillant* ironically criticized a well-known dishonest football club's president by playful means, i.e. by shooting a projectile on this symbolic and negative social figure. Its attractive interface included a recognizable social context, a football game ground that helped to ridicule the targeted social agent. Mary Fanagan (2009) gives multiple illustrations of *Radical Game Design*, a perspective that

uses games as a weapon for the development of a critical view of society and culture [7].

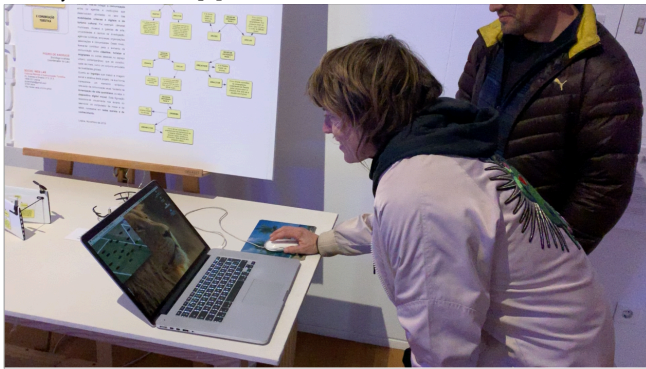


Figure 1: Art gallery visitors play a Sociological Game, 2018 © Pedro Andrade

The hybrid and *Hybridology* play here a central role. Sociological games may take the form of *Hybrid Games*, which are games that merge other games of different nature, or combine their styles. This is the case of the aforementioned game *Major Vaillant* (2006) : by satirizing a public figure through artistic means, it mixes several styles of games such as the *Artistic Game* and the *Satirical Game*. Although some classic or recent digital games articulate diverse types of games (e.g. a 1st person shooter merged with an adventure game), such hybridization is often casual and not causal. On the contrary, the hybrid style of play may imply the fusion of the game means (e.g., a shooter's weapon embedded inside the player's body). Or a hybrid gaming encourages the blending of the broader aims of the game. For instance, some player's participation in real or virtual social life, appears combined with art actions, satyric messages, ethics recommendations or research stages within projects. In sum, in what regards a social problem, the gamer develops an understanding of its possible social causes, and may engage in the playful odyssey of searching/researching its probable social effects.

In connection with Sociological Games and other Hybrid games, *Research Games* make possible to undertake research, which may be scientific, technological, artistic, etc. A research game's gamer may conduct a research on social fabric, e.g. play and try to resolve a social issue, like survey the causes and effects of a teacher's, student's, politician or CEO success or failure. Research Games can also inquire questions on the nature or social acceptance of other games. For instance, by taking playing as a means for trying to understand user reception to a game's interface in what concerns the gamer's social profile. This is undertaken through the embedding of sociological and artistic methods and procedures inside the very gamification process and within concrete game dynamics. In so doing, Research Games contribute to the creation of a new social activity, '*researtainment*' (research + entertainment).

In sum, this research game posture, in a way, construct *meta-games*, which are an enhancement of the game concept itself. Indeed, meta-games can be defined as : (a) games that reflect on

and interpret other games ; (b) games that talk (establish some conversation in a manner that the very game assumes to be and act as a specific character, inside or outside itself or within other games ; (c) games that have perceptions, sense and feel emotions given by its own structure and dynamics, or by the gamer.

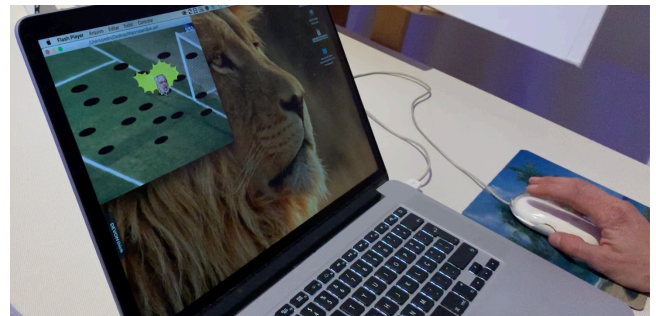


Figure 2: Major Vaillant: a Sociological Game where a Portuguese dishonest football club's president is socially criticized via playful means © Pedro Andrade

4. Case Study 2 : Drone Art

Drones are a recent technology and an even more new tool for making art. Its social image as an instrument suitable for war activities, to rescue people in trouble or solely for instrumental uses, must be challenged. In fact, in the last years drones are founding a specific culture, a *drone culture*, within multiple realms of society. The interactivity between cultural media audiences and drones is central. However, many issues subsist, for example the legislation and regulation covering drone's economic and social uses across public urban spaces.

4.1 A brief history of drone art

Drone artists began using images and videos taken through these apparatus, sometimes projected on walls or other surfaces. Other early works were performances using combinations of lights (light shows) deployed by multiple drones within a dark environment (night shows). Some examples are the following : *Soleil's Sparkled*, by Cirque du Soleil, 2014. *Loop>>60Hz : City of Drones*, by John Cale and Liam Young, 2014. In 2017, Lady Gaga showed 300 drones flying in synchronicity, designed the American Flag using GPS positioning [5]. In March 2018, Misha Most, presented a drone that made graffiti [11]. In November 2018, other drone art experiments took place at *New Art Fest'18*, section *Maker Art*, at National Society of Fine Arts, Lisbon, and in December 2018 at *Visual Methods Colloque* at Tenerife. In these events, Pedro Andrade, coordinator of Social Web Lab 'Mobile Cultures and Touristic Communications' at Lisbon, introduced his *Droseum*, a museum created with drones, which includes diverse knowledge and art works, that will be presented in the next section.

4.2 The future: dronology, drooks, drone art

However, the potential applications of drones in art are incommensurable, and specific projects to develop their

potentialities must be pursued, within university courses, research centres, labs, ateliers, artist residencies, art galleries, museums, ONGs, associations and artist collectives.

Moreover, a theoretical reflection and conceptualization on the History, Sociology and Anthropology of drones will be useful. For instance, Dronology is a reflection about drones, and often through the use of drones. Some of its applications are sketched in the following paragraphs.

These works are situated within the framework of urban social mobilities [11], and hybridize Arts with Social and Human Sciences applying a new way of knowing or wisdom : as we mentioned above, Hybridogy is no more than hybrid reflection (as a method) over everything from which emerges a hybrid nature (as objective).



Figure 3: Droseum in exhibition at New Art Fest'18, section Maker Art, National Society of Fine Arts, Lisbon © Pedro Andrade



Figure 4: Droseum: a museum made with drones © Pedro Andrade

For example, the human and the machine (post-human, etc.), the West and the East, the North and the South, and even the human being itself, which is, in essence, a form of hybridization between a man and a woman, or whatever comes next. These

hybridizations are constructing an *Hybrid Reality*, which deconstructs and reconstructs the processes of hybridization between Virtual Reality and Augmented Reality, that presently is still reduced to the denomination Mixed Reality.

The challenge nowadays resides on using such power to reflect and act within a democratic and creative way, through public events. Here are some potential applications of drones in culture, knowledge and arts, mostly shown at the above mentioned *NewArtFest'18*.

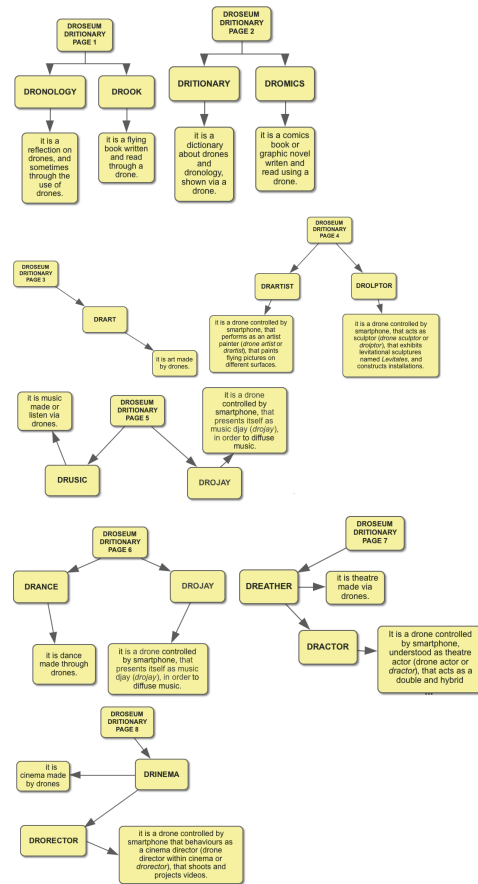


Figure 5: Droseum's Ontology© Pedro Andrade

For example, the *Droseum*, which is a museum made with drones (see Figure 3). Its various meanings can be shown visually using *ontologies*, which are networks of concepts within a given knowledge area [8]. A *Droseum's Ontology* is presented via the next propositions and definitions.

Drook means a flying book written and read via a drone. *Dritionary* must be understood as a dictionary on drones and dronology, shown through a drone. In the *NewArtFest'18*, a drone named *Drook1* showed several book pages written in its wings (see Figure 4, the drone placed in a central position over the table).

When the drone takes off, it is possible to read the pages of this flying book as it floats and moves across several public or private social and individual territories, like a home or working

and leisure places. Here, the drook's content includes the very *Droseum's Ontology*, which circumscribes, as we noticed, the plural meanings of the Droseum project (see Figure 5).

Another relevant idea inside Droseum ontology's is *Dromics*, which means a comics book or graphic novel written and read using a drone. *Dromics1* presents comics pages as it crawls across the ground and walls or flies in the air (see Figure 4, the drone placed in the left position over the table).

Moreover, *Drone Art* signifies art made by drones or about them. In our perspective, Drone Art must be named *Drart*. This more specific concept includes works of art or apps produced and disseminated by drones, but special attention is paid to the levitational power of drones. In particular, *drart* articulates with the idea of *Levitates*. *Levitates* are works of art that levitate in the air, and interact with one another and with people in different ways.

An example is *Levitates1*, a *levitational sculpture* that consists of a drone which stays in the air for some predicted, casual or random time (see Figure 4, the drone placed in the right position over the table). This encourages reflection and critique on the ways we understand social actions within the (a) space over our everyday practices pursued on the (b) ground space under our feet. Both aerial regions of space are dominated by common commitment on considering that flying is mainly reserved to birds and planes. For people that practices meditation, the levitational sculpture may even allow what is sometimes called *tech buddhism*. However, our perspective is slightly different : drones are extending human power upon physical places and social realms, and this social technology must be accessible by everyone.

Some other illustrations of this approach : on one hand, drones may be hybridized with pre-electronic arts. For example, *Draining* signifies painting executed with drones. *Drolptor* connotes a drone driven by smartphone which acts as sculptor (*drone sculptor* or *drolptor*), in order to construct levitational or other flying sculptures/installations. *Drartist* is a drone controlled by smartphone which performs as an artist painter (*drone artist* or *drartist*). It depicts *flying pictures* on different surfaces.

As for performative arts, *drusic* translates as flying music made or listened via drones. *Drojay* is a drone directed by smartphone which presents itself as a music djay (*drojay*). The scope is to diffuse music more dynamically, via sounds and rhythms that travel through the air not just using sound waves, but actually moving and performing across different acoustic and social contexts via a drone.

Drance denotes a dance made through drones. *Drancer* is a sort of dancer (drone dancer or *drancer*), managed by smartphone, that dances commanded by a performer's gestures. *Dreather* means theatre made via drones. *Dractor* is a drone conducted by smartphone, conceived as theatre actor (drone actor or *dractor*), which performs as a double and *hybrid character* (within a sort of *drone cubism style*) inside a *mobile theatre* play and stage.

On the other hand, drones were articulated with electronic arts. That is the case of *Drinema*, which is cinema made via

drones, where *Drorector* signifies a drone moved through a smartphone that behaves as a cinema director (drone director or *drorector*), in order to shoot and project movies. *Drideo* means video made and/or project through drones (see Figure 3). Finally, virtual reality and augmented reality are both technologies that are being transformed when used in connection with drones, e.g. through a sort of *virtual and augmented Dronic Reality or Droreality* ?

Conclusion

In sum, how are mobile and hybrid cultures doing, within the present post-colonial planet, where citizens interface with both tourists and immigrants, in an daily basis ? Are all such social actors capable of developing interculturality in some way ? And are sociological games just a continuation of digital social games, or they may contribute to transform society, via a deeper understanding of social problems ? Moreover, how can we use drones within democracies, not just for warfare but also to develop daily economical, political, ethical and cultural lives ?

Considering all questions, ideas, social processes and works of art discussed above, is it possible, in a next future that is increasingly approaching and becoming a futuristic pass, to talk about a *Dronic Society*, deeply connected with other contemporary phenomena ? These are some of the questions that haunt our social and technological world. It is then crucial to debate them, in what regards their virtualities and promises, but also in what concerns their subjacent risks.

REFERENCES

- [1] Pedro Andrade (2018a). Epistemology and Methodology of Urban Cultural Tourism : the case of Artistic Sociology of Mobile Cultures and Tourist Communication in urban social networks. *Comunicação e Sociedade*, 33, 215-242.
- [2] Pedro Andrade (2018b). Innovative Role of Users Within Digital Economy : the Case of Information / Knowledge Flows at Social and Semantic networks (Web 2.0/3.0) In L. Carvalho ; P. Isaias (Eds.) *Handbook of Research on Entrepreneurship and Marketing for Global Reach in the Digital Economy*. Hershey : IGI Global.
- [3] Pedro Andrade (2017). Cultural e-Tourism depicted by Digital Discourse : the Case of Portuguese Networks of e-Heritage and Discursive Innovation. In M. Bielenia-Grąjewska ; M. Ríos (Eds.) *Innovative Perspectives on Tourism Discourse* (pp. 1-17). Hershey : IGI Global.
- [4] Pedro Andrade (2014). Post-Colonial Co-Ordinary Literature And Web 2.0/3.0 : thinking back within transmediatic knowledge. In M. Pope (Ed.), *New Literary Hybrids in the Age of Multimedia Expression : crossing borders, crossing genres* (pp. 17, 123-144, 389-90, 427-437). Amsterdam : John Benjamin Press.
- [5] Brian Barrett (2018). "All About Lady Gaga's Super Bowl Halftime Show Drones". (<https://www.wired.com/2017/02/lady-gaga-halftime-show-drones/>). Wired. Retrieved 2018, December 11.
- [6] Ulrich Beck (1999). *World Risk Society*. Oxford : Polity Press.
- [7] Mary Flanagan (2009). *Critical Play : Radical Game Design*. Cambridge MA : MIT.
- [8] Gilbert Paquette (2010). *Visual knowledge modelling for semantic web technologies : models and ontologies*. New York : Hershey.
- [9] Mimi Scheller & John Urry (Eds.) (2012). *Mobile Technologies of the City*. London : Routledge.
- [10] Noam Shoval & Michal Isaacson (2013). *Tourist mobility and advanced tracking technologies*. London : Routledge.
- [11] Tsuru Robotics (2018, March 29). First in the World Graffiti Drone (Part 1). Retrieved at <https://diydrone.com/profiles/blogs/first-in-the-world-graffiti-drone-part-1>, 2018, December 11.
- [12] John Urry (2007). *Mobilities*. Cambridge : Polity Press.
- [13] John Urry & Jonas Larsen (2011). *The Tourist gaze 3.0*. Thousand Oaks : Sage.