FCJ-090 Proliferating Connections and Communicating Convergence

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2 Over the last few years debates about digital technologies and moving imagery have often evolved around the concept of convergence. By now a powerful term, convergence continues to have a purchase on moving image media. Since it has been a point of reference for many discussions of digital media, convergence has, in a sense, set the context with which academics in the field have had to engage. To explore the pressure the concept of convergence exerts over our understandings of changing expressive practices following the emergence of numerous digital technologies, I employ Niklas Luhmann's approach to communication. My claim will be that in its current form, convergence privileges *either* the human users of technological platforms, *or* the combination of aesthetic conventions from different media. These two understandings of convergence propose that connections through the process of convergence are established by eitherthe user or the aesthetic code.[1] While neither of these two positions would be likely to deny a reliance on the interplay between humans and technologies, it is an issue more often taken for granted than explored. Using Luhmann's version of systems theory, in particular his ideas about communication and organisation, I argue that we can more effectively grasp the interplay of human and technological participants by understanding their combined roles in changing expressive practices. What connects is determined neither by the practitioners nor the capacities of their technologies; instead, it evolves in a system of communications of which they are a part.

Communicating Convergence

3 How have we come to communicate about convergence in the ways that we have? How do ideas proliferate, and to what extent is an idea both generative of others, while at the same placing a limit on what can be said. I am broadly interested in the debates around digital technologies, and in particular the ways in which these have an impact on both the materiality of moving images and the expressive practices subsequently made available to moving image artists working within live-action cinema, digital games and animation. For the last decade, and more, convergence is an idea, or a distinction, that has exerted a strong degree of control over what can and cannot be said and communicated about these changes.

4 Distinctions are central to Luhmann's theory of systems, which he conceptualises as a means through which sense is made of a highly complex environment. An environment is a mass of information arising from multiple sources, whereas a system relies on a process of communication through which elements of information are selected. This involves making a distinction that limits which elements of the environment can be communicated about. Luhmann's work on social systems is extensive, ranging from discussions of law, education, mass media, art, love and economic systems. Although Luhmann has considered the ways in which art might be a system, I am not aiming to argue that either digital technologies or convergence are systems in themselves. Instead, I consider how Luhmann's concept of communication provides insight into thinking about how the academic discourse surrounding these terms has developed to allow the inclusion of some elements but not others.

5 Digital fx, for instance, are part of a complex environment that exists in relation to the art world of cinema, in particular the art world of the popular cinema. This is a place of constant change, whether through the introduction of technologies, changing work practices, different modes of investment, generic innovation, or the ripple effect of a major and influential star or key production company. While these aspects of the cinema contribute directly to the product seen throughout the world, either in cinemas, on DVD, video or downloads, they do not operate in isolation. We might see this art world as a massively multifaceted lattice structure, in which each aspect represents a node, and each node is connected to others via many routes. For instance, the star power of an actor connects to investment, marketing, distribution, other actors, and directors, which in turn creates another relay of connections around cinematographers, and post-production houses, which then links into the diversifying technologies used in the production of contemporary cinema, bringing us to a another kind of investment practice. Taking into account all these aspects would require an approach in which all the different nodes of the lattice were given place in the process. Conventionally, however, cinema studies has used a series of distinctions through which

to make sense of this complex environment, separating out its aspects into domains of the discipline: star studies, genre, aesthetics, historical studies, political economies, national cinemas, queer studies and so forth.

6 Convergence is another means by which a distinction is made, and a recent definition of convergence by Henry Jenkins is as follows:

7 > [Convergence is] a word that describes technological, industrial, cultural, and social changes in the ways media circulates within our culture. Some common ideas referenced by the term include the flow of content across multiple media platforms, the cooperation between multiple media industries, the search for new structures of media financing that fall at the interstices between old and new media, and the migratory behavior of media audiences who would go almost anywhere in search of the kind of entertainment experiences they want. Perhaps most broadly, media convergence refers to a situation in which multiple media systems coexist and where media content flows fluidly across them. (Jenkins, 2006: 282)

8 Jenkins' definition reveals that by the mid 2000s convergence has come to be understood as a complex phenomenon establishing connections across the different aspects of the latticework that defines the art world of popular cinema. Despite the high degree of complexity this definition suggests, it is also clear that convergence is defined by a key distinction, that of platforms that co-exist and the media content that flows between them. The term convergence is a distinction that sets aside convergent from non-convergent media.

9 A brief look over the evolution of ideas associated with convergence shows the centrality of this distinction. By the mid 1990s convergence had become a predominant element through which communications about new media took place. One early view of convergence was that it represented a revolutionary moment following the growing tendency for technological platforms to be shared across media, a tendency particularly well illustrated by digital media. Over the last two decades, computer-based systems of image construction have become common to television, live-action and animated filmmaking, as well as digital games, digital art and the internet. The concept of remediation emerged as a means of understanding the impact of these convergent platforms on the aesthetics of image making. The distinction of convergent platforms underlies the capacity of remediation to articulate something about changing textual conventions. Convergence, however, is not only interested in the aesthetic conventions of various media, as it also involves the users of those media, and how their participation flows across the different platforms creating new ways of establishing networks of connections and relationships:

10 > Convergence doesn't just involve commercially produced materials and services traveling along well-regulated and predictable circuits. It doesn't just involve the mobile companies getting together with the film companies to decide when and where we watch a newly released film. It also occurs when people take media into their own hands. Entertainment content isn't the only thing that flows across multiple media platforms. Our lives, relationships, memories, fantasies, desires also flow across media channels. Being a lover or a mommy or a teacher occurs on multiple platforms. Sometimes we tuck our kids into bed at night and at other times we Instant Message them from the other side of the globe. (Jenkins, 2006: 17)

11 Convergence relies on a distinction that reduces the complex environment of digital technologies to a selection limiting communications to those elements that involve some kind of convergent aspect, whether it is the media platforms, the visual and aural aesthetics, or the ways users' 'lives, relationships, memories, fantasies, desires' flow across these platforms.

12 What connects discussions about convergence is, then, a distinction. This distinction, convergent/non-convergent, has proliferated via two main routes of scholarship, those of remediation and what we can designate as participant-flow. Both routes are interested in the emergent practices in aesthetic innovation/assimilation, or of novel modes of participation as a consequence of an engagement with a changing technological terrain. Despite the centrality of convergent technologies, these approaches nevertheless tend to privilege either the human user or the textual convention. As a consequence the interplay between the humans and the technology involved in these processes is less easy to explore.

13 A feature of Luhmann's theory of systems is that connections occur between conscious and non-conscious elements, which in this case would mean the human user and the technological interface with which they work. In the following I more fully outline Luhmann's concept of

communication in order to finally discuss what this will allow us to say about the interplay between humans and the technologies with which they are engaged. My particular focus will be on the interplay between humans and technologies in the context of the impact of digital technologies on expressive practices, with an emphasis on digital games. A central feature of these discussions will be the question: what connects?

Making Sense of Communication

14 In Luhmann's version of systems theory, communications form the material substance out of which a system evolves, and this evolution relies on the connectivity of its communications. To make greater sense of this statement it is necessary to say more about the very specific use to which Luhmann puts these familiar terms. A system is the means through which sense is made of our extremely complex situations. To put it very simply, a system is an ordering and simplification of the multiplicities of possibilities that surround us as life is lived.

15 At its core a system is defined by the communications that take place within it. The relationship between a system and its environment is tentative, but relationships within a system are directly connected, coupled providing they have meaning. Unlike the more conventional definition of a communication that can be likened to a send and receive interaction, in which the sender is given a special status through intentionality, in Luhmann's formulation intentionality is displaced. The meaning of the communication resides in the proliferation of connections that emerges out of interactions, and these interactions can be between both conscious and non-conscious entities. Taken as a schema, a communication is a three-act process divided into 'information,' 'utterance,' and 'understanding.' Through a communication a small number of the possibilities that co-exist on a horizon with many others are selected as information, and consequently a process of simplification begins: 'Communication grasps *something* out of the actual referential horizon that it itself constitutes and leaves *other things* aside. Communication is the processing of selection.' (Luhmann, 1995: 140) A selection can be made by human individuals, for instance, out of all the possible ways of considering digital technologies I have selected digital games. The process of a selection can also be understood to occur via a machine interface. The programmed architecture of a game will offer the gamer a specific selection of moves from a wider array of possibilities.

16 In the terms that Luhmann lays out, a communication happens when the 'information uttered is understood.' (Luhmann, 2006: 47) He does not mean that information has been transmitted from user to receiver, but that instead the participants have understood the process of selection through which communication can occur:

17 > [C]ommunication is never an event with two points of selection ¾ neither as a giving and receiving (as in the metaphor of transmission), nor as the difference between information and utterance. Communication emerges only if this last difference is observed, expected, understood, and used as the basis of connecting with other behaviours. (Luhmann, 1995: 141)

18 In any communication the recipient of the information is cogniscent of a process of selection, even if they are without much insight. Take the example of a gamer playing a digital game such as *Tomb Raider*. The recipient, the gamer, understands that in order to make an utterance, the communicating entity, the game AI, relies on making a selection from information, which in turn is a selection from a multitude of possibilities from an environment. The gamer is able to participate in the communication because they know the process through which the utterance occurs. Similarly, anyone reading this piece of writing is able to see it as an utterance that makes a distinction between different ways of using information about convergence, digital technologies and games.

19 The final step of a communication is the recipient's acceptance or rejection of this communication. Acceptance or rejection does not mean the same as agreement or disagreement, that is something that might follow on from acceptance. If a communication is accepted, via agreement or disagreement, the recipient engages with the codes already set up in the utterance. The gamer, for instance, could accept by continuing to play according to the parameters of the game, or they could reject the utterance and quit. Making a further communication sets up a connection based on an understanding of those codes. The response entails another series of selections, and is contingent on the directionality that emerges in those further selections. When acceptance occurs, the gamer or reader is beginning to participate with the structure of a system of communications,

and as they do so a procession of connectivity is set up through ensuing communications. Accordingly, the meaning of the communication does not reside in the selection of information, but in understanding the difference or distinction between the utterance and the information, and an ability to manage that difference: 'In contrast to the mere perception of informative events, communication comes about only because ego distinguishes two selections and can manage the difference.' (Luhmann 1995: 143) It is in the procession from the initial selection of information, to an utterance, and the understanding of that utterance, that the system begins to take hold. That is, it is not until a subsequent communication, which relies on a capacity to 'distinguish the utterance from what is uttered,' that communication occurs. As David Seidl and Kai Helge Becker state:

> Understanding [...] is the distinction between utterance and information; but whose understanding is of relevance here? Again, for Luhmann, it is not psychic systems — that is, the individuals' minds — that are of interest here. Instead, it is the understanding implied by the connecting communications — in the same way as the meaning of a word in a text is only determined through the following words of the text. Thus, the meaning of a communication — that is, what difference a communication makes for later communications — is only determined retrospectively through the later communications. (Seidl and Becker 2006: 20)

An important point here is that the connection of a subsequent communication begins from the understanding of an utterance, and it follows that the starting point of an understanding is from the information provided in that communication. The referential status of communication becomes clear in this description. Communication is based on the continuity of connections between the communications, but communication itself depends on an understanding of the distinction between information and utterance. If understanding the distinction provides the momentum for the connection, then it follows that the subsequent connection is in part a reference to the original distinction. The connection does not occur outside of this understanding, which makes it autopoeitic or self-referential, in that the distinction is maintained via the connection:

> The fact that understanding is an indispensable feature in how communication comes about has far-reaching significance for comprehending communication. One consequence is that communication *is possible only as a self-referential process*. (Luhmann 1995: 143)

From this definition of communication it also becomes possible to appreciate the distinction that Luhmann makes between a system (or organisation) and its environment. Changes in an environment act as irritants that may be taken up and communicated through a system. However, the communication occurs within the boundaries of the system, not because of any direct connection with the environment. That is, it is only possible to communicate about any changes in an environment through the terms already established within the system:

> The *unity* of communication corresponds to nothing in the environment. Therefore communication *necessarily* operates by *differentiating*...Of course, all communication depends on its environment as a source of energy and information, and every communication indisputably refers via meaning references directly or indirectly to the system's environment. The differentiation relates strictly to the unity and thus the closure of the connection among selections, to the selections of selections contained therein, and to the reduction of complexity thereby achieved. (Luhmann 2006: 44)

The selections made by any participant in a communication result in the closure of connections, so that communications about a complex environment become simplified. Since communications are self-referential, in that the procession of a series of communications always relies on a connection created by an understanding of the distinction between information and utterance, there is a closure of connections. The starting point of one communication to the next is ensured by prior as well as current selections.

As a system creates itself through a chain of operations not just any connection can be made, rather, only those that are defined by the distinction: '[the] system has to be capable of controlling its own conditions of connectivity.' (Luhmann, 2006: 49) For communication to be successful the system needs to be establish conditions that make successful communications more likely, to overcome the impossibility of them ever happening.

> If a system has to decide or, to speak with greater caution, create couplings between one communication and another, then it must be able to discern, observe and establish what is compatible with it and what is not. (Luhmann, 2006: 49)

Another way of putting this is that a system enlists only those elements that will have meaning within that system, but at the same time an 'element is constituted as a unity only by the system that enlists it as an element to use it in relations.' (Luhmann, 1995: 22) Elements do not have an absolute meaning, but only those conferred by their function within a system.

Organising Convergence

29 These more abstract ideas about communication and systems can be aligned with the concept of convergence. As I outlined earlier, convergence operates through two primary routes of discussion. The primary code is convergent/non-convergent, and this proliferates through two further distinctions that enlist elements that allow relations to be established through communication about remediation and participant flow. Although the initial distinction leads to a simplification of the complex environment of digital technologies, communications subsequently proliferate by enlisting elements that have meaning within the confines of the term convergence.

30 When considering a disciplined formation of communication, such as academic writing, any progression operates under a series of controlling restraints. Luhmann's concept of an organisation is useful in thinking about how such restraints exert control over what elements can and cannot be enlisted as communications. An organisation is premised on the condition that the proliferation of communications operates under some form of control. In an academic discussion of convergence, some of these restraints concern the protocols of performing academic communications, while others concern the subject-specific selection of information that will be used during the connective process of a communication. Even though they continue to transform, it is fair to claim that the form of academic discourse has been decided. There exists a style of language one is able to use, modes of expression, length of paper, speech patterns and the performative mode one might adopt in giving a presentation.[2] Before the question of content comes into play, all of these restraints need to be overcome for a piece of writing or a presentation to be acceptable as an academic communication. If academic disciplines and their sub-disciplines are seen as examples of organisations, then such restrictions are decisions. A decision is a particular kind of communication, a selection of one possibility from many:

31 > A decision may then be comprehended as the transformation of the form of contingency. *Before the decision*, several possible decisions exist, thus the space of open possibilities is limited. *After the decision*, the same contingency exists in a fixed form: the decision could have been made differently. (Luhmann 2003: 37)

32 Just as is the case with communication, a decision is only 'active' once it connects to other decisions, and so generates the context for other decisions or conditions one's expectation or anticipation.

33 These ideas can be more directly taken to the procession of ideas around convergence. Making sense of the art world through communication involves first enlisting elements that are relevant to a particular system. Take for example a developing area within digital games, animation and also fx work in live-action cinema, that of games engines. These are the core software algorithms of games that create real-time images. They include a renderer for graphics, a physics engine that configures 'environmental reactivity,' as well software for sound, animation, the game's AI and so forth. A game engine can be shared by different games, either within an individual company [Rockstar games uses RAGE for both *Grand Theft Auto IV* (2008) and *Rockstar Table Tennis* (2006)], or across several companies. The Doom 3 engine is used for *Doom 3* (2003, id software), *Quake 4* (2005, Raven Software), *Prey* (2006, Human Head Studios) and *Enemy Territory: Quake Wars* (2007, Splash Damage). This sharing of an engine, either from within a company or through buying one in, economises on the amount of software development necessary for any particular game.

34 There is any number of ways in which communications about game engines could occur, through the legal system for copyright issues or through the economic system for share ware, amongst others. Given the distinction evident in my stated interest in expressive practice I am not likely to select information that would be enlisted within the legal and economic systems. Of greater relevance are the consequences of the sharing of game engines across a range of media platforms. As an example of convergent culture, these engines are not only used in the games industry, but are central to the growing use of pre-viz in popular cinema, and also in the machinima movement. In Hollywood, the fx company Pixel Liberation Front has been in existence

since the late 1990s, and undertook pre-viz work on recent films including *Superman Returns* (2006), *Dreamgirls* (2006) and *Spider-Man 3* (2007).[3] Instead of static storyboards, moving animatics are created, and the game engine allows for different lighting, framing and lens set-ups to be explored. Where Pixel Liberation Front operate in the high end of moving image production, more independent practitioners such as machinima artists exploit the technology in much the same way but do so in order to create animated films. Originally a so-called underground movement associated with games modders, machinima is going more mainstream as the technologies are configured so that less specialist users are able to exploit them.

35 Using the formation that has settled around convergence allows much to be said about the impact of this sharing of game engines. As game engines have developed they have formed an irritation within the environment of digital media, crossing over into the environment of the art world of popular cinema. The diverse ways in which games engines are exploited, either within the regimes of elite pre-viz artists and games designers, or by the growing band of indie games designers and machinima animators, is a prime example of a convergent technology, crossing platforms and being mobilised by an array of interest groups, from the games modder shut away alone in a room, either communicating on-line or going solo, to the industry drone working away at scene 3001 in the production of game XYZ. Described in this way, it is easy to see how game engines could be enlisted as an element in communications about convergence that speaks to aesthetic conventions or participant flow. However, if we want to ask a question about the implication of this moment of convergence for the interplay of human users and these technological platforms as they undertake expressive practice we are left with a series of choices that illustrate both the possibilities and limitations of convergence discourse.

36 One of the features of a distinction is its designation of elements through which communications can connect. Equally, however, a designation indicates that other elements were available for selection and so other utterances and communications could be made: to make a distinction always necessitates designating something unsaid. If a participant is able to manage the difference of a communication, then they also will be aware that things have not been said. The organisational decision to speak about film, for instance, initially limited communications to film, but it has always been clear that the art world within which cinema exists has other kinds of elements.[4] The decision to change the title of the US-based Society of Cinema Studies to the Society of Cinema and Media Studies demonstrates that the distinction on which cinema studies was initially founded could not continue to operate as an effective decision. This reveals another important facet of systems theory. The operations of communications are closed, but they are not unaware of irritations within the environment. As the environment of the art world of cinema has altered, as moving imagery has proliferated from cinema to television to games, from analog to digital, from static single screens to multiply mobile ones, communications have been bubbling up, beginning to form a competing formation within the discipline of cinema studies. The decision to allow media into the name operates as a symbolic change that reveals the already extensive possibilities of other utterances about other media within the organisation.

37 The development of new technologies in the art world of popular cinema adds an irritation into the environment that challenges the ways in which the code for convergence continues to proliferate by generating a different range of selectable elements. Once something exists within the environment of an art world, it has the potential to become enlisted as an element within the organisation for communications about convergence, and it also has the potential to establish new connections. As communications accumulate through these new connections they allow the organisation of communications about convergence to continue to proliferate but add further dimensions to a debate. The emergent presence of technological innovations such as digital intermediates, game engines, computers with processing power sufficient to work with RGB ratios of 4:4:4 draws greater attention to the complex interplay between practitioners and technologies in the processes of expressive practice. Luhmann's conceptualisation of communication is particularly well placed in allowing this interplay to be articulated.

38 This point can be illustrated by looking at some of the ways in which digital games are approached using the terms of convergence. For instance, the circularity of influences running between games and cinema has been a source for debates concerned with remediation. This may involve a generalised discussion of the increasing realism of digital games, which is essentially about the

imagery becoming more like that of live-action cinema, or a focused discussion of a franchise including both games and cinema, such as *Resident Evil*. Capcom initially released the digital game in 1996, and the first film version, directed by Paul W.S. Anderson, was released in 2002. Much of the discussion of this latter film not only involves comments on the imagery, but also on the plot devices shared by the games and movies. The remediation of stylistic devices cycle from the original games through the films, and back again as more films and games are produced. Taking the participant route of convergence culture, *Resident Evil* is a game that has excited the interest of modders. A brief search on the internet reveals forums discussing various mods for *Resident Evil* and also video clips of such mods on YouTube. It would be possible to explore both these terrains of convergence surrounding *Resident Evil* through a focus on expressive practices. In considering the participant route, one might assess the modders self-expression via their desire to rework aspects of a digital game and to share it with others via an on-line community. If thinking about the expressive practices of game's remediation of aesthetic conventions, one would most likely look at the operation of conventions within the final organisation of an image. In making an assessment of remediating practices a comparison is made across the different platforms, drawing out the ways in which the stylistic codes from different media are combined. Both of these re-iterate and are shaped by the convergence/non-convergence distinction: modders converge via the technologies, while remediation involves a coming together of textual codes, often through a convergence of platforms.

39 A recently developed game, *Okami* (2007), reveals the limits that these kinds of approaches place on thinking about expressive practice. At the moment there is little web presence of *Okami* mods, but the game can be enlisted into a remediation-influenced approach. The aesthetic of the game is unusual, as it is derived from Japanese cultural traditions. The imagery is based on a combination of Japanese woodcuts, ukiyo-e style, and the watercolour tones of sumi-e. *Okami* remediates the visual codes of traditional Japanese imagery, and also mythologies to provide the story-world of the game. While this kind of information about *Okami* is useful in allowing a gamer greater knowledge about the cultural referencing that runs through the game, it does not necessarily say very much about the development of game. The aspect of the game's development that has interested commentators is the 'celestial brush,' a unique tool that allows the gamer to alter the physical environment in which the game's characters perform.

40 In order to delve further into the expressive practices involved in the development of games, to say more than either participant flow or remediation, a different selection of information becomes necessary. For instance, I wish to enlist information about the impact of the changed materiality of digital environments in order to consider the expressive practices of game builders and filmmakers. This involves enlisting information about the nature of digital images. When constructed using a computer, as is the case with fx in live-action cinema, digital intermediates, digital animations and games, digital imagery is fully accessible to the manipulations of digital technologies. That is, any part of the image can be manipulated using the appropriate digital platform. Therefore the expressive possibilities available to an artist are contingent on their capacity to work with digital tools, which in turn is contingent on the capacities of those digital tools. Just as a game AI can participate in a communication with a gamer by playing a role in selecting information, digital tools too function as communicating devices within expressive practices because of what they can or cannot select during interplay between a human user and a technological interface.

41 The development of the celestial brush of *Okami* has produced an interesting series of communications about the capacities of digital tools, which can be enlisted into communications about the interplay of human users and technological interfaces. Within the game the celestial brush allows a gamer to change an environment's dynamics in a constructive way by altering the colour and detailing of objects, as well as enabling tactical play within the game. Although using the brush is a tactic within game play, the process is also an act of remediation. The celestial brush allows gamers to create a gust of wind, and Katsushika Hokusai's (1760-1849) landscape work has been noted as a key influence. The connections established via remediation can be taken further by bringing Jeff Wall's *A Sudden Gust of Wind (after Hokusai)* (1993) into the discussion. Wall's image is in fact a collage of more than a hundred digital images manipulated so that the whole captures movement in a still image in a quite striking way. This connection takes me back to the point that

to understand the expressive work of any given text the evolution of a new communication is not only complicated by the products of competing media, but also by the competing processes involved in the creation of that communication.

Conventional approaches to convergence emphasise media interaction via textual conventions, or the flow of information between platforms:

> Medium-specific perspectives may limit our understanding of the ways in which media interact, shift and collude with one another. The evolution of new communications systems is always immensely complicated by the rivalry of competing media and by the economic structures that shape and support them. (Thorburn and Jenkins, 2003: 11)

Rather than looking at competing media, another approach is to instead consider the competing processes that influenced the construction of moving imagery. For instance, the final look of *Okami* can indeed be described as remediating the conventions of both ukiyo-e and sumi-e, but this occurred by necessity rather than by design. The original intention of the game's makers, the now defunct Japan-based subsidiary of Capcom, Clover, was to render the images as photorealistic 3-D images. During the development of *Okami*, the CEO of Clover, Atsushi Inaba, discussed in interview how the limitations in the rendering time capacities of the Playstation 2 (PS2) platform caused the production team to the reassess how they should design the look of the game:

> We were as I mentioned previously, constrained by the hardware performance. However, this caused the 3D style of brush touch to be born so Okami as we know it would not have existed if we had not encountered issues with the hardware. All the consoles come with some restrictions, so this probably makes developing games more challenging and interesting. (Inaba, quoted in McGarvey 2006)

In a later interview, at around the time of the game's release in early 2007, Inaba was also questioned about the inspiration for the concept of the celestial brush:

> Actually, to tell you the truth, it wasn't originally in the game; it wasn't part of the original concept. It's sort of something that was borne of the graphical style of the game. Once we fixed ourselves on a graphical style and got down to the brushwork, we thought, "Wouldn't it be great if we could somehow get the player involved and participate in this artwork instead of just watching it?" That's how the idea of the Celestial Brush was born. (Inaba, quoted in Shea 2007)

Throughout this article I have been working with the ideas of Niklas Luhmann since his model of communication gives us a way of thinking about connections established across communications. From the above description I can select information about the development of *Okami* and use it to argue that the processes of production be conceived as a series of communications, and that tracing the connections established in these connections gives insights into the interplay of practitioners and technological systems. The first point to bring out is that the elements enlisted in the communication are not only derived from the verbal communications of the production team, they also derive from the capacities of the technological processes that are engaged in the activities of the design group. Both the design team and their technological interfaces form the organisation through which the game is developed. When a practitioner is making a selection of information that they want to enlist in their communication, in this case an image they are aiming to produce, in addition to any cultural or aesthetic influences, their selection can draw on the possibilities of the technological interface that they are using. In creating a digital game the range of selections will be potentially enormous, but are likely to include the design of the game play, the architecture of the game, the visual and aural imagery. The concept of organisation is again relevant. An organisation relies on decisions, and game design involves decisions. For *Okami* the practitioners worked according to the decision to construct 3-D photoreal imagery drawing on influences from Japanese cultural traditions. The elements enlisted in order to achieve this would be connected according to that decision. We can envisage artists using 3-D packages to draw environments, developing the story-telling to highlight the aesthetics of 3-D imagery. One of the few examples of original imagery of the game shows the white wolf, Amaterasu, running through the depth of the screen with grass reactive to her presence.[5] Each of these are communications, and as they develop they maintain the integrity of the decision while other elements remain unenlisted, part of the complex environment of possibilities. Just as communications are autopoeitic, the connections generated through a decision are so too.

To describe the expressive practice of such a process, it is not necessary to think about the intentionality of an individual. In the same way as for other communications, meaning emerges through the connections that are established as the communications proliferate. Rather than looking at anything to do with originating intentionality we can look instead at the outcome, and understand how the operations of the communications have yielded certain expressive practices and not others. This is not to say that individuals do not start out by acting with intention, but that their intention does not necessarily connect with the outcome of their communications. Within Luhmann's theory, it is the system that generates its meaning through a proliferation of communications, and both the human and technological participants provide the elements around which relations are formed in a series of communications. Therefore, the expressive practice that emerges comes out of the relational interplay between these elements. I am not suggesting that expressive practice emerges randomly, but that it evolves out of the possibilities offered by both technologies and practitioners, with each step a communication based on the selection of information from those possibilities.

50 This claim can be given more substance by continuing to trace the connections evident in Atushi Inaba's statements about *Okami*. The game designers set out to create a game that would not only be successful but also distinctive, and in order to do so they decided to exploit Japanese cultural traditions, something that had not been much done in the game industry. Based on the accolades the game has received these intentions were achieved, though the route by which this occurred was never within the game designers full control, but rather down to the organisation within which they operated. They, of course, are part of this organisation, but the organisation itself is autopoeitic and so too played a role in the outcome. Take the decision to use Japanese traditions in *Okami*. This placed limits on the possible selections for the visual and aural architecture of the game, and also the gameplay, since the creators wanted to draw on Japanese legends. The decision exerted an influence in such planning, but also entailed fitting in with the limits of the possible selections, as is evident in the problem with the rendering power of the PS2 technology. The problem of slow processing capacity, given the detail of the photoreal imagery, necessitated a change in decision. As described by Inaba, the process occurred as followed:

51 > Originally the Director wanted to create a realistic looking world, but we had to give up on this concept as we were not able to realise the level of detail we wished for given the constraints of the hardware. One day an art designer came up with the brush painting style, we all liked it and it became the final style. Therefore I can say that team members did not talk to decide the direction but an inspiration of a designer stimulated the director's sensitivity and the art as we know it today was born. (Inaba, quoted in Shea 2006)

52 The initial decision to build a game exploiting the visual and aural iconography of Japanese culture still holds in this new direction, but the PS2 problem acts as a selection, and 'it's' communication entails further selections that lead to a communication about using a brush painting style. As this last communication proliferates, other elements, which had initially been confined to the environment, become enlisted into the communications through which the game was designed. If we apply this kind of thinking to the celestial brush, the unique innovation of *Okami*, then the expressive practice that this entails occurs as a result of the relations between the elements that are enlisted within the communications of the production team. The interplay of selections involves both human and non-human participants, and neither fully determine the actions of the other.

What Connects?

53 To ask what connects, then, becomes a complex question, whose answer depends on the distinction used in making the selection of information to deploy during a communication. Luhmann's central concept of autopoeitic communications provides a means of exploring what current communications have allowed cinema studies scholars to say or not say about digital practices. The predominant debates of convergence have accumulated around the remediation of aesthetic conventions across different media, and around the ways different participant groups exploit the possibilities of the emergent techniques. These two routes of proliferating communications continue to engage with the impact of digital technologies on the changing patterns of media aesthetics, the numerous platforms for consumption of media texts, as well as the growing ways in which we participate in digital cultures. Despite everything we do know from

these ideas, they have not really told us much about the changing nature of expressive practices within the digital cultures of various art worlds.

54 My discussion of *Okami* uses Luhmann's concept of communications to suggest an alternative way of thinking about expressive practices. They can be conceived of as a series of communications that connect through an organisation of human and non-human elements consisting of practitioners and the interfaces they utilise in their creative work. There are several outcomes of taking this approach, one of which is to disperse the capacity of being able to mark a difference between human and non-human elements, and also to displace the notion of intentionality. Given that this article is about expressive practice, such a tactic may well seem bizarre. However, in the context of an art world that relies on teams of workers, of networks of computers and other filmmaking technologies, of assistants and designers who may never set eyes on each other, let alone reside on the same continent, any concept of intentionality was going to have to deal with dispersal. This is not to suggest that filmmakers, animators and games designers act without intention as they generate moving imagery. Instead, it is to see that the visible outcome of making moving images emerges through a proliferation of connections across an array of both human and technological activities.

Author's Biography

Aylish Wood has published articles in *Screen, New Review of Film and Video, Film Criticism and Animation: an Interdisciplinary Journal*. Her recently published book *Digital Encounters* (2007) is a cross media study of the impact on digital technologies in cinema, games and installation art, with an emphasis on the on narrative organisations and t he agency of viewers.

Notes

[1] Henry Jenkins is probably the foremost scholar on the ways in which users exploit convergent platforms, while David Jay Bolter and Richard Grusin's notion of remediation continues to influence how we understand the coming together of textual conventions.

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[2] The *MLA Handbook for Writers of Research Papers* demonstrates that decisions have been made about what is acceptable for academic writing, and the history of that particular handbook would also reveal how writing has transformed.

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[3] Pixel Liberation Front's website includes illustrative materials that can be viewed on-line. See https://www.thefront.com/.

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[4] Not all communications outside of film were excluded, but they did remain peripheral.

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[5] See for instance, the video of the two versions of the opening scene, which can played at https://www.gamevideos.com/video/id/5057. The video allows a comparison between the more photorealist 3-D imagery and that of the more graphical imagery used in the final game.

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References

Bakken, Tore, and Tor Hernes. *Autopoeitic Organization Theory: Drawing on Niklas Luhmann's Social Systems Perspective* (Copenhagen: Copenhagen Business School Press, 2003).

Bolter, David and Richard Grusin. *Remediation* (Cambridge, Mass.: The MIT Press, 1999).

Jenkins, Henry. *Convergence Culture: Where Old and New Media Collide* (New York: New York University Press, 2006).

Keane, Stephen. *Cinetech* (London: Palgrave, 2006).

Luhmann, Niklas. *Social Systems* (Stanford: Stanford University Press, 1995).

Luhmann, Niklas. 'Organization', in Tore Bakken and Tor Hernes (eds). *Autopoeitic Organization Theory: Drawing on Niklas Luhmann's Social Systems Perspective* (Copenhagen: Copenhagen Business School Press, 2003): 31-52.

Luhmann, Niklas. ‘System as Difference’, *Organization* 13.1 (2006): 37-57.

Manovich, Lev. *The Language of New Media* (Cambridge, Mass.: The MIT Press, 2000).

McGarvey, Sterling. ‘Running with the Wolves: Atsushi Inaba talks Okami (PS2). The head honcho of Clover Studios briefly breaks down his upcoming opus’. Feb. 23, 2006. https://uk.ps2.gamespy.com/playstation-2/okami/690940p1.html.

Seidl, David and Kai Helge Becker. ‘Organizations as Distinction Generating and Processing Systems: Niklas Luhmann’s Contribution to Organization Studies’, *Organization* 13.1 (2006): 9-35.

Shea, Cam. ‘Okami Interview AU: Okami’s Producer on the stunning art direction in the game’. *IGN AU*, Jan 30 2007. https://uk.ps2.ign.com/articles/759/759997p1.html.

Thorburn, David and Henry Jenkins. *Rethinking Media Change* (Cambridge, Mass.: The MIT Press, 2003).

Films Cited

Dreamgirls (2006, Bill Conlon)

Resident Evil (2002, Paul W.S. Anderson)

Spider-Man 3 (2007, Sam Raimi)

Superman Returns (2006, Bryan Singer)

Games Cited

Doom 3 (2003, id software)

Enemy Territory: Quake Wars (2007, Splash Damage)

Grand Theft Auto IV (2008, Rockstar)

Okami (2007, Capcom)

Prey (2006, Human Head Studios)

Quake 4 (2005, Raven Software)

Resident Evil (1996, Capcom)

Table Tennis (2006, Rockstar)

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