

Mapping the Complexity of Creative Practice: Using Cognitive Maps to Follow Creative Ideas and Collaborations

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Abstract

Adopting a complexity theory perspective, the paper looks at the role of collaboration and at the impact of place, audiences and activities have on the artistic projects presented at a street art festival in UK (FUSE Festival, Medway). Using cognitive maps we explore changes, difficulties, unexpected collaborations, audiences, feedbacks and a variety of external influences. The results highlight how artists evolve, change and learn while creating and presenting their work.

Introduction

Inarguably, arts festivals are important cultural assets for communities, contributing to the expression, celebration and creation of local culture. Most research on arts festivals tends to be on the evaluation of their “impact,” focusing either on economic measurements or audience satisfaction (e.g., Williams & Bowdin, 2007). Less attention has been given to understanding the process of artistic creation, and how the local context influences creative production. An understanding of the process and the factors that influence creative practice can help unearth and map intangible cultural assets. However, research on creativity and creative production tends to look at how individuals generate ideas, focusing on their particular skills, processes and cognitive characteristics (for an overview of approaches to creativity see Sternberg, 1999). Yet, creative practitioners very rarely operate in isolation – they operate within a complex environment that influences their practice in a fundamental way (see, for example, Amabile, 1996). Our understanding of the interactions among artists and between their environment and intended audience is much more limited.

This chapter aims to contribute to our understanding of creative practice, the development of cultural projects in arts festivals and their impact, by taking into consideration the creative practitioners but also the influences, networks and contexts that interact with their work. Taking the FUSE Festival 2011 in Medway (United Kingdom) as a case study, this chapter narrates the use of a mixed methods approach to cultural mapping, using cognitive maps and interviews to explore how we can map culturally the artistic creative process, and unearth the factors and interactions that influence it.¹ This work is crucially informed by complexity theory.

The chapter is organized as follows. First, we introduce our theory-informed perspective on creative practice and creative work, and we briefly outline some core literature on festivals. We then present in more detail the case study, our methodology, the data collected and the results achieved. The final conclusion reflects more generally on the value of complexity science, its contribution to understanding creative practice, and its implications for cultural mapping.

Reflecting on creative practice from a complexity perspective

Complexity science has emerged in the last decades as a promising and powerful way of understanding a variety of systems, physical, biological, computational or social (e.g., Byrne, 1998; Holland, 1998; Kauffman, 1995). Breaking with traditional reductionist approaches in science, complexity focuses on studying how diverse components and systems interact in space and time, leading to the creation of new forms of order and organization. Its main

premise is that most phenomena or systems in the world cannot be understood without looking at their multiple interactions and interdependencies with other systems across different scales. Complexity theory is not a single unified theory, but constitutes a framework (and set of methodological approaches) for studying complex systems leading to a more integrated understanding of phenomena. What is key for our research on cultural relations is that it allows us to interrogate relational dynamics rather than single objects or units (individuals/organizations) and understand dynamic changes that affect or characterize a system as a whole.

If we apply this perspective to an arts festival, we can see the festival itself as a spatial and temporal expression of the work and interactions of a dynamic network of agents (the festival organizers, the artistic director, the artists involved, the audiences, the community groups, etc.) who are moved by both individual (e.g., aesthetic expression, career goals, etc.) and collective interests (e.g., local place-making, community representation, etc.). While performances and activities are designed, funded, tested and delivered by individual agents, the overall system changes as well. Changes take place continuously at different stages (from the initial commissioning to the actual performance) and at multiple levels. External influences (such as performing at another event or attending other performances) are also part of the process.

Complexity theory allows us to capture some of these dynamics and understand changes and emerging patterns across the system. Significantly, while a better understanding of how agents, networks, events and performances come together can provide us with new tools to argue for their impact or improve their work, complexity theory implies abandoning a causal prescriptive view of a system: while we can record and acknowledge all intervening changes, we cannot predict how the system will behave and respond as a whole.

Complexity theory offers those of us working in cultural and creative practice some useful suggestions regarding the principles which guide the evolution and development of complex systems, and how cultural factors and agents interact, respond and evolve in different ways in specific contexts. Across different disciplines it is accepted that a system can be considered “complex” when it presents some characteristics. A key characteristic is that its elements interact in non-linear way: it is not possible to forecast the behavior and direction taken by the system as a whole simply having knowledge of the components of the system. Table 1 (based on Cilliers, 1998; Pavard and Dugdale 2000; Martin and Sunley 2007) outlines the principles governing complex systems and presents some examples related to the way these principles can be interpreted in the context of festivals.

Table 1. Principles of complexity theory and possible application to mapping cultural and creative practice

<i>Principles and features of complex systems</i>	<i>Explanation</i>	<i>Possible applications/examples in the context of cultural production and festivals</i>
Complex systems are not in equilibrium	A complex system is never fully stable as its structure, openness, and connectivity implies continuous changes.	Festivals as cultural activities and organizations are always changing: they are affected by funding and policy changes but they also grow and change in response to audience’s demands and

		changes in population.
Interactions are non-linear	Feedback loops and self-reinforcing interactions mean that small events can have large impact on the overall system.	The decision of an artist to work with a specific partner or involve a specific community group in a performance can have long-lasting effects on the community and partners; it can also lead to new artistic collaborations or offer long-term occupational opportunities to artists.
Complex systems are open	There is no fixed boundary between the system and its environment. The system is often defined by the observer/researcher for operational reasons but this is always an approximation.	A festival is an open network of activities and people which unclear boundaries. Artists, organizers, technicians, etc. come and go over the course of a festival and so do different users or audiences. National and international changes and connections can also have an impact on the system and its interconnection with cultural activities.
Distributed connectivity	Complex systems consist of a large number of agents who interact dynamically; agents and relations take place at a variety of scales, with little possibility of centralised control over the system. This connectivity is often hybrid, for it involves human and non-human elements.	Audiences interact with cultural providers but also with the built environment, the cultural content, and with each other. The festival organizers and artists need to interact with regional and national cultural agencies, funding schemes, and planners and developers, as well as with the audiences. The built environment and transport links might be important elements of successful cultural planning.
Path-dependence and history	Complex systems can often display path-dependence: they have a history and this often contributes to their present behavior.	It is not possible to understand the cultural development of a place in a vacuum. Similarly, each performance and creative practice is the result of a specific context and its historical development contributes to the cultural profile, activities, and individuals taking part in the system. Cultural planning needs to take into consideration this path-dependence.
Adaptive behavior and feedback	Each single agent is often unaware of the behavior of other agents and the system as a whole (as it is not possible to understand the system by summing up	Artists tend to interact with other artists and cooperate towards common goals, especially in the context of a festival. Changes in funding or other structures, such as the emergence of artistic collaborations or partnerships,

	individuals' behavior) but responds to continuous interactions of the system and returning feedback.	might influence their future decision and cultural production. Similarly, audiences influence with their single choices the kind of offers available and cultural producers will cater for different audiences and respond to their requests differently.
Emergence and self-organization	The system tends to organize itself through macro-structures (sometimes soft/ideological infrastructures, sometimes spatial/physical structures). The dynamics resulting from the micro-adaptive interactions will give space for the emergence of new structures.	The artists can organize themselves in communities of practice and new partnerships or can organize themselves in virtual networks online. The need to find structures that flexibly respond to the changing system can, for instance, cause the emergence of an artists' forum or an artist newsletter. Similarly, from an audience perspective, common passions or interests can give rise to interest groups, associations, friend groups, or pressure groups working toward a common goal.
Non-determinism and non-tractability	Complex systems are non-deterministic. This means that it is not possible to foresee the behavior of the system from the knowledge of its components' behaviour. Due to the nature of the system, local and small changes can have unpredictable influences which cannot be traced back to the cause.	The decision by a city to establish a new festival or cultural activity can have a positive impact on the local community attending the venue. This might have a long-term impact on those audiences, but it will be difficult if not impossible to trace back those changes to specific events or activities taking place.

The first step to understand complex system involves identifying the agents interacting in this system. These can be both human and non-human elements, and this is particularly relevant to the cultural field, for non-human elements (such as a specific place or a specific idea or artistic performance) can have powerful influence on the overall outcomes of a festival or local event. It is also important to consider that while our focus here is on the development of cultural projects or performances, many other factors (cultural and non-cultural) need to be taken into consideration. The openness of a complex system implies that the local context and its history are important players. Although we accept that non-deterministic patterns can be followed, the main focus and value of complexity thinking in the present chapter lies in its potential to shed a light on the micro-dynamics of cultural producers, a key element often ignored.

Within this complexity framework, networks and interactions become central to our research on Fuse Festival. We look at the complex set of collaborations, exchanges and

feedback that appears at different stages during the development of these networks and for different purposes: for example, sometimes they are moved by cooperative behaviors and sometimes competition comes into play. These networks are never stable. They change and evolve to respond to the circumstances. As Doak and Karadimitriou suggest, “networks (form) and interaction (process) are the cause and the ‘glue’ that give rise to and sustain phenomena, ‘generating’ meaning which is then embodied into matter” (Doak & Karadimitriou, 2007, p. 210). For us it is particularly important to focus on capturing and mapping artists’ networks and interactions, to see how such networks and interactions become part of their practices and performances, part of the glue that enables those practices and performances to be delivered. What we offer here is a way to consider and chart how artists work and interact with others, and how that interaction both complements and complicates social practice, especially in areas like festivals and cultural mapping.

Festivals and creative practice

As many authors highlight, the last decades have seen a surge in the number of festivals being hosted in cities throughout Europe (Quinn, 2005; Smith & Jenner, 1998). A number of motivations inform this growth. First, from the perspective of cultural economics it is part of a trend in growth of cultural consumption and experience goods, which has come with increased disposable income and increased levels of education attainment. However, from a city and policy perspective, many authors argue that there are economic forces pushing cities and locales to host festivals in order to attract investments, visitors or improve their image (Richards & Wilson, 2004; Robertson & Wardrop, 2004). While our focus remains specifically on festivals, it is also important to mention the literature on community-engaged artists (Newman, et al. 2003), since this new mode of artistic production is often closely linked to the establishment and development of festivals. Finally, festivals have also been used as tools of local socio-cultural regeneration. This is natural considering that it is within the historical origins and practice of festivals to provide a time for community cohesion and celebration (Quinn, 2005).

It is therefore not surprising that most of the focus of academic research on festivals is on their socio-economic impact. The concept of impact is articulated in the literature usually from two different perspectives: the economic impact of the festivals, their potential to attract tourism (O’Sullivan & Jackson, 2002), and local expenditure (Crompton & McKay, 1994). Festivals are often seen as potential engines for local development, especially in places not usually able to attract visitors (Gibson, Waitt, Walmsley, & Connell, 2010). There are also arrays of impact studies of individual festivals, which seem to be undertaken “under the assumption that economic benefits of festivals and special events is one of the most important reasons for organizing a festival or a special event in the first place” (Gursoy, Kim & Uysal, 2004, p. 172). This assumption is often articulated further for issues such as urban vs. rural festivals (Long & Perdue, 1990), type of cultural festivals (Thrane, 2002), and others. The impact on the image/brand of the place is a further object of study (Quinn, 2005), one which has strong economic implications but is also connected with socio-cultural regeneration.

The socio-economic impact of festivals has also received attention more recently. These studies focus on their role in re-branding or regenerating the locale, specifically looking at pride in place, social cohesion and participation of specific social groups. Festivals are

displays of social and cultural identity (O’Sullivan & Jackson, 2002), and therefore seen to reinforce the connections and shared values within a community (Crespi-Vallbona & Richards, 2007). Other studies focus on the development of social capital (Arcodia & Whitford, 2006; Rao, 2001) and increase in cultural capital (Snowball & Willis, 2006a; Snowball & Willis, 2006b). However, the reach of this socio-cultural engagement has also been questioned (Waterman, 1998).

While the research looking at all these external impacts of festivals is very rich and diverse, there is almost no consideration given to the impact of festivals on one of their core stakeholders: the participating artists. The only work to date looking at the impact of a festival (the Adelaide Fringe Festival) on its artists has been undertaken by Glow and Caust (2010). They use interviews and focus group discussions with participating artists to consider the benefit they experience in taking part. They identify a series of activities and services that the Festival provide to artists, such as newsletters, making the most of media exposition, free listing in the festival guide, etc. They also consider the importance that the Fringe plays in inviting producers to scout new acts for further commissions and touring. The main benefits experienced by artists, as summarized by Glow and Caust, are linked to gaining increased visibility or launching their artistic work or careers. Passing mention is made to how festivals help “to build the respondents’ sense of purpose and identity as artists” (p. 419).

We propose to push this research agenda further by mapping key dynamics and interconnections between ideas and places, and within the context of project-based work and festivals. Mapping the role played by specific individuals, but also location and collaboration, allows us a deeper understanding of the complex set of agents and relations that underlie the cultural production of a festival.

Case study and methodology

Fuse Medway Festival² is a free outdoor arts festival taking place in Medway (Kent) every June. It was started as Medway Spring Arts Festival but later rebranded and re-structured from 2007 in its current format. It is considered—within the UK context—an “emerging festival.” Fuse Festival is characterized by a weekend of street and performing arts, including performances from local, UK-wide and international artists. It is funded and managed by Medway City Council and receives funding from the Arts Council of England (through an Arts Council Grant for the Arts award) in the region of £100,000. As the Festival director explains, artistically the festival provides local communities and visitors “opportunities to engage with arts that are of really high standard.” For the local council it is about placemaking, “to show that Medway is a very dynamic place and a place where people may want to move to, and students may want to come and study. And a place where they may want to live after they have graduated.” However, alongside these goals, there are other objectives which the Festival aims to achieve: in particular, “supporting local creatives and providing them with opportunities [...] by contracting them whenever possible and by offering a programme of commissioning every year” (from personal interview with director).

Therefore, like many other festivals, Fuse needs to deliver both artistic quality and engagement - with a careful balance between local, national and international performers. The nature of the artists’ engagement and connection differs from festival to festival: artists sometimes are simply touring an act, sometimes they are specifically commissioned a work, sometimes they are engaged long-term with the local community, and sometimes their

engagement is only for a few hours for a specific activity. The data presented in this chapter are part of a broader research project designed to capture the value and role of festivals in artists' careers and connections. However, in this chapter, we want to focus more closely on mapping the creative practice and work of artists in a festival performance context.

Here we adopted a complexity perspective – focusing closely on relations, development, and feedback. For this study we look at the creative performances of seven performing artists who took part in the FUSE festival 2011 (in Medway, UK). Adopting the methodological framework offered by complexity theory, and using a combination of cognitive maps and interviews, we invited these artists to reflect on their work and experiences.

As Pinch et al. (2010) suggest, cognitive mapping is an umbrella term for a variety of methods used in order “to produce diagrammatic representations of peoples' understanding of their world” (p. 379). The vehicle of cognitive mapping was selected here as an effective and intuitive way to record artists' understandings of their own practice, but also because it allows us to make systematic observations and comparisons about relationships and interactions between the different entities and factors that play an important role in artists' projects.

While cognitive mapping can be used within a variety of different frameworks (e.g., Eden, 2004; Huff, 1990), here we focus specifically on the role of cognitive maps as tools to express and visualize interactions, processes and knowledge exchanges, in order to capture the development and learning by interaction (Nootboom, 2000) which characterize creative practice.

Starting from when and how the idea for that specific performance was originated (i.e., a commission, a discussion with a colleague), we asked artists to map out their path towards the delivery of the performance. We asked each interviewed artist to think about his/her project for Fuse Festival 2011 and to talk us through the idea for the project and how it developed. We asked them to think about how the final outcome compared with the first idea. We specifically asked them to map their project using a large A3 white sheet of paper to reflect on what they delivered (from conception to finished performance) and consider how it changed/evolved over the time.

In particular we asked them to consider the role of four elements:

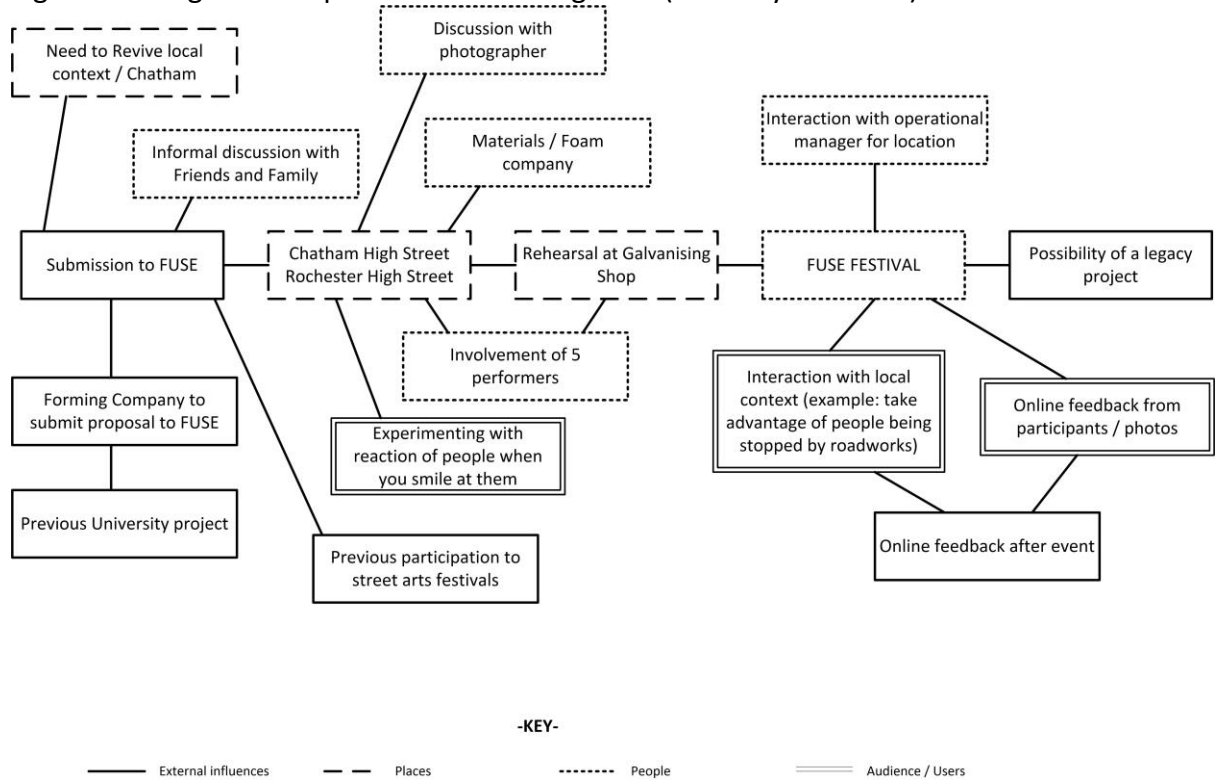
- *People* (who helped and when, who gave feedback, friends or colleagues, who took part, festival organizers, etc.)
- *Space / environment* (space where you tested; rehearsal space where you presented the outcome; space where you designed the project such as studio, etc.)
- *Community/ users / audience* (who you envisaged as audience, your real audience, any contact with the local community, etc.)
- *Other external influences* (a trip, attending another event, etc.)

After drawing their maps, the artists used colored pens to highlight which items on the map fell under the different categories of elements: yellow for external influences; orange for people /organizations; blue for audiences/users and green for specific places or spaces. We interviewed seven artists who took part to Fuse Festival and collected seven cognitive maps for further analysis. The original maps hand-drawn were schematized using Visio (examples of schematized map in figure 1) in order to be able to facilitate recording of the information and make comparisons.

The nature of productions as project work emerged in remarkable when talking with the artists about their maps. They frequently referenced key elements (people, places,

audiences/users and external influences) that were instrumental in shaping the project from conception to implementation and beyond. They annotated their maps in different ways, using lines and arrows to record connections, and boxes, circles or clouds to indicate key elements or stages; and these annotations provided key markers of process and connection.

Figure 1: A cognitive map schematized using Visio (courtesy of J. Park)



It is important to consider the range of projects analyzed through the cognitive maps of the artists / creative company (table 2), for this has implications with regard to the role played by Fuse in their commissioning and with regard to local audiences.

Table 2: Profile of the projects analysed through cognitive maps

<i>Project no.</i>	<i>Company Location</i>	<i>Previously at Fuse</i>	<i>Fuse Commission</i>	<i>Involvement of local community/groups</i>	<i>Performance touring</i>
1	Medway	Yes	Yes	Yes	Performed at Fuse 2011—no further touring
2	Medway	Yes	Yes	No	Performed and toured before and after Fuse
3	Southeast	No	As part of consortium	No	Performed before and after Fuse across commissioning festivals
4	Southeast	No	No	No	Performed first at Fuse and then three other festivals
5	Medway	Yes	Yes	Yes	Performed at Fuse 2011—no further touring
6	Medway	No	Yes	No	Performed at Fuse 2011—no further touring
7	Southeast	No	No	No	Performed first at Fuse and then touring

Overall, during the project we conducted eight semi-structured qualitative interviews: seven were undertaken with artists and creative practitioners involved in delivering performances (two interviews were double interviews as the project was co-run by two main individuals) at Fuse Festival 2011, and one was with the new artistic director of Fuse Festival. The interviews explored key issues around developing an artistic practice and a creative career and the impact of the festival in particular. As part of the interview process – which was semi-structured to allow flow of the discussion toward specific issues and experiences of each individual - creative practitioners and artists were asked to discuss the following topics, organized under three themes: their participation at Fuse 2011; the impact of Fuse 2011 on the artist/company, and finally the role of collaboration / connections in relation to Fuse Festival.

Results

As mentioned earlier, Festivals fit well with (and in part contribute to) a networked and project-based form of creative work and creative practice. Like other project-based activities, they tend to require the skills and collaboration of different people for a short time. The ever-changing nature of creative companies involved is highlighted below in the comments of each artist. While a company is usually formed by one person (or at most, a handful of permanent staff), many more tend to be involved in collaborative work:

It is a collaborative company really [...] there are about two or three regular members, but the cast and the collaborative teams has got about 30 people [...] I tend to work in a very collaborative way, reaching out to people where my skills are limited. (Artist 7)

Creative work is also characterized by multitasking and the so-called “slash/slash professions” (i.e., company director / actor / choreographer). This is definitely the case in festivals, where across different festivals (and sometimes even at the same festival) artists take on multiple roles.

Fuse was different as I had [this piece], but also I worked with [name], who are a dance company, who were at Fuse. I directed their piece. So there were two pieces happening at the same time. It was the place that the two companies met, that the performers interacted with each other [...] always at festivals, there is cross collaboration. (Artist 2)

Drawing upon the seven cognitive maps, we created two main summaries/analyses.

- A summary table (table 3), which places key activities and interactions related to the four elements outlined above (people, places, audiences/users and external influences) in a timeline: according to the phase in which they appeared in the project development (i.e., Idea Generation, Preparation/Resourcing, Testing, Pre-Delivery At Fuse, Fuse Festival, After Fuse Product/Touring)
- A network diagram (figure 2) which summarizes the connections between entries under the four key elements of the cognitive maps: people, places, audiences/users and external influences.

Understanding the function of people, places, audiences and external influences in the project development timeline

Let us start by presenting insights from Table 3, referencing the four key elements, their roles and their influence in the development of the seven projects.

People

The category “people” was identified in the research as anyone “who helped, who gave feedback, friends or colleagues, who took part, festival organizers, etc.” These are people external from the actual creative company / artist delivering the project. As depicted in Table 1, we can see that people play a key role in all the phases of the project (apart from the final touring aspect). In particular, they play the most important role in the preparation-resourcing phase, which calls for a variety of creative skills and expertise, but also

networking skills when researching for partners and funders. This is clearly highlighted by the way the project of artist 7 was initiated:

We had this initial starting point at the beginning of 2010, which was a commission for [park festival]. And that is interesting because the producer at [park festival] is also kind of linked to the whole Fuse network. But he is also a friend of mine, so I suppose that initial commission was given with a lot of trust from him. (artist 7)

The artist highlights the often uncertain environment of commissioning in which artists operate, but also the highly connected nature of the sector. People play a key part in connecting and initiating projects.

Other interviewees highlighted in different ways how people contribute specific knowledge and skills, noting also the challenges and tasks in managing people working in and around the project:

He produced a lot of puppet shows [...] We met him, we did not know him previously. We had to ask around and research to find him. He was luckily happy to help. He was a great input. He gave us the confidence in the show I believe. (artist 3)

People play also a key role in reference to feedback (both at testing phase and at the delivery phase during festivals). Feedback from key experts (such as other festival directors or producers, or funders from the Arts Council) was considered particularly important as a means to direct interactions or changes:

Fuse I considered a theatre festival and for me that was very important. As I knew the people going to the Festival would be people interested in theatre, other street art practitioners and producers and they would all have a discerning eye for street art. (Artist 7)

We have at least one person watching the audience and getting feedback from them afterwards. We then speak to some of the partners involved to ask for their feedback on the show. But also, at Fuse, we invited [Arts Council person] to watch and feedback. (Artist 2)

Overall, people can be seen as key agents in the system, and the interaction with specific people (others artists and producers as well as gatekeepers in the festival system) can shape the overall dynamic of a production piece both in reference to its content (where the presence of a specific input from another artist can alter ideas and production) but also in reference to its overall success and distribution (where key gatekeepers can allow for further promotion and development of the piece).

Space / environment

Space and environment play a strong and consistent role across the project development. However, there seems to be a split here between the value of local and other spaces. Looking at the origins of the artists / companies (table 1) we know four of them have strong connections and worked in the local area. They are commissioned directly by Fuse and therefore local places play a role in bringing together people and ideas from the very beginning. Space is key in providing a frame for specific performances, and while it does not determine the content of the production, it shapes its overall feel and look. Local spaces and in particular Slip 6 – a large rehearsal space in the Chatham Historical Dockyard – was mentioned by a few companies (not only local) as a key location for the development of these projects

Here on the historic dockyard, slip 6, so they did a bit of pilot if you like, and they had a few artists that went and used the space, to test it out if you like and I helped her on that project and also we got to test out the space. (artist 1)

I asked them if they had any space. And they said they had Slip 6 and we went into Slip 6 [...] We did not choose the space because it was inspirational, but the space is important because we need a big space to just, play, and rehearse.(artist 2)

However, it is not only the space for creation and rehearsal that is important. The local context functions as inspiration in other ways linked to idea generation, often shaping the whole dynamics and setting of a performance. As the artist quoted below suggests, the motivation to start a project can come from the local context – space can be a source of inspiration and ideas. As complex systems are open, space can also provide feedback and connectivity to instigate and shape projects:

The day before I had been in Chatham and had noticed there were a lot of unhappy people, so just as a weird thing to do for myself I was randomly smiling at people on the street, just to see what reactions I got and if people did smile back and if that spread. I got into this idea of sharing a smile and a sort of free way of making people feel better. (artist 6)

The physical shape of the space (and the urban structure, in the case of Fuse) provides constraints and opportunities for further changes and development:

It was called “Within the Docks and Towards the Docks.” [...] then ended up changing the title as it wasn’t “towards the docks” at all [laugh]. [it became] “Dance to the River.” [...] So that piece started by Rat’s Bay pumping station with a school, people from a local secondary school, they led the audience to see our adults performing in a temporary group, that then led along the river to a secluded area where there was a mini performance. (artist 5)

Space also plays an important part in reference to the delivery of the performance, providing sometimes advantages and sometimes difficulties or challenges for the performers:

As we were right next to the castle. I remember the castle looked absolutely lovely next to the piece. As you know in an aquarium you get fake, sort of stuff. So we sort of had this inside the tank, and you were sitting in the tank you had the castle grounds, so site specifically that looked really nice. (artist 7)

In terms of a complexity perspective, space becomes a source of feedback during the performance, where new patterns and behaviors can emerge in relation to how artists and audiences interact. As one artist suggests,

Even in Gillingham High street there is a clear divide between one end of the high street and the other end of the high street and you can’t leave the other one out. We were starting getting into a bit of trouble with the shop owners at the other end of the high street as no one goes down there, and instead of us going that way towards them, bringing people there, we were taking people away from there. (artist 1)

Community/ users / audience

The involvement of community and audiences is highly dependent on the nature of the creative project. Two of the projects analyzed involved local communities and local groups as key partners in the performance. Therefore, for these projects, community and user groups were pivotal at the initial stages of the project:

The sports groups and the dance groups that we got involved with they used it as a promotional tool which was good for them. They came along and did a display as part of the parade [...] it gave them some experience of doing displays but also to bring more people in, which also helped us to get more people active, so it was a good partnership, especially with the martial arts team and dance. (artist 1)

The participation of such groups provides artists with opportunities for further feedback and engagement. In community projects the ownership is shared between artists and other participants, and often different agendas and experiences need to be negotiated toward the creation of the common piece:

Then we set about creating the piece in a way that we would normally do a community piece, so we contacted schools and we used our youth company and our adult performance group, and we sent out a calling to all professional dancers and we worked with those groups over a series of weeks, and then the professional dancers over an intensive day, two days before the performance we had a rehearsal when we pulled it all together. Kind of like a big jigsaw puzzle that we kind of like put together on the day and performed. (artist 5)

However, both for these projects and for the projects that did not see direct community involvement / participation, audiences remain important to the development of the performance—and not only as spectators. In particular, the audience was recognized by the artists as both powerful and having a strong impact on the success of their work. As one artist put it, in reference to “a street theater piece,” “you get instant response from an audience. If they don’t like it they get up and walk away” (artist 2).

Audiences play a key role also in each piece’s development as the same performance is repeated. Artists use the different responses to re-shape their performances, adjusting to the immediate interaction and seeking to interact with different audiences to push and refine the performance further.

Feedback here is from a mixture of different audiences, we test one audience in Winchester because they are kind of used to street theatre and used to us, and one audience in Eastleigh, you know where it is, as they are not used to Street Theatre and they are aggressive [laugh] and so as a result we get two contrasting views and if we can make it work in both spaces then it functions. (artist 2)

In this complex system of performance and response, small changes, such as the traffic on a nearby street, can change the dynamics. New audiences are constantly joining in and moving around the performance, and therefore change happens often and continuously—as noted by the following artist:

In Rochester there is a really busy junction through the High Street and for the first performance we stood out there and the reaction was amazing, and so we really developed that and used the traffic aspect a lot more just from seeing that the people in the cars were reacting really well to what we were doing, as an added audience. (artist 6)

All of the artists reported awareness of the different kind of audiences that their performance could expect (especially comparing them across different cities and different festivals), and they considered Fuse as an important testing ground for their work:

Fuse was very important for us as a testing ground, to see how people reacted. And different spaces, as we were in the High Street and we were on grass, you know in different parts of the city later on. (artist 2)

The earlier festivals we went to like Fuse were very useful in terms, in giving us an opportunity to try it out. And in a way the testing, certainly for the first few festivals, and was why Fuse was so useful and really good to start our tour with. (artist 7)

Artists attached specific value to Fuse, noting its nature as a free festival, where audiences that are not used to performance can have access to different artists and works:

I also wanted to mention about the free aspect of Fuse, as that is also very important as well. [...] is also so important as well, in terms of accessibility and being able to see all these great companies performing. (artist 3)

Audiences in Chatham, and the Fuse festival are very new, and they have not seen much work. So they are very shy, tend to stand far back in case they get pulled out or something, not sure why. They tend to be passersby in Chatham, people out shopping and stuff, stop and see something. So they won't necessarily stop and see the whole thing either but you know, they tend to really like it. (artist 4)

Other external influences

Our study found clear evidence that performance projects are part of a chain of interactions and commissions, often cumulative in nature, with one project leading to another. This process is affected by external influences, and in the case of the Fuse, the external influences coincided with events taking place before and after the performance. Mapping complex cultural systems, such as a network of events and interactions, involves more than the ostensible object of study. In this respect our complex system of cultural creation needs to be understood as an open system, with identifiable links between attending a festival, performing, and the securing of further commissions and projects:

It starts actually very specifically in China and so the development of the show came not from our idea but came from a, I want to say commission, [...] we created some walk about street theatre for the World Expo in China, and as part of that process we decided that we wanted to make something specifically for the Expo that was about being British as the theme was being British. (artist 2)

I was working with a girl I was at university with, a partnership [...] We had created while at university, [...], we had made these giant cardboard letters in giant 3d form and I liked the idea of somehow amending that into a costume. But because it was cardboard and weather we decided some kind of foam (artist 6)

Another type of external influence involves partnership and funding. This comes into play specifically at the preparation / resourcing phase, when companies need to find partners to develop their ideas or need to find commissioners or funders to support their work. This of course can be a positive and straightforward thing, or the process can become long and require many re-submissions, in turn requiring the exclusion and inclusion of new partners:

Arts Council bid went in with these partners and that point - the reason that this show has a complicated past - is because another producer wanted to make it a bigger show than a walk about [...] they wanted to develop it into a bigger show, which we started to do, foolishly really without the partners they had they promised to bring to the table. They did not bring the partners to the table which meant that this show suffered. (artist 2)

It was the Emerge, coming to here that really gave us the opportunity to move forward as this led into an Arts Council Funding application, which again was part of the reason why we went to Emerge. (artist 6)

Yes, failed fundraising, looking for partners all of that stuff. And just did not get anywhere, no results, nothing. And what I was trying to do was trying to avoid, the plan, to avoid making an application to the Arts Council. So that was the main aim, was to avoid doing that. [...] And that was kind of finding partners, to book it. And one of those was Fuse. (artist 4)

Environmental factors, including the accidental, also play important roles, encouraging the artists to look back and reflect:

The first show did not happen because we got a puncture [...] But there was lots of glass everywhere, so puncture, that was a bit of nightmare, second show, the second show there was this unbelievable rainstorm that happened. (artist 4)

Other external influences, those resulting from the participation at Fuse, encourage the artists to look forward, with an eye toward developing new projects:

So actually that is one thing that happened, part of the development, the night time show which we could now sell. So that was separate show and that came from the tour, having that opportunity. (artist 6).

But we have been picking up the pace at the moment. But we did have plans to do other festivals, but just did not have the time. But now the overall project we have worked out a touring show we can all do together and take it round to different festivals (artist 1)

These comments help define the nature of festivals as interconnected complex systems, where the outcomes of one performance and one festival (in terms of the relation enabled and developed) may prompt a new series of activities and events not originally interconnected with the original festival or performance.

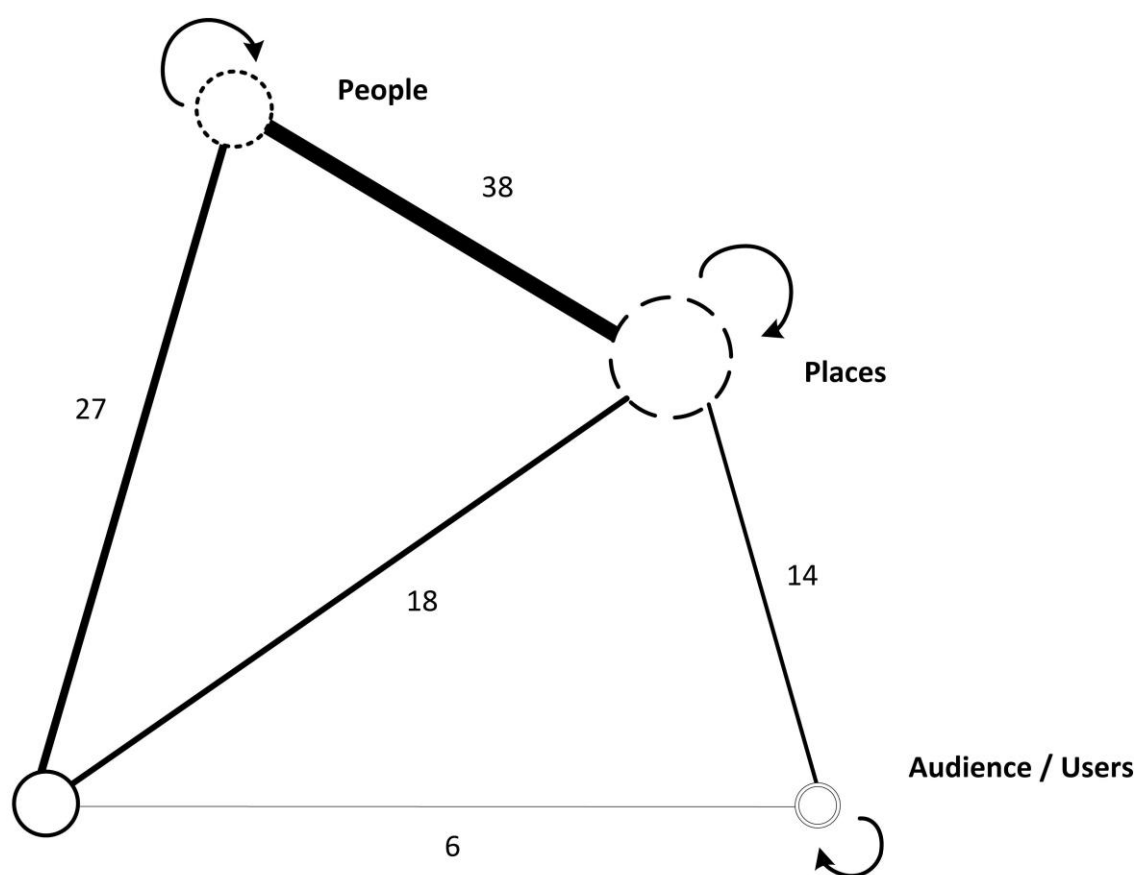
Table 3: Summary of the roles played by people, space, community/audience and other external factors in relation to project development

<i>Elements</i>	<i>Idea generation phase</i>	<i>Preparation/resourcing phase</i>	<i>Testing</i>	<i>Pre-delivery at Fuse</i>	<i>Fuse</i>	<i>Product/touring</i>
People	Meet other artist/technician/specialist (4)	Work with other artist/technician/specialist (14)	Work with other artist/technician/specialist (2)	Work with other artist/technician/specialist (1)	Receive feedback (4)	
	Meet Fuse person (3)	Meet/work with Fuse person (3)	Receive feedback (2)	Receive feedback (1)	Work with Fuse person (1)	
	Discussion with family and friends (1)	Funding partners (3)				
		Other collaboration (1)				
Space/Environment	Local area (3)	Local area (3)	Local area (3)	First delivery at other place (3)	Delivery at FUSE 2011 (4)	Touring in other places (3)
	Other place (2)	Other place (2)				
Community-Users-Audience	Specific target groups (2)	Seek involvement of community groups (3)	Unsuccessful test (1)	Test with other audiences (4)	Local audience (5)	
		General public (1)				
Other external influences	Previous commission/project (6)	Funding issues (3)			Policy/General context (1)	Receive feedback (2)
	An external source of inspiration (1)	Research for the project (1)				Touring (2)

Connecting people, places, audiences and external influences

While table 3 and the qualitative interviews help us understand the role of people, places, audiences and external influences during different phases in the development of projects for the festival, figure 2 highlights the relations and connections which are set across these key elements within the ecology of creative projects.

Figure 2. Network diagram summarizing the number of connections between the people, places, audiences and the external influences emerging from the individual cognitive maps. The numbers represent actual number of connections documented during the Fuse Festival.



External influences

As we can see from the network, the strongest connection is between people and places (38 connections), followed by the connection between people and external influences (27), then the connection between places and external influences (18), the connection between places and audience/users (14), and lastly the connection between external influences and audiences/users (6). There are no connections represented between people and audiences/users: these connections are non-directional, so the numbers represent the sum of all the connections between the key elements.

More specifically, from the network diagram we can see that *people* have a strong connection with places and external influences (but not with audiences). Let us unpack this

a bit more. If we consider specifically the relationship between *people and places*, some key dynamics emerge:

- *Co-working / creation space* (14): Places function as a landscape where collaborative work and relationships take place. The opportunity to co-create and work together can be seen as a key stage for the development of temporary festival projects. We mentioned before the role played by Slip 6, but, in other projects, local theatre or rehearsal spaces in London play a key role in bringing together a range of skills and expertise.
- *Place of origin/ affiliation / meeting space* (9): Place in the accounts of artists is also the space where the company originates or meets; it is also linked to affiliation and partnership with local organizations and people, and to the first coming together of these partners. Issues of origin and affiliation are often meaningful in reference to attracting funding, but also in relation to shaping and defining the identity of the artist or company (for example, Fuse's practice of initiating specific commissions for local artists).
- *Delivering in a place/space* (8): Places are also where the project is delivered, where people (performers and partners) come together. The delivery provides the opportunity to engage with new artists and find new potential partners for future projects.
- *Feedback / contribution linked to space* (7): Places (especially after a performance) are also where feedback takes place (especially from the key experts, such as festival directors). Artists evaluate their performance in the specific rhetorical context where it takes place, and in terms of how the place has itself shaped or changed the "original" performance.

We note a strong relationship also between *people and external influences*. The kinds of dynamics that connect these two elements involve the following:

- *Actions - e.g., asking for funding / applying for a project* (13): around half of the external influences are actions, undertaken by the artists / company, which involve other people or partners; or festival work which relies on a complex set of skills, expertise and external partners that inevitably influence the ideas and practices of the artists involved.
- *External issues – e.g., lack of space / lack of knowledge* (11): external issues such as needing a specific skill or lack of space necessitate collaborations with other artists or experts. Artists tend to see these issues in terms of bringing together skills and knowledge as a means of enabling their practice and shaping their future work.
- *Previous commission and further work / commissioning* (2): commissions before the festival or after are also key elements that imply a coming together of different people / partners. As festivals are built from a network of projects coming together for a very short period of time, the possibility of establishing future commissions or using previous ones to develop new projects is essential to make the practice of these artists sustainable.

As noted, there are no explicit connections between people (those working on the project but not immediately involved in the performance) and audiences. We find this ellipsis interesting, and we speculate that it reflects how the connection with audiences is mainly mediated by the artists or members of the creative company. Artists and other creatives who provide specific knowledge or advice in the production phase are usually not involved

in the delivery; similarly, funders and partners, although they might observe or evaluate the reaction or feedback of audiences, are seldom directly involved with audiences.

The relation between *places and external influences* offers still further insights:

commission/funding and delivery/testing in a place (6): here we see a connection between actions (such as funding or commissioning) and delivery and testing of those actions within a place. In part this seems linked to the way funding structures work and are managed (for instance, with specific commissions being driven by specific localities and policy agendas in specific contexts, i.e., local regeneration / local branding etc.). However, there are also many coincidences and fortuitous events, which in the words of one of the interviewees could be described as “being in the right place at the right time.” This casual observation suggests a complex set of interrelations developed alongside the creative projects.

Similarly, places are used for

- *meeting / rehearsing*, and afterwards further actions are taken (*application/ funding/ touring*) (6). Most of the interviews described the importance of this “co-presence” in relation to creation, production and also in reference to receiving feedback from funders and experts attending the festival. While a few “virtual” or online platforms were mentioned, co-presence and co-working was valued in particular ways for the development of the project and also the personal growth of the artist.

In addition, places are linked to further actions in reference to

- *future works and commissioning* (6). Most future commissions and touring opportunities resulted from the attendance of other festival directors, touring managers or funders at a performance, and therefore each performance can be seen as the connection to a further network of creative work and production.

The link between *places and audiences* is slightly more direct and obvious, for it relates to the connection of projects with local community groups, especially at the project development phase and at the moment of delivering a performance in a specific place with its local (and often place- specific) audiences. For these artists, audiences are not perceived in an abstract way nor in a setting-specific manner (for example, in terms of the seating of a theater); instead, they are understood as a contextualized place, where spatial dynamics are registered in terms of their influence on the audiences and therefore on the performance (for example, a busy open space versus an enclosed location).

Finally we note a weak connection *between audiences / users and external factors*.

This occurs more in community-based projects, when users are involved in planning and application, but also where communities are considered resources in response to an issue (such as lack of space). Such audiences (and their feedback / involvement in projects) can also be linked to further work or further commissioning.

Every journey recorded in the cognitive maps is different, with a different set of agents and connections between them, different dynamics and different outcomes. We offer the network analysis as useful in helping capture and explain some of the systemic connections and dynamics behind festivals and their projects. The particular network described shows connections between human and non-human elements (spaces, events, resources), which influence the ability of artists to deliver their projects but also influence the nature of these projects (often in unpredictable ways). Links with places have the more influential impact for the dynamics of production, but audience feedback, and external influences (often perceived in

terms of constraints and opportunities) also provide catalysts for further actions. Especially important is the temporal element of these connections. Some of these connections play important roles at specific times in the development of a project (for example, we saw that audiences connect to spaces only at the development and delivery stages); while others remain influential throughout (for people are linked to spaces continuously and in various ways: they provide inspiration, constraints, and facilitate work and delivery).

Conclusions and reflections

Using the FUSE Festival 2011 in Medway (UK) as a case study, this chapter has explored how we can gain a better understanding of creative practice, the development of cultural projects in arts festivals, and their impact, by taking into consideration the work of creative practitioners in context—considering, that is, the influences, networks and contexts that interact with their work. Taking our cue from complexity theory, we have mapped the relationships and interactions that underlie the development of artistic projects over time. Our findings highlight the nature of artistic projects and festivals as complex systems, wherein ideas get developed by artists as open adaptive projects that, following the principles of complexity theory, remain unpredictable and ever changing.

Although informed by theory, we have described our methodology as an inductive process, employing cognitive mapping techniques and qualitative interviews to help artists reflect on their practice and unearth some of the processes and exchanges which too often remain hidden from researchers. The data collected highlight the range of agents, places and external influences that come into play when mapping the development of a cultural project from the artist's perspective. For those engaged in community mapping and social practice generally—especially for non-artists—it is worth reflecting on what is at stake and what is at play for the artist. As the editors note in their introduction to this volume, when working in community contexts, “artists are cast frequently as illustrators, animators, and facilitators; artists and artistic practices, however, are seldom examined as rhetorical agents and agencies with their own disciplinary orientations, methods and histories.” Our chapter seeks to redress this oversight and provide a method for understanding and describing how uncertainty and feedback inform each project and ultimately influence artistic practice. People, places, external factors, and audiences play key roles in terms of development and performance, contributing significantly to the success or failure of projects.

The network representations and analysis detailed here unveil important aspects of the interactions between elements which are not otherwise evident from simple consideration of, say, the verbal accounts of artists' experience. We believe there is scope for a wider application of complexity concepts and methods in the cultural field, leading to more holistic mapping and greater understanding.³

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Notes

¹ We note with interest how the work of Sullivan and Wendrich (included in this volume) offers a very different focus and methodological approach, but nonetheless highlights the importance of mapping cultural relationships and the difficulty of representing intangible

assets. Where Sullivan and Wendrich map dynamic cultural content, our chapter maps dynamic cultural relationships, especially as they obtain for artists. We are pleased to advocate, with these authors, and with others included in this volume, for the importance of mapping cultural relationships as a key element of cultural mapping generally.

²For more information visit www.fusefestival.org.uk

³The project was carried out as part of a research program called “The Role of Complexity in the Creative Economy” (www.complexity-creative-economy.net) and constitutes an initial step towards establishing fruitful connections between research in complexity science and research on the creative economy and creativity more generally.

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