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Theorizing Studio Space: spheres and atmospheres in a video game design studio

James Ash (james.ash@newcastle.ac.uk)

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Introduction

Writing in the first part of his *Spheres* trilogy, Peter Sloterdijk (2011) argues that human existence and dwelling be rethought through the concept of spheres. For Sloterdijk, spheres are forms of shelter that humans generate in order to protect themselves from the openness of the world (Elden and Mendieta 2009, Elden 2013). Spheres are both material architectural forms of inhabitation, such as buildings as well as more ephemeral constructions, such as psychological states used to protect oneself from mental harm (Castro Nogueira 2009). Spheres can be understood as both individual bubbles in which humans find themselves, but also shared spaces that allow and enable contact to be possible between beings. For example, a campfire could be considered to generate a sphere in the sense that it provides a focal point for people to gather round, opening a space for conversation and shared warmth and in doing so separating the campers from the cold and darkness of the woods where the campfire was located. In this sense, the spatial extension of spheres is limited by their capacity for transferring matter or energy between beings. In Sloterdijk's (2011, p. 13) words: "the limits of my capacity for transference are the limits of my world". At the same time every act of transference is itself the creation or re-enforcement of a sphere and an associated interior in which activity can take place: "every act of solidarity is an act of sphere formation, that is to say the creation of an interior" (Sloterdijk 2011, p. 12).

This chapter develops Sloterdijk's account of spheres to theorise the 'spaces' of studio processes. Specifically it argues that studio space should not be understood as geometric containers in which action takes place, but instead as a series of co-existent spheres and atmospheres that shape the possibilities for action of those that work in studio settings. As I argue across the chapter, non-human and technical objects, in concert with human bodies are key to the construction of spheres and atmospheres. As such, space itself can be theorised as the gaps or spaces between objects, which work to construct a particular sphere and atmosphere of activity.

To make these claims, the chapter examines an ethnographic case study of a videogame design studio which I observed creating a First Person Shooting game for Xbox 360, PlayStation 3 and PC. Through this case, I show that the many objects that are utilised in the creation of the game help constitute a multiplicity of spheres and atmospheres of the studio (on videogame design ethnography also see Ash 2010, and on videogame design more broadly see Ash 2012, Ash 2013a).

To make the argument about the studio as sphere the chapter that follows is organised into two parts. In the first, I theorise the notion of space in relation to accounts of work and productivity in studios and argue that space can be understood as sets of spheres, which all have their own atmosphere that in turn shape the potential for work to occur. In the second part I explicitly develop the concept of ‘atmosphere’ in relation to the videogame studio and shows how the various technical objects that make up the studio environment create multiple spheres and atmospheres. In conclusion the chapter points to how the concepts of spheres and atmospheres contribute to broader understandings of studio spaces.

Spheres, Space and Atmospheres

When imagining a studio space, we may consider its physical structure, its size and shape or the objects that exist within that space. For example desks, chairs, computers and white boards etc. Work, in what might tentatively be called studio studies after this book, is beginning to recognise the importance of space to how activities unfold within studios. This work has been keen to argue against a purely geometric view of space as a container for action, instead positing a relational view of space. For example ethnomethodological accounts of studio space argue that “instead of treating ‘space’ and ‘place’ as ‘already there’ when interaction begins and statically encompassing it as it unfolds, it is proposed that these phenomena are accomplished, maintained and dynamically shaped in and for a particular interaction...” (Broth 2008: 1998).

As Mackenzie (2006) argues, the objects that mediate interactions in studios have important repercussions on the types of space and knowledge that is generated. Writing in *Cutting Code* Mackenzie describes the development of a software program at a British company Knowledge Management Systems (KMS). Tasks associated with the project were assigned to paper cards with different colours and numerical values, which indicated the type and relative difficulty of a task that needed to be completed. The movement of the cards around the studio space at KMS was significant: “cards were strewn on tables singly and in packs; they were pinned to the memo board in rows and sometimes in envelopes. People walked to the memo board, put cards on and took them off. Individual cards were scattered between work stations...The production, distribution and consumption of these cards threaded through much of the work of the Universal team” (ibid. 2006, p. 148). For Mackenzie the movement of the cards and their associated tasks highlighted a contestation of agency: “whenever code or programming becomes an object of attention as such, agency is contested. Here, the contest was played out between different doctrines for the control of software production. These cards literally moved control of the project away from the hands and eyes of the managers” (ibid., p.148). Space and agency within a studio are inherently linked. As Mackenzie suggests, the space of KMS was actively produced through the relations between various objects and actors. In turn, this relational account of studio space points to the ways that any form of knowledge produced within a studio does not simply emerge from individual human bodies or brains, but is co-produced with a range of objects, which in turn produces the space of the studio as a particular location in which particular activities take place (Farias 2015).

While these accounts of studio space are certainly interesting, they also have some limitations. First, these accounts tend to underplay the emotional or affective aspects of labour. In Mackenzie’s case, although issues of emotion and affect are raised in relation to KMS they seem incidental to the type

of knowledge and space that is created. Second, when emotion or affect is discussed in relation to studio space, it is often considered as a uniquely human phenomenon. That is to say, affects or emotions are implicitly posited as a product or relation between different bio-culturally located human bodies. Here affects and emotions are considered in very human terms as anger, frustration, despondency etc. In doing so the affective capacities of the non-human are also ignored. Instead non-human objects become considered as background props or tools that only have agency when utilized through human practices.

Against this, and following Yaneva (2009) I want to argue that the affective capacities of non-human objects are absolutely fundamental to how a studio space is produced and that affect also shapes the potentials for new knowledges and objects to be generated. Affect is not then an additive or emergent effect of a relation between human bodies, but one of the basic components that enables the possibilities and limitations of a space to appear through non-human objects as well. To make this claim, I use the work of Sloterdijk and Anderson to consider studio spaces as constituted through multiple spheres, each with their own atmospheres.

Drawing upon the work of Bohme (1993) and McCormack (2008), Anderson (2009) has developed the concept of atmosphere to discuss the ways in which spaces are loaded with particular feelings that do not seem to originate from any one person or object (Adey et al. 2013, Wetherell 2013). He defines atmosphere as: “perpetually forming and deforming, appearing and disappearing, as bodies enter into relation with one another. They are never finished, static or at rest” (Anderson 2009, p. 79). What is crucial to Anderson’s account is the notion that: “On the one hand, atmospheres require completion by the subjects that ‘apprehend’ them. They belong to the perceiving subject. On the other hand, atmospheres ‘emanate’ from the ensemble of elements that make up the aesthetic object.” (ibid.). For Anderson, atmospheres are ambiguous and “emanate from but exceed the assembling of bodies” (ibid., p. 80). The concept of atmosphere arguably emerges from a meteorological metaphor of gaseousness. As Anderson suggests, the etymology of atmosphere is based on two roots: “atmos to indicate a tendency for qualities of feeling to fill spaces like a gas, and sphere to indicate a particular form of spatial organization based on the circle” (ibid.).

Sloterdijk’s (2011) notion of spheres offers a linked but alternate concept of atmosphere for thinking about the space of the studio. For Anderson an atmosphere is an open assemblage of elements, which change when new elements enter or leave the scene (also see: Paulos et al. 2007, Bille 2014, Edensor 2014, Healy 2014, Shaw 2014). For Sloterdijk, atmospheres emerge within spheres and are specific to those spheres. Here elements of objects that might affect the atmosphere of a sphere can’t simply leave or enter freely, without that sphere breaking down, precisely because the sphere acts to both bound and separate the atmosphere from a broader world or environment. Sloterdijk (2009 n.p.) offers a useful summary of this argument in the following quote: ‘being means someone (1) being together with someone else (2) and with something else (3) in something (4). This formula describes the minimum complexity you need to construct in order to arrive at an appropriate concept of world’ (ibid.). In the language developed here (4) is a sphere, while (3) and (2) shape an atmosphere. As such, an atmosphere in Sloterdijk’s sense is always bound and linked to a set of non-human objects and is not reducible to a particular human’s affective or emotional state of being (on non-human atmospheres also see: Ash 2013b, Sørensen 2014).

While there are some similarities between Sloterdijk's account of spheres and Anderson's concept of atmospheres, there are also important differences. There is not space to explore these differences in detail here, but my main point is that Anderson's account of atmosphere emphasises non-human forms of affect as key to atmospheres, whereas Sloterdijk considers affect to be only one possible aspect or component of an atmosphere. As such, Anderson's concept of atmospheres is a useful way of focusing on the relationship between spheres and atmospheres as a question of affect. Developing aspects of Anderson and Sloterdijk's account, we can define atmospheres as the affects, forces and affordances contained and brought into being by the specific objects that make up a sphere, which in turn create the appearance of objects as being discreet and spatially differentiated from one another. In other words, spheres and space are intimately linked. Rather than a container in which objects are situated, space can be understood as emergent from the relations and non-relations (Harrison 2007) between objects, which in turn constitute a specific sphere. Objects, spheres and atmospheres are therefore linked to one another in processes of co-emergence.

As I will unpack in the following section, in video game studios objects are always creating spheres, so the constant (re)arranging of objects alters studio spheres by shifting their boundaries and limits. Altering the boundary and limits of a sphere in turn alters the atmosphere associated with that sphere, which in turn alters or reconstitutes the space of the sphere (understood as the relations and non relations between objects). In other words, studio space is constructed, as objects, tools and technologies are arranged and rearranged. More formally put, studio spaces can be understood as the atmospheres that emanate from objects that are intentionally and unintentionally assembled by both humans and non-humans. Expanding upon the concept of atmosphere as a set of affects that are localised to particular spheres, we can consider how studio atmospheres shape the potential for action and work to take place. Turning to the concrete example of a videogame design studio 'Angle Games' we can identify a number of objects that help generate both a sphere of activity and an atmosphere that shapes the conditions of possibility of that sphere.

Spheres and Atmospheres of the studio

Large-scale contemporary videogame design is a complex process that often consists of hundreds of individual staff members working on different aspects of a game. These staff are generally split into teams, such as an art team, a programming team, a testing team and so on. This is a common practice in videogame design and the rationale for a team based approach is that it follows the largely modular nature of games production. For example, artists produce objects and artifacts that make up the game world, which are then organised and arranged by the game or level designers. Each team has a set of specialist skills and use particular forms of specialist hardware and software and this is a key reason why staff are organised into distinct teams.

At Angle Games these teams were split across several buildings on a small campus style industrial development. Each building was designed around an open plan setting and consisted of a variety of objects, such as tables, chairs, computers, specialist console development kits and so on. My own involvement with the game came late in the development cycle. In return for access to the studio I agreed to work as an external quality assurance tester. External quality assurance testers were usually friends of the developers who were brought in towards the end of the project to allow the design

ners to check that the game was playable and enjoyable by people who had not been involved in the project from the beginning. These sessions took place in three hour slots during the evening, between once and twice a week over a two month period.

In this section I want to reflect on my experiences and observations during this testing period and concentrate on three objects in Angle Games in particular: the studio's development servers, audio headphones and screens. I focus on these three objects to show how they each generated a particular sphere (and thus space), which in turn enabled the production of an atmosphere that shaped the game that was being made by the studio. The key point here is that atmospheres, through the mediation and arrangement of objects, can overflow physical, conventional or assumed boundaries between different types of space. As I discuss in the following vignettes, these boundaries might include the distinction between the digital space of the game on screen and the extended space of the monitor on which the game was played or the networked space of the server which allowed information to travel between different screens and the server as a physical object.

Servers

While working on different aspects of the game, staff at Angle needed to be using the same version as everyone else. This was made possible by a networked computing environment where a series of central servers contained the current 'build' of the game. At any one moment the game was in a state of flux and under modification by various staff. Aspects of the game, such as character animations or rules regarding bullet physics, were constantly tweaked on a daily or even hourly basis. The central servers allowed appropriate staff to access the current build to ensure that their work would fit into the existing changes that had been made.

It would be tempting to think of the servers in the offices of Angle Games as a central hub around which the space of the studio was organised. To be sure, other objects and bodies needed to be arranged in a particular way to connect to the server. For example, to access the server developers required a PC, a screen and networking cables, as well as the correct operating system and software to access the files on the server. However, thinking spherically about the server as an object, suggests that the server is not located 'in' a space, nor does it organise other objects in the space that surround it. Rather, the server creates multiple specific spheres and atmospheres between particular pieces of equipment that it connects to and the people who are using that equipment.

An example that clarifies this point is the way that the server was used as part of the multiplayer testing for the game. As the game was not finished, the game could be played via builds that were contained on the server, to which individual workstations could connect. In the multiplayer component, players form teams and play on specially designed maps to fight against one another in real-time. The multiplayer component supported up to twelve players and so needed to be stress tested with the maximum number of players. This would mean people from different departments outside of the internal quality assurance (QA) testing team would have to join in. On one occasion, designers and programmers in one office played against the internal QA team, who were situated in another office. This moment was one example among many others I observed, both through testing and in interviews with staff, where it became apparent that there were significant differences of opinion between the design team and the internal QA team about what the game should be and how it

should work. In this empirical instance, these differences were partly amplified by the spheres the server created. As I reflect in my research diary:

“We were using voice communications for the first time today and the external testing team and the designers were in the same room, playing against the internal QA team. People from design were making jokes about the internal QA, which they heard and commented on as snide remarks. In particular, design were goading the internal QA, repeatedly asking them if they liked the bunker level, which we were all currently playing on. This was in response to earlier feedback from the internal QA, which suggested that the bunker level be dropped from the multiplayer playlist because the design did not work in a particular online mode. Testers from the internal QA team responded to this by making personal jokes about how bad the designers were at actually playing the game. There was definitely some disconnect between the two groups, both in terms of physical location (being housed in different buildings) but also in terms of communication. As the game designers had told me on other occasions, they thought QA couldn't understand the publisher limitations and ideal of the design, while QA had very strong ideas about what features of levels should 'obviously' be dropped that were no good from a design perspective”. (16/08/07)

Although the servers allowed the game to be distributed and updated in real time, this form of distribution was also central to creating an antagonistic atmosphere between the internal QA and design team. In this example, the server created a sphere that was particular to the twelve individuals testing the online component of the game. Here the sphere was constructed via two main sources. First the sphere was constructed from the game level that existed as digital data on the server and expressed as a shared space through each players screen, which allowed players to engage in battle with one another. Second, the sphere was constructed from the voice communication between players, which travelled through the server. The sphere of play was therefore constituted by a number of relations and non-relations between objects and bodies. For example, the voice communication allowed players to relate to one another and provided a sense of proximity. However, the game environment (experienced through the objects of the screen and work station) allowed the players avatars to move around separately and thus created a sense of distance and distinction between players, while remaining a shared location in which contact was possible (for instance, through shooting at one another).

The specific sphere of the multiplayer match, as enabled by the server and workstations in turn created an atmosphere of disconnection and annoyance between members of the internal QA and design team. Perhaps the main reason for this was that, within the atmosphere of the match, the internal QA team felt able to speak their minds in ways that they couldn't in face to face meetings with the designers. As such the spheres created through the relations and non-relations between objects cultivated emotionally charged atmospheres that were localised to that sphere. What is key here is that the sphere and atmosphere of the multiplayer match was specific to the twelve bodies, servers and other associated objects that allowed those bodies to communicate with one another. As the multiplayer testing was going on there were many other staff working on other issues with the game, accessing the servers and performing tasks, which in turn created other spheres and atmospheres of activity and affect. As this example makes clear, studios that use computers or software are not a single site or space, but a variety of overlapping spheres and atmospheres that co-exist alongs-

ide one another and are localised to the relations between particular objects such as computers and servers and the bodies that engage with those objects. In relation to studying studios more broadly, we could consider the types of objects in that studio, which may or may not create overlapping spheres in similar way as the servers at Angle Games.

Headphones

Another notable object that created a sphere and shaped an atmosphere in the studio were headphones. Headphones were seemingly simple, but quite significant objects in the studio, especially during the testing sessions I participated in. The testing booths at Angle Games used PC monitors to display the game on, which did not have inbuilt speakers. In order to hear the in game sounds, the player required headphones to be plugged into the monitor. Headphones produced spheres by connecting the player to the audio environment of the game, which itself was constructed from a series of objects, such as weapons, buildings and vehicles in the game and the software and hardware needed to play the game. These spheres created an atmosphere in at least two senses. First, the headphones and the soundscape they communicated to the player helped create an affective relation with the narrative, story and events in the game. Hearing weapon sounds, or enemies shouting in game helped create a sense of immersion in the gameworld. Second, the headphones also enabled a sense of affective detachment from what was going on in the broader studio space of Angle Games. In this sense, wearing headphones could be considered as creating a small sphere and atmosphere within the sphere and atmosphere created between the tester and the booth they were sitting in.

However, on several occasions during the testing sessions, there were no headphones available for the play testers. This had a range of consequences for the outcomes of the test. In one test I was playing a level that required stealth. If the enemy spots the player they sound an alarm that causes enemy reinforcements to arrive and attack them. As I reflect in my research diary:

“There was no sound on the tests today and at the last testing session this had a big impact on the experience. Me and David couldn't hear if the alarms had been sounded by the enemies or any of the audio cues to hear the position of the enemies... There were audio adaptors for speakers, but the team weren't that interested in having the sound, even though it was mentioned the lack of sound was an impediment to the gameplay ...” (13/08/07)

In another example, while testing a level set in an oil tanker, the lack of sound caused other problems. When steam pipes lining the walls of the ship were shot they emitted steam which could hurt the character. However, without the sound effect of whooshing gas I died a number of times without realising that the gas was present in the level or could cause damage.

Both these examples point to how the presence of objects creates both a sphere and an associated emotional atmosphere for the staff and testers at Angle. Without the headphones, there was a palpable sense of annoyance on the part of the developers when the testers didn't respond to the environments of the game as they wanted the player to. Furthermore, without headphones, immersion in the atmosphere of the game was also made difficult, because testers could hear other employees chat and engage in tasks that distracted them from the game itself. Objects, spheres and atmospheres are therefore intimately linked to one another. The distribution of objects create a sphere of spa-

tial proximity and distance based on the relations and non-relations between objects, which in turn generate a palpable atmosphere that shapes the kind of work that gets done in the studio. In the case of the game audio, without headphones, players could not relate to or experience the in-game sound, which created a fundamental non relation between player and game and generated a negative atmosphere that was specific to that sphere.

Screens

A third and final example can be used to examine the different kinds of sphere and atmosphere that emerge from the relations between objects and humans in the studio. Specifically we can examine how the placement of particular sized screens created an important sphere and atmosphere that ended up contributing to the change of a key mechanic in the game. On my first trip to Angle Games I was asked to play a demo of the opening level, which would be the first thing players would experience if they bought the game. While there were screens and development kits throughout the office I was asked to play on a very large monitor in a cleared area in the middle of the office. As I played the opening level I recalled the following in my research diary:

“The first thing I played was the intro of the first level and its associated tutorial (which introduced the player to the basic mechanisms of the game). The tutorial was not at all obvious to me even though Brian had mentioned Seb had been working on it. It wasn’t clear how the two player mechanic worked...the navigation marker was also unclear and I quickly got lost in what was supposed to be an easy opening section...Kevin picked up on this and thought it was interesting. As I played, a group of five people gathered behind me. They were very eager to watch ‘fresh eyes’ play something they had been working so hard on ...” (09/08/07)

The location of the large television screen and its distance from the surrounding desks created a sphere that allowed the group of developers to gather together and focus on watching me play the game for the first time. This sphere, constituted by the particular relations and non-relations between objects, such as the distance between the desks that allowed more than one person to stand, and the size of the screen that allowed more than one person to watch, created an anxious and slightly tense atmosphere as the developers looked on, hoping I could make my way through the tutorial without too many problems. When it became apparent that I was having problems, the five developers became more anxious. Indeed, we could argue that the co-presence of bodies in the same sphere created a more anxious atmosphere than if only a single developer was watching. As Kevin realised the problems I was encountering would need to be fixed, his quiet mutterings had a contagious effect on other developers who came to see what was going on. This atmosphere was not simply shaped by the fresh eyes of a newcomer (although that certainly contributed to the production of this atmosphere). Rather it was the arrangement of objects and the size of the screen that created a sphere in which people could gather to watch a newcomer play the game, which co-contributed to the production of the anxious atmosphere. In other words, the space created by the opening between objects (such as desks and chairs) allowed the developers to gather and stand together, which in turn amplified the collective emotional and affective response they had to the situation. Indeed, after this event both the opening tutorial section and the navigation marker were redesigned for the final release of the game. While it is impossible to know whether this event in particular was central to the

decision to rework these systems, this sphere certainly created an atmosphere in which multiple designers at the studio recognised that something needed to change about these systems.

Across the three vignettes in this section I have gestured towards a few of the spheres that emerged from the (non)relations between objects and humans at the Angle game studios and how these spheres generated atmospheres. In turn, I have suggested that these atmospheres have tangible effects on the emotional and affective sensibilities of those working within them. However, it is important to state that the atmosphere of Angle Games (or any studio) was not a single thing that enveloped the entire studio. Rather, Angle games was a site of multiple spheres that were appearing and shifting at any moment as objects were moved, added and modified at the studio. In this case, spheres and atmospheres are multiple phenomena that emerge from the localised (non)relations between objects and undergo more or less continual change. With this in mind, the objects examined in this section are only a small number of the objects that constituted the multiple spheres and atmospheres of Angle games. However, while modest, it is hoped that these three vignettes provide some openings to begin to think productively about studio spaces as atmospheric.

Conclusion: Spatial Atmospheric

This chapter has developed the concept of spheres to think about the production of particular atmospheres within video game studio spaces and the effects of these atmospheres on the quality of products that are produced. An account of studio space as multiple spheres with particular atmospheres has a number of implications for studio studies more generally. Firstly the concept of atmosphere troubles simple accounts of work, when work is understood as the instrumental undertaking of an activity by a human being for some end goal. From a spherical perspective, work is also about creating and maintaining multiple spheres and atmospheres in which the right kinds of activity can take place. Furthermore work is thoroughly distributed across a set of non-human entities, all of which inhibit and enable the cultivation of appropriate atmospheres within a studio. Secondly the issue of intentionality and authorship is also radically called into question. A spherical account highlights the difficulty in pinpointing the location or origin of a particular idea or catalyst that is central to the success of a product (either technically or commercially) within a particular individual human body or object. Perhaps it is better to say that it is the spheres and atmospheres themselves (that exceed any individual body or object) that are equally responsible for a moment of artistic inspiration or the innovation that leads to the development of particular feature of a product or artwork in a studio space.

More generally, the chapter has developed Sloterdijk's notion of the sphere to think about space as multiple, fragmented and localised to the relations and non-relations between particular objects. This has been achieved through linking Sloterdijk's account of spheres to Anderson's notion of atmospheres. Creating this link has allowed me to discuss both the affective relations between non-human objects and the emotional qualities created through encounters between human and non-human things in productive ways. This notion of spheres and atmospheres complicates an account of the studio as a single place or site. Rather, any studio is a continuously shifting set of spheres and atmospheres within which localised struggles and encounters take place between a variety of objects and bodies, many of which do not appear to the humans that supposedly wield authority in these studios. While I have used the concepts of spheres and atmospheres to talk about videogame

design studios in particular, these concepts also have important implications for thinking about studios more broadly. These implications are two fold.

First, the notions of sphere and atmosphere allow us to theorise action as occurring between different spaces which are often considered discreet or distinct from one another. For example, the sphere and atmosphere of a space are not just determined by physical extension. Objects that appear on screens or sounds pumped through headphones can contribute to broader atmospheres in ways that cut across distinctions between the digital space of the game or software or screen and the physical space of the studio in which these objects are located. Indeed, the key strength of the concept of sphere and atmosphere developed here is that it allows us to cut across distinctions that may seem to limit the affective capacities of objects to particular zones or areas. Rather than thinking in terms of type of object or type of space, we can instead classify spaces through the types of sphere and atmosphere they create.

Second, the concepts of sphere and atmosphere emphasises the multiple nature of space. Spaces are not one, but many. Spaces, defined as set of relations and non-relations opened up within a particular sphere of objects, can overlap and co-exist without necessarily appearing to the human beings present within a particular situation. This understanding of space complicates how we might investigate a seemingly obvious or normal situation or space. Rather than as a single scene apprehended by a human body, any one set of objects can open up multiple spheres and atmospheres, depending on how a human body might encounter these objects or how these objects might encounter one another.

Indeed, this notion of studio space as multiple may help explain why it is so difficult to create coherent and successful products and artwork within studios. Speculating beyond the particular examples developed in this chapter, success seems to be a matter of calibrating the multiple spheres and atmospheres that emerge in a studio in an attempt to cultivate some kind of shared atmosphere. Unfortunately, if we take a non relational account of space seriously, spheres and atmospheres cannot every be fully shared, because they are specific to the relations between particular objects. If one attempts to alter the relations between the objects that make up a sphere, then one ultimately changes the atmosphere and therefore the creative or productive potential that atmosphere may contain. Studio studies is an important new field of inquiry and it is hoped that the concepts and examples developed in this chapter begin to offer some ways for thinking about how products can emerge from, while also being potentially suffocated by, the multiple spheres and atmospheres that make up studios.

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