NECSUS

Digital maps and fan discourse: Moving between heuristics and interpretation

Marta Boni

It has already been established that maps, studied as a form of knowledge, share certain attributes with moving images. Both have the function to make visible elements of real, or imaginary, landscapes, but also to offer a multitude of possible paths, as well as multiple ways of existing in space and, sometimes, in time. Taking into consideration these two (apparently) opposite functions, heuristic and hermeneutic, we can examine in detail mapping in the digital era as an academic practice and also as a fan practice, through the lens of film and media studies. With a specific focus on the ability to explore space, a large amount of scholarship has already shown that film can be governed by operations based on mapping.[1] Laying down markers for exploration, a map can provide a way to acquire information about the real world. Film has a similar need to systematise and grasp the complexities of a reality, which is often revealed by using a structure similar to a map. Representational in its own right, a map is also what results from the exploration itself, like cinematographic images that stem from an expedition into a space. Cartography, in this particular form, is to be understood as a hermeneutic tool: thanks to its capacity to abstract and schematise data which would otherwise be too complex to be read and understood, it gives us a means to read what could potentially be the hidden meaning of an explorable reality.

Let us consider this representational and interpretative function of maps in the digital era. Recently, the use of GIS has increased the proximity of moving images and cartography. Dynamic maps are included in regular car-

tographic practices,[2] and moving images largely facilitate access, for researchers of various disciplines as well as the public at large, to maps and geographical tools. Within the visual turn in the humanities, maps are used to collect and organise the growing amount of data that fills the social space. As visual culture historian Lev Manovich points out, when working on cultural artifacts, graphic representations may work better than sampling and compressing information, or establishing a canon, particularly since they give both a *complete* view and the possibility to select individual objects. In this case, mapping is conceived as a way to display and build knowledge, making possible what Manovich calls a '"deep cultural search" – [which] give[s] users the open-source tools so they themselves can analyze any type of cultural content in detail and use the results of this analysis in new ways'.[3] But can maps actually offer a unique, definitive view? Manovich's claim, as well as Franco Moretti's,[4] seems to stress an *unbiased* look offered by cartography.[5] This might be a form of 'anxiety', borne in a crisis of representation: according to Giorgio Avezzù, the 'cartographic approach to the study of cinema history is trying to strategically reimpose an order on something that is slipping out of control'.[6] What if, as an answer, we embraced the partiality of visual exploration and knowledge? What if we accepted such loss of control? Maps could be then conceived as temporary, ephemeral ways of knowing, building, but also deconstructing media content. Especially when considering the subjectivity of maps, and their power to 'tell lies' as Mark Monmonier put it, it appears that every map is an interpretation, and a deformation of reality. But indeed, when observing media practices in the digital era, deformation, subjectivity, and fragmentations are very present. Media content, in the approach presented here, are worlds, complex spheres of discourse inhabited by various, sometimes short-lived, elements. They are therefore living organisms, constantly transforming.

The heuristic value of maps emerges here: they can focus on resolving limited tasks such as highlighting a specific shape or form or frequency of a media world, without necessarily being considered as a final and immutable result. Assuming its composition flexible, multi-faceted, and ever-evolving, and devised as one of the possible entrances to a world, mapping can represent both the results of a research project as well as work as an aide in its proceedings, without necessarily leading to any initial interpretation or easy answer. Particularly when mapping is devised as a collective endeavor, often found in fan practices, it allows its users to follow the continually fluctuating transformations of a living space, like the sphere of multiple discourses and

gestures that content users perform within the space of a particular movie or television series. Such considerations point to a heuristic use of mapping as a set of alternative views of media artifacts, adapted to the complexity of media experiences. They stress the need to understand what happens within media conceived as worlds themselves, more than following a conception of media as windows on the world. Maps offer a 'spatially facilitated understanding of society and culture embodied by a fragmented, provisional, and contingent argument with multiple voices and multiple stories'.[7]

I will consider mapping within the context of grassroots and academic practices that build media as spheres of discourse or complex worlds, utilising maps as both interpretive and heuristic tools. Therefore, I will bring into question the relationship between mapping as a way to interpret media, as well as how to explore them, in a context marked by constant using, reusing, and sharing of more fixed, stable maps, and other incomplete, fragile ones of even more fragile, ephemeral practices.

Régime de visibilité cartographique

The relationship between maps and film is first studied by comparing the non-verbal, non-linear elements that constitute them. According to Tom Conley, 'even if a film does not display a map as such, by nature it bears an implicit relation with cartography'.[8] Focusing his attention on maps in film, Conley notes that maps and film, made up of signs that do not transcribe the spoken word, posit questions (which could be better answered by a film analyst) about language that do no belong to linguistics. The two require similar reading methods: they engage spectators by making them question their position in the real world, but also by the negotiation of their relation to a fictional space. A map tells a story: it is a narrative. A film, on the other hand, offers, with similar means, a spatial understanding of the world that involves viewers not only intellectually, but also physically. Interestingly, this knowledge of the world, depending on the filmic techniques used, is not linear, unlike traditional narratives, if we consider that cinema is a language precisely because it is also a space. This use refers to maps as an act of exploration, and as a form of knowledge that could be a key to unlocking the hidden meaning behind a film.

Published in 2011, Teresa Castro's *La pensée cartographique des images* demonstrates that cinema (and photography) must be conceived as indissociable from a '*régime de visibilité*' similar to maps or diagrams, described as cartographic tools. Castro analyses modes of viewing similar to maps or directly inspired by them, and which are linked to an exploration of the world, but also to a need to control it, often clearly universalistic or even imperialistic (film being described as 'the ultimate art of controlling the universe'[9]). The cartographic impulse of cinema is bound to a certain illusion of realism which is part of film technique and an understanding of cinema as a modality of reality construction, an 'increased spatial consciousness'[10] which is inherent in filming. Space is to be understood as inhabited by bodies, and the map displays a 'set of possible narratives',[11] thanks to its own structure. The bird's-eye view is interesting since it shows the sum of individuals as a mass, whose movements draw geometrical or flower-shaped traces in space. The concept of mass that emerges from such an aesthetic approach to cinema is important: it is the cartographic view that allows the geographer or choreographer, like Busby Berkeley, to produce an abstract image of individualities engaged in a certain movement taking place in a defined space and time. The view makes it possible to get the desired visual effect or to see otherwise non-existent objects.

Maps are therefore forms of knowledge, linked to connections between the body, space, and emotions. Castro's volume focuses mainly on film, but some final remarks contextualise a need for maps which, in today's world, is omnipresent in the landscape of networked media: Google Maps, geolocation, user-generated data. It is necessary to note that in this digital landscape, a map's claim to universalism seems to give way to a multiplicity of different views and, therefore, to a definition of media maps that would also serve as a possible entryway to an overly complex world, one that does not necessarily correspond to the real world. Maps are also non-linear forms of knowledge; they offer multiple access points.

Mapping complex worlds

Film thus possesses a 'cartographic impulse' which makes it possible to interpret collages of images, similar to an atlas, or a bird's-eye view, closer to a cartographer's explorations, bringing into question both the spectator's position in the diegetic world as well as the media's capacity to create a spatial

abstraction. However, it is also possible to put forward, as is the aim of this paper, an approach linked to film and media conceived as the objects of partial, in-progress cartographies. Focusing on a map's capacity to highlight frequencies, nodes, and accumulations through abstraction, with particular attention on today's digital landscape, media emerge as mappable spaces that cartography helps, at least in part, analyse.

Consider Abigail De Kosnik's work on television piracy. One point of particular interest is how she traces fan uses that constitute a vast 'archive', often bigger than the official text itself. We read on the project research blog:

> In November 2016, alpha60 tracked 16 torrent files (of varying resolutions, from MP4 to 1080p) of an episode of the AMC horror series The Walking Dead (season 7, episode 3), and generated graphs showing how much seeding and downloading of these files took place in the seven-day period following the episode's broadcast; and produced maps showing all of the locations in the world that shared these files.[12]

The stress here falls on the extent or the mass of fan work regarding a television show. Issues emerge related to the occupation of space and localisation of the dots that compose such a mass. De Kosnik's goal for the alpha60 tool is 'to make perceptible the global distribution of pirated television files', therefore focusing on a map's ability to create an abstraction in which the 'mass' of a cultural phenomenon becomes the object. Also,

> alpha60 illustrates what Jenkins, Ford, and Green call the "spreadability" of current popular television series originating in the U.S., ignoring all national boundaries and defeating the international syndication agreements that insist on different release dates for television programs in different countries. alpha60 reveals the shape of a 'pirate archipelago'.[13]

In my view, media must be conceived as spaces of discourse, worlds, or semiospheres[14] composed of traces left by consumers in a landscape where social media, GIS techniques, and mobile devices come together in shaping the cultural space. These worlds are made up of heterogeneous elements: not only are they representations, but also (and especially) dense threads of discourses, deliberations, tributes, and critiques produced by users before, during, and after the experience. They are territories where stories meet, are absorbed, and relaunched in a network. Interestingly, the cartographic issues provide a possible set of heuristic solutions in order to understand the place and role of such traces. Every aspect of our culture produces data (according to Louise Merzeau, '*une trace est consubstantielle à l'acte communicationnel*'[15])

and such information is linked, increasingly, to geographic coordinates. Users display and share their location when tweeting, posting photos on Instagram, discussing in boards, etc. All these are ephemeral, sometimes unwanted, yet persistent, fragments of media content, and they have an effect on the production of meaning for the users, and often unbeknownst to official producers or the consumers themselves. The concept of connection is at the core. According to Merzeau, traces of reading and interpretation, but also purchases, geolocation, comments, retweets, and more visible artifacts, such as fanfiction (produced by consumers and every action performed in a network), are to be considered as parts of a world and are concurrently situated in the real world. Indeed, '[f]or the humanist, space is not only physical space but occupied space, or place, and the concept, like that of time, exists not simply in a real world but in memory, imagination, and experience.'[16] When we study the intervals between media fragments (for example, between the episodes of a television series, at least in the traditional television mode of viewing), a large, proliferating, long-lived vitality surfaces. The persistence of such emergence of traces leads us to draw a history of a media product which is more similar to a mapping, in the geographical sense that Fernand Braudel used when proposing his 'longue durée'.[17] Media are arrays of data that can be laid down through a map.

It should be noted that these are not exactly appropriations, but more a way of locating users in a virtual space, but in a real space at the same time. These link fiction and the real, putting the experience of media at the center. From a socioeconomic viewpoint, these interactions are not neutral in a market. For example, De Kosnik shows the success of some products, depending on their spreadability, as defined by Jenkins, Ford, and Green.[18] These are complex effects of global capitalism which gathers and vertically amasses narratives, all while giving consumers the illusion of having an agency. Also, such logic facilitates the discovery of connections and communitarian forms, but also strengthens the commercial value of all these objects. World building becomes a space where the logic of accumulation and the transformation of fans' creativity in immaterial labor are at the core.[19] Yet, instead of wanting to hide the hierarchical power relations, or simplify the complexity of such interactions, focusing on geography can display national or transnational power trajectories or follow the success of a show. Accordingly, assimilations, transformations, and traces, when geolocalised, inform us on the declared foundation of certain users within a digital representation of real space. GIS tools can be used to map the *mass* of such a media world, also highlighting

the relevance of affects and fragile components of media. Deep mapping is an approach that consists of merging the imaginary dimension of social life, cultural artifacts, and real places, displaying the way by which the complexity of such an intertwining is what precisely gives meaning, specifying the connotation of what it means to inhabit a territory. Moreover, deep maps oppose a positivist view of cartography, since they

> do not explicitly seek authority or objectivity but provoke negotiation between insiders and outsiders, experts and contributors, over what is represented and how [...] Framed as a conversation and not a statement, they are inherently unstable, continually unfolding and changing in response to new data, new perspectives, and new insights.[20]

Performative maps

According to Johanna Drucker, concerning the use of digital tools within the spatial turn, maps are performative tools that can be used as a 'visual form of knowledge production', allowing new meaning to emerge from a set of data.[21] In other words, we could see emergent results or, following Edgar Morin, 'qualities that evidently do not exist when they are presented in isolation'.[22] Points appearing on a map at determined time frames, for example, display zones of influence of a show, as pulsations. Other forms of grassroots activities involving maps can appear thanks to the communitarian dimension. Following such emergences, we can see moments of the world that do not depend on what is imposed by official institutions but which are linked to assimilations or transformations. These are ways of redoing or reviving a known narrative, or a fragment of it. Maps can therefore serve as starting points to trigger questions and possibly provide answers. In this sense, maps are representative tools, but they can also be considered performative search engines, favoring spaces that produce networks and connections.

In a context marked by spreadability, I will consider the case of geolocalising fan discourses. GIS is 'the science of where', enabling us to understand the locations of phenomena. Fans geolocalise their gestures, which helps them blend in to a larger community, and consequently appreciate the media experience also because of the collective geography they produce – in the very acceptation of the term, a *writing of the earth*. This is a heuristic use of mapping: together, users look for a tool to make sense of their experience.

GIS maps function on a microscopic level thanks to points. The use of geomatics is more and more diffused in works concerning film distribution and theatre localisation, as the projects that gather annually at the HoMER network initiatives prove.[23] In the path drawn by Conley, Les Roberts is interested in the cartography of production and distribution of films and discusses many works that make databases visible through maps.[24] Cinema becomes the object of a 'spatial critique' consisting of inhabiting a real space with the results of an ethnography of consumption, until productive contradictions emerge.

Such a perspective is at first glance paradoxical for television, which, unlike cinema, is not located in one specific place. Nevertheless, something can be said about television audiences and mapping.[25] First, the very idea of broadcast is itself a geographic concept: it is the sending of a signal, from a source, towards a space as large as possible, the space of the nation. Television reception is certainly conceivable, in geographic terms, as a sum of points corresponding to television sets turned on in a determinate time frame. Maps are indeed used by institutions such as Nielsen and by networks in order to subdivide the market into zones, and therefore sell the right advertisement lots. In the current digital landscape, marked by non-linearity, such observations are limited.

Also, readings in terms of localisations can be found in blogs. Maps are in fact more and more used online, as spaces where a conversation can begin:

> [t]his has always been the case, but what is new today is the opportunity for unusual, provocative, or minority points of view to reach a wide audience. Pick an issue – anything from drone strikes abroad to the Olympic bid in Boston – and imagine a map that reframes the debate. Now go make that map. For the cartophile, loving maps should mean producing them, too.[26]

Let us consider the following remarks, which highlight a link between cultural interests and US states:

> [g]enerally, viewers love to indulge in reality shows that reflect their own regional interests. Many of the popular reality TV shows in each state reinforced regional stereotypes and clichés. People in the South seem to enjoy watching the redneck branded, gun-toting Robertson family from Duck Dynasty. States infamous for polygamy embraced Sister Wives as their own, while those in the harsher New England climates preferred to test their skills with Survivor. Below, in each state breakdown, you'll find the top three reality TV shows and a fun fact about correlations between viewers and the TV they watch. Sink into the couch and take a tour from sea to shining sea as we reveal the guilty pleasures each state entertains.[27]

But what is more important, going beyond the 'cartographic anxiety', based on the (almost impracticable) endeavor of putting order in a scattered panorama, is the fact that maps, by creating connections, can make links where otherwise there are none, underlining limited, short-lived phenomena that might have an impact on the way we understand media content. Such heterogeneous maps make it possible to visualise zones of higher-intensity viewing practices, that a tabular reading would not allow. In this way, interpretation is possible: a map makes it visible, highlights zones of influence, and creates links. Media mapping has to be considered as a moveable practice, developing across various instruments.

With the Labo Télé research group,[28] we have mapped the series *Sense8* (Netflix, 2015-2018), in order to take a look at both the persistence and the fragility of fan discourses on Twitter and other social networks with regards to television shows, but also on the possibility of mapping them at specific moments. The show, created by Lana Wachowski, skillfully explores obscure and complex sci-fi questions, world cinema atmospheres, and the inclusion of LGBTQ+ characters, thereby wining over an audience of millennials thanks to the theme of the connections that telepathically link every protagonist across the globe. Mapping is therefore somehow at the core of the show itself. Famously, *Sense8* has created an intense fan upheaval since its unexpected cancellation in June 2017. Angry and 'devastated' fans gathered for months in international online petitions, tweeting to Netflix, asking, begging to bring the show back.

When eventually a teaser for the last episode came out ('Finale Special First Look', 9 December 2017), we were particularly interested in understanding whether and how a map of the world would be useful to track the fan reaction, namely because of its world-at-large scope. In fact, in the days around the date, there was some tweeting, in particular from the official content producers, but the entire world map was quickly filled with points. Expectations were high, and the content of the 1min48 YouTube video, showing all the actors talking to the cameras, seasoned with some images of the filming locations, and (very important) of crowds of fans themselves, taking pictures, offering gifts, and cheering the crew, precisely addressed the Finale as a product made for them. Cartophiles could also notice the presence of a map at the very end of the video, just before the Netflix indent, with the announcement of the Finale ('Coming 2018').
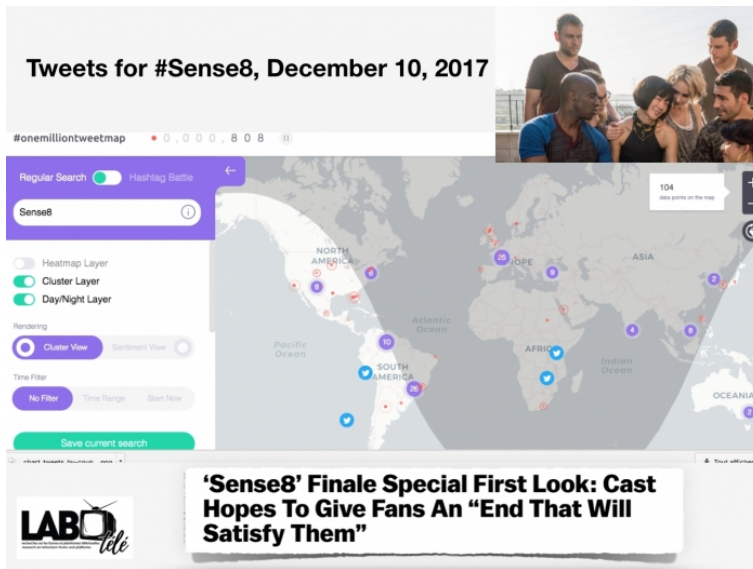
Fig. 1: Tweets for Sense8, 10 December 2017.

Tweeting was mapped through the online app One Million Tweet, which allows one to 'live' measure the amount of geolocalised tweets with a specific hashtag (compared to the extraction of Twitter's public API, this operation makes visible the rapidity, the frequency of the 'live' production of discourse). The higher intensity of discourse emerged in the following countries: United States, Brazil, France, Spain. A global spread, with more intense activity in certain zones, could be related to many factors: the production country (US), the main shooting location (Paris, France), the fact that the biggest gay pride takes place in in São Paulo, Brazil where one episode was shot (s02E08), an actor's country of origin (Spain). When reading such a map, we should consider that not only the mentioned YouTube video brings up specific previously unseen and highly anticipated content, but also that other information, including fan speculation, was simultaneously produced and circulated along with the official delivery of news. Complementing this first cartography with another piece of online software, Social Bearing, we analysed the type of interactions. These points were not necessarily new productions of original content, but in fact, it was the large number of retweets that filled the map (more than 2000 per minute).
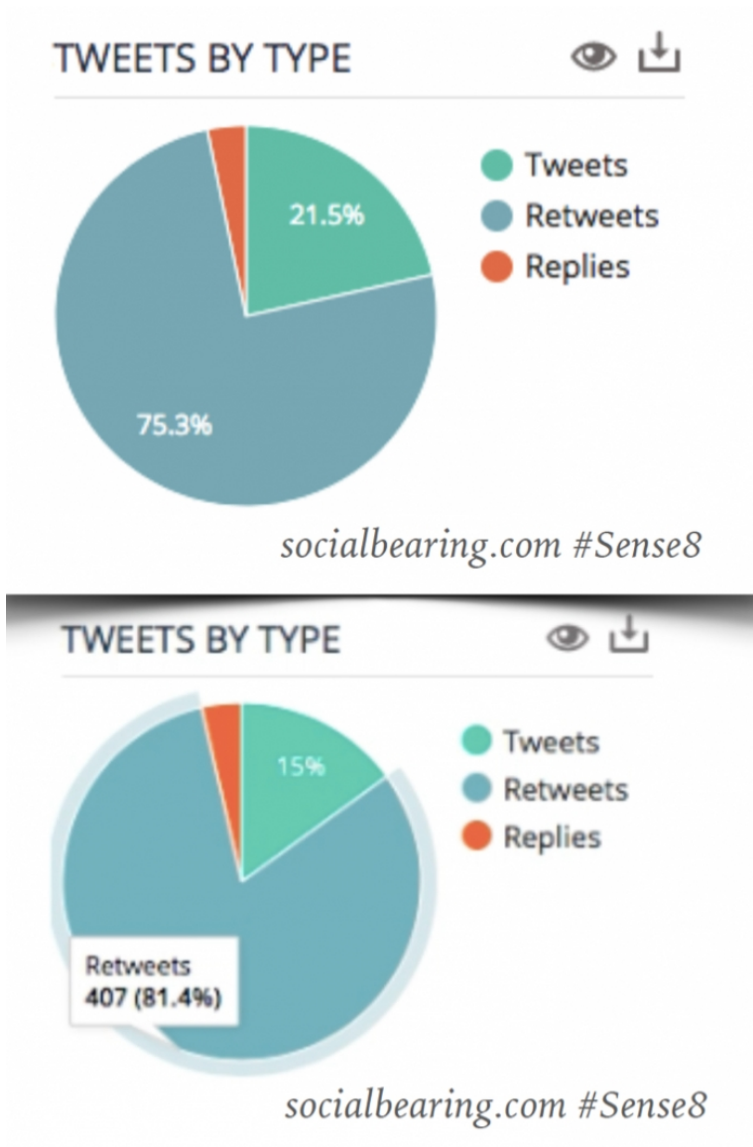
Fig. 2: Types of tweets for Sense8.

Looking at the map on different days, the same countries appear, always taking into account tweets and retweets. Considering the distribution of Netflix in these countries, and the large fan base developing across the world related to LGBTQ+ inclusion and rights, what emerges is the relevance of specific moments during a show's life. In this case, it is the announcement of a last

episode after the news of the show's cancellation, and months later, the distribution of the last episode. We also gain insight into user practices: some hardcore fans tweet constantly, others might interact only when relevant, big-scale events happen. Ephemeral practices such as retweets become important constituents of a broad phenomenon that can explain the success, resilience, or failure of a media object.

After such a visualisation, the scholar can study, using other instruments for text analysis, such as Voyant Tools, relevant terms, hashtags, characters, etc., thereby developing close analysis or discourse analysis. However, this can be done only by viewing from a distance, displaying frequency and distribution on a global scale, and the overall mass of the studied phenomenon.

Also, when we master a show's dialect and specificities, like in the case of series fandom, such as 'shipping', we can delve deeper into the display of particular dynamics, in specific moments, starting with a key word or term. We can therefore see a spatial occupation according to different factors: themes, ideologies, influences, tendencies. In another example, let us take the Amazon Studios show *Transparent* (2014-), a specific event, like the accusations actor Jeffrey Tambor faced in the fall of 2017, caused a spike in tweets about a series that has niche followers. This confirms that the life of a show is made up of fan appropriations and discourse. Again, maps can display the distribution of such discourse and become entry points for the analyst. Both *Sense8* and *Transparent* are series that can be watched streaming, and therefore they do not present gaps between episodes. Maps are then more useful in big, ceremonial moments such as finales or special events.

For a network series such as *Once Upon a Time*,[29] the rhythm of linear television, and the necessary gaps that take place within it, is a factor that can be highlighted through maps. We can see specific discourses taking place about particular episodes, such as the fact that one of the actresses will direct it, or that fans project, starting from elements gathered from the text, their desires about fictional couples of characters, like in 'ships'.
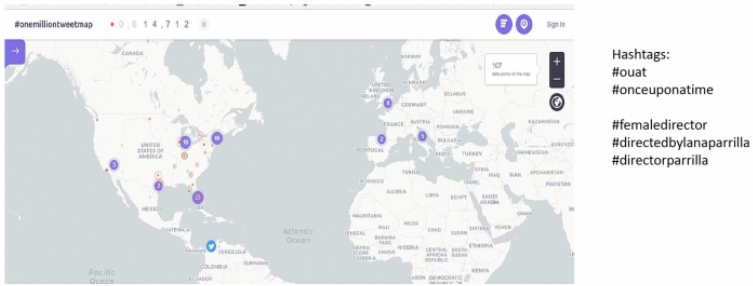
Fig. 3: April 13, 2018, 17×07, 'Chosen', directed by actress Lana Parrilla.

The last episode of a series, like the two-episode *Once Upon a Time* finale aired 11 May and 18 May 2018, still are catalysers of intense discourse, indeed functioning like a farewell or a 'going-away party', in which fan discourse play a capital role. As Jason Mittell put it, '[f]inales are defined more by their surrounding discourse and hype than any inherent properties of the narrative itself, with conclusions that are widely anticipated and framed as endings to a beloved (or at least high-rated) series'.[30]

When using another tool, provided by ESRI's ArcGIS maps, we can gather the totality of hashtags related to a media content, creating a slightly different effect, one corresponding to the superimposition of discourse over time. Let us consider, for *Grey's Anatomy*, this image:

Fig. 4: ESRI map for Grey's Anatomy.

Without offering, again, a *total image* of the discourse about the series, we can find here more elements, that can be starting points for a close analysis, localised in specific countries, cities, or spaces of consumption. Reading such maps is a matter of interpretation of known information and, at the same time, of discovery of new meaning.

The way we shape the data we gather (therefore also deforming or 'massaging' them[31]) has an influence on the knowledge we create. The more common, linear, or tabular form is a narrative, a sequential organisation of events. Non-linear maps allow us to move beyond the linear form of online databases and other lists, and to embrace the circulatory dynamics of media spreadability. By keeping the connection to the real gestures produced by users in the digital sphere, they eschew a *total*, *complete* view, and make it possible to describe, in a more generalised way, the fragility of the studied phenomena. Any form of cartography, but also conceptual diagrams, can help us outline the interdependency between forms, platforms, and uses, and their evolution through time and space in relation to mutations occurring over time.

To sum up, quantitative methods and geographical tools help grasp distribution, frequency, and temporalities of complex phenomena, which intertwine despite cultural gaps. They highlight geopolitical issues related to representations. We take into account multiple factors. Namely, we go from a certain idea of the life of a show as a matter of time to an idea of a show as a space. If television studies originally focuses on a diachronic view of a series, cartography stresses the relevance of a synchronic grasp of a portion of it. Of course, as we see, release dates, special events, fan appropriations, and discourse in real time or during a series gap (intervals between episodes or seasons) are still capital. Yet, a geographical perspective can highlight localised reactions; asynchronous fan appropriations and discourse; external events, drawing the ever-evolving image of a bigger ecosystem (other social networks, blogs, fan sites, etc.). Globally, maps contribute to shaping the density and vivacity of a world, conceived as a multiple, yet continuous phenomenon, expanding in time and space. A map is a way to interpret such phenomena and at the same time to test different possible paths within it, offering ways of inhabiting a media world customised by users.

Tactics

Being research instruments for understanding complexity from the point of view of the researcher, maps, when they are the result of *fan art*, also have a heuristic function – one that is clearly more subjective, and which can briefly be described here in order to better understand the performative power of maps at different levels, namely at the grassroots level in which, contrary to *strategies* developed by institutions (the producers and distributors top-down gaze on media content and reception, aiming at maximining commercial profit), a form of cartography moved by affective, and sometimes (we could also say, and therefore) critical purpose, comes up. At the same time personal and social, maps can exhibit an attachment and thereby become works of art themselves: think of fan art reproducing the *Game of Thrones* land of Westeros. Instead of merely fixing the image of a world, they expand its borders, giving place to personal forms of rewriting and emotion. In another way, such uses transform the experience of media content into a relational space. Within such connected spaces, fans build maps in their collective attempt to situate a character's actions, to solve interpretive problems, or share their enjoyment, and are aware of the effects their performance can have in a public space.

We can highlight a type of mapping that manages to display the geographic properties of a fictional world. These maps represent the complexity of many episodes, seasons, characters and stories of a show. They have size and definition, making it possible to have a *mobile gaze*, which reconstitutes: 1) the *interconnectedness* of elements in space and time; 2) the size, and therefore the hierarchy of such elements; 3) their *frequency*. A map's elements depend on their ability to categorise and to create subjective containers for the elements, grouped according to traits and similarities, as well as to build links among portions of content that help us master the massive set of data that composes a television show.

Spatial thinking becomes a solution to understanding narrative complexity, since it helps visualise a set of story elements. It also answers the need to create a non-linear reading, where trajectories appear regarding the tone, the genre, and potentially the ideologies and values of a world. Maps are homages to a world, celebrations of specific moments of characters. They also have an interpretive function when they fill in gaps; they have a critical function when they improve a representation; and finally, they have a cognitive function orienting those who create them. Building and sharing a map is an

act that helps disseminate a specialist's knowledge: sometimes fans act as intermediaries to help orient other less experienced fans. The map therefore becomes a relational tool: its readability is accessed through the culture, shared between creator and reader. A map becomes a common mental image, built with the hope that it will be commented on or adopted. However, because the map also has the power of persuasion, it can make a viewpoint accepted, and therefore become an instrument of laying down a specific interpretation within a community about a certain fictional world.

Without forgetting the representative function (both connotative and denotative), an opposition between representing and performing seems clear when considering diegetic maps, for example, the ones described by Conley, and also the fan-made ones that proliferate in online spaces. Official maps are more fixed, restrained to the work or exposed in paratextual spaces. It helps us orient ourselves thanks to its stability. Fan-made maps can destabilise readers by suggesting alternative orientations or representations, forms of appropriation, or perverse readings.[32] It is necessary to understand these two gestures as strictly intertwined. Official maps can also evolve over time, and fan practices can contribute to fixing a certain personal interpretation without altering the message. They are to be understood as *attuned* with official producers of meaning. As a result, boundaries between representation and performance are porous. Being rational tools, encoded in a set of communal rules, fan-made maps create a pathway to share knowledge, but also to explore affective and emotional spaces. Maps are also to be considered as cosmogonic attempts, somehow able to control, modify, and rebuild the adored show. Again, a show has to be conceived more as a complex phenomenon than as an audiovisual text.

Beyond the opposition

Maps can therefore be useful to analyse media, particularly in a landscape marked by phenomena that build media as participatory experiences, increasingly rich and complex. The filmic cartographic impulse can be found in many contemporary forms, including television shows, for example the opening titles of a series such as *Game of Thrones* (HBO, 2011-), which is actually a map.[33] In this case, taking complexity as a starting point, a series world is a territory to explore through a map. Also, we should ask why we see so many maps in the media space. The answer could be not only for visual

and esthetic reasons, but also for reasons which perceive media as an experience that is shareable and therefore mappable. Finally, maps do not define a heterogeneous space, but instead they make a multiplicity of layers visible, leaving the door open to the unknown. As researchers, but also as fans, we can find what we are looking for, discover links, and masses or accumulations that we would not have otherwise seen. A form of imperfection, then, that instead of pushing us back is also at the source of a certain effect of authenticity. On the one hand, we create paths; on the other, we let ourselves be transported to new discoveries.

The opposition between representing and performing feeds the recent history of cartography. At first, maps were considered as 'pertinent discourses' on the world. Their first function is to represent, according to Jacques Bertin who, in France in the 1950s, took an interest in the universal value of graphic signs. Within this framework, a map is a system composed of denotative signs. According to a positivistic model, it helps communicate spatial information in a rational form. Since the 1970s, these statements have been made more complex by the following questions: What has to be mapped? What influence does a map have on previous knowledge?

Let us remark that, according to Charles S. Pierce's pragmatism, a map is a representation from which we can elaborate interpretations as we do when interpreting reality, but also by taking into account users. In effect, the observer can put into it a variety of semiotic relations: the connotative function of each sign which composes it is to be thought of in relation to the contexts of usage and user. In a post-structuralist perspective, maps stop being merely a representative tool and become the starting point, as well as the arrival, of many forms of deconstruction and creation. A map is a performance. It is also the point of view of Johanna Drucker, who states that the graphic sign and the map are tools that enable creation and knowledge production. Data are information that are not 'naturally' given. Instead, they are always gathered, organised, and therefore built by researchers. This is why the operation of giving form to data is also a form of research.

We do not know what we are going to find when we start mapping. The operation can create new meanings or hide others. Mapping is therefore a way to establish knowledge and power. Maps colonise; they contribute to instituting the point of view of those who conquer a territory. But also, particularly when we consider it from both the heuristic and hermeneutic perspective, linked, a map is incomplete. It is to be considered as an operation in progress, that carries the shortfall of any attempt to organise the world or to

understand its mechanisms in a universal or unique way. In the networked landscape of media *spreadability*, it is important to consider traces of consumption as links and nodes that connect different objects and practices across the globe. Mapping, as a way to gather such information as well as to display it can, consequently, become a complement to quantitative or qualitative analysis of the media sphere, a set of entry doors adapted to the networked – and fragile – nature of objects and practices that inhabit it.

Author

Marta Boni is assistant professor of film and television studies at the University of Montreal. She works on television history, seriality, fan practices, and transmedia.She has published*Romanzo Criminale: Transmedia and Beyond* (Ca' Foscari Digital Publishing, 2013), co-edited *Networking Images* (Presses de la Sorbonne Nouvelle, 2013), edited *World Building: Transmedia, Fans, Industries* (Amsterdam University Press, 2017), and published various essays in international journals.

References

Avezzù, G. and Fidotta G. 'Introduzione. Certo non un'esaustiva geografia del cinema', *Cinergie. Il cinema e le altre arti*, nº 10, 2016: 10-18.

Avezzù, G. *L'evidenza del mondo. Cinema contemporaneo e angoscia geografica*. Parma: Diabasis, 2017.

Bodenhamer, D.J., Corrigan, J., and Harris, T.M (eds). *Deep maps and spatial narratives*. Indianapolis: Indiana University Press, 2015.

Boni, M. 'Des téléspectateurs géolocalisés', *Sens Public*, 15 December 2017: http://sens-public.org/article1283.html.

_____. 'Crossing the boundaries – Narrative ecosystems as semiospheres' in *Narrative ecosystems*, edited by I. De Pascalis and P. Brembilla. New York-London: Routledge, 2018: 27-42.

Boni, M. and Re, V. 'Here Be Dragons. Le mappe come soglia/le mappe come creazione' in *Trono di Spade – Game of Thrones – Erotismo guerra e spazi urbani nel trono di spade*, edited by S. Martin. Milan-Udine: Mimesis International, 2017.

Braudel, F. *The Mediterranean and the Mediterranean world in the age of Philip II*, 1st U.S. edition. New York: Harper & Row, 1972.

Burdick, A., Drucker, J., Lunenfeld, P., Presner T., and Schnapp, J. *Digital humanities*. MIT Press, 2012.

Caquard, S. and Cartwright, W. 'Narrative Cartography: From Mapping Stories to the Narrative of Maps and Mapping', *The Cartographic Journal*, 51, nº 2, 1 May 2014: 101-106; https://doi.org/10.1179/0008704114Z.000000000130 .

Castro, T. *La pensée cartographique des images: cinéma et culture visuelle*. Lyon: Aléas, 2011.

Conley, T. *Cartographic cinema*. Minneapolis: University of Minnesota Press, 2006.

De Kosnik, A. 'Piracy Is the Future of Television', *Alpha60* (blog), 16 October 2016: https://alpha60.co/2016/10/16/abigail-de-kosnik-piracy-is-the-future-of-television/.

Drucker, J. *Graphesis: Visual forms of knowledge production*. MetaLABprojects. Cambridge: Harvard University Press, 2014.

Hassler-Forest, D. *Science fiction, fantasy, and politics: Transmedia world-building beyond capitalism*. Lanham: Rowman & Littlefield, 2016: 4.

Jenkins, H., Ford, S., and Green, J. *Spreadable media: Creating value and meaning in a networked culture*. New York: New York University Press, 2013.

MacEachren, A.M. *How maps work: Representation, visualization, and design*, 1st edition. New York: The Guilford Press, 2004.

Manovich, L. 'Cultural Data. Possibilities and limitations of the digital data universe' in *Museum and archive on the move: Changing cultural institutions in the digital era*, edited by O. Grau with W. Coones and V. Rühse. Berlin-Boston: De Gruyter, 2017: 259-276; 274.

Merzeau, L. 'Faire mémoire de nos traces numériques', *E-dossiers de l'audiovisuel*, 29 June 2012.

Moretti, F. 'Planet Hollywood', *New Left Review*, 9, May-June 2001.

_____. *Graphs, maps, trees: Abstract models for a literary history*. Verso, 2005.

_____. *Distant reading*. London: Verso, 2013.

Morin, E. 'Restricted Complexity, General Complexity' in *Worldviews, science and us: Philosophy and complexity*, edited by C. Gershenson, D. Aerts, and B. Edmonds. World Scientific, 2006: http://cogprints.org/5217/.

Roberts, L (ed.). *Mapping cultures: Place, practice, performance*. Basingstoke: Palgrave MacMillan, 2012.

Staiger, J. *Perverse spectators: The practices of film reception*. New York: New York University Press, 2000.

Notes

[1]   Conley 2006; Castro 2011; Caquard & Cartwright 2014; Avezzù & Fidotta 2016; Avezzù 2017.

[2]   MacEachren 2004.

[3]   Manovich 2017, pp. 259-276; 274.

[4]   Moretti 2001, 2005, 2013.

[5]   See also Avezzù 2007, p. 13.

[6]   Ibid., p. 425.

[7]   Bodenhamer & Corrigan & Harris 2015.

[8]   Conley 2006, p. 1.

[9]   Castro 2011, p. 86.

[10] Ibid., p. 67.

[11] Ibid., p. 211.

[12] De Kosnik 2016.

[13] Ibid.

[14] Boni 2018, pp. 27-42.

[15] Merzeau 2012.

[16] Bodenhamer & Corrigan & Harris 2015, p. 2.

[17] Braudel 1972.

[18] Jenkins & Ford & Green 2013.

[19] Hassler-Forest 2016, p. 4.

[20] Bodenhamer & Corrigan & Harris 2015, p. 4.

[21] Drucker 2014.

[22] Morin 2006.

[23] http://homernetwork.org/

[24] Roberts 2012.

[25] Boni 2017.

[26] Rankin 2015.

[27] https://www.cabletv.com/blog/favorite-reality-tv-show-by-state/

[28] I discuss here the results from research by graduate student Clara Bich.

[29] I discuss here the results from research by graduate student Chloé Glangeaud.

[30] http://mcpress.media-commons.org/complextelevision/ends/ par. 8.

[31] Burdick & Drucker & Lunenfeld & Presner & Schnapp 2012.

[32] Staiger 2000.

[33] Boni & Re 2017.