

Affinity Spaces and 21st Century Learning

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# Affinity Spaces and 21st Century Learning

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James Paul Gee

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This article discusses video games as “attractors” to “affinity spaces.” It argues that affinity spaces are key sites today where people teach and learn 21st Century skills. While affinity spaces are proliferating on the Internet as interest-and-passion-driven sites devoted to a common set of endeavors, they are not new, just being transformed by digital technologies. Affinity spaces, old and new, organize teaching and learning in quite different and deeper ways than do schools. At the same time, they organize people and productivity quite differently than do traditional institutions.

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## Introduction

In this article, I want to talk about video games as “attractors” to “affinity spaces” (Gee, 2013a, b; 2015; Gee & Hayes, 2011). I will argue that affinity spaces are key sites today where people teach and learn 21st Century skills (Trilling & Fidel, 2009). Affinity spaces organize teaching and learning in quite different and deeper ways than do schools (Gee, 2004).

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## Traditional Affinity Spaces

To understand what affinity spaces are, it is best to start with traditional ones. When I was (long ago) young, I was part of a devout Catholic family that interacted almost exclusively with fellow Catholics. What I will call a Catholic “affinity space” was a big part of our lives.

This Catholic affinity space was made up of smaller spaces and routes among them. These sub-spaces included our home (with its religious statues and images, places for devotional activities, and a room filled with religious books); other people's Catholic homes; our elementary school; our parish church; the local Catholic high school and college, where it was assumed we

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would all end up once we left elementary school; other local Catholic churches, where we attended baptisms, confirmations, weddings, and funerals of Catholic friends in other parishes; Catholic churches we attended when on vacations; sites where adults or families attended religious events outside the school or church, such as retreats or gatherings to hear speakers; sites where the school or church carried out social events like dinners or charity events; and the Cathedral for the diocese, a place we went to rarely, but which was a looming presence nonetheless.

This whole big space of spaces I will call an “affinity space” because people were connected in it by their shared affinity for Catholicism. I will call Catholicism the “attractor” to the space. This Catholic affinity space was “squishy,” by which I mean it was not entirely well-bounded. Different people used different parts of it more or less regularly. For any one person the big space could gain or lose smaller sub-spaces across time (albeit fairly slowly in the case of our conservative Catholic affinity space). We could have mapped out the space, but the map would have been a bit different for each person, and spaces, and routes could change across time.

Everyone who entered any part of the affinity space, I will call an “affine.” Even if a given affine was someone I never myself met, our shared affinity ensured that if we did come across each other, we would have shared a good deal cognitively, affectively, and morally. Clumps of people who overlapped a good deal in large parts of the larger space and, thus, bumped into each other regularly, I will call “fellow travelers.” The notion of “fellow travelers” is “squishy” too, since there is no definitive amount of overlap that determines “membership,” and since people can drop in and drop out as time passes, and they can join other fellow-traveler groups.

Some of the sub-spaces in the larger (squishy) affinity space were special. They were what I will call “home bases.” Home bases are key places where fellow travelers, or different sets of them, come together a good deal to engage in the activities that keep their shared affinity alive. They are places where the people with the most passion for the shared affinity are the key organizers, motivators, teachers, and standard setters for the affinity space as a whole. For us, there were three home-bases: home, school, and parish church. These three home bases were closely connected. Priests, nuns, and other families regularly visited our home; we regularly visited other homes, our church, and our school. Priests from the church visited the school for religious instruction, and the nuns from the school regularly ran events at the church for their students and their families. We might call home-school-church here a “home-base cluster.”

Finally, let us note that some of the sub-spaces in the

larger affinity space were used for other purposes and were, thus, sub-parts of other affinity spaces as well. For example, our parish church was linked to a variety of other spaces—some not specifically Catholic—that constituted an affinity space to combat Communism (this was the 1950s, after all). This anti-Communist affinity space overlapped with our more local Catholic affinity space (we took an anti-Communist course in elementary school, whose textbook was titled *The Evil Tree*), but was, by and large, more central for some families than others. Nonetheless, because of this overlap, I was (even as a child) an affine of the people in this anti-Communist affinity space.

The Catholic affinity space I have sketched out was made up primarily of physical spaces and physical routes. But not all of them were physical. There was no Internet then, but telephones served as routes to connect spaces within the larger affinity space. A great many of us “religiously” watched Bishop Fulton J. Sheen’s *Life Is Worth Living* television show each week (1951–1957) and later the *Fulton Sheen Program* (1961–1968). These televised spaces were much like, though less interactive than, digital virtual worlds. So the affinity space was composed of physical spaces and routes and less-physical sorts of spaces and routes.

### New Affinity Spaces

Affinity spaces devoted to all sorts of different affinities and attractors existed then and exist now. What is new today is that there are a great many more of them (Gee, 2013a, b; 2015; Gee & Hayes, 2011) and they are far more “squishy” than are traditional ones. A great many of them today have more non-physical spaces and routes (usually virtual) in them than they did before. Affinity spaces, I argue, are becoming prime spaces where people engage in 21st Century teaching, learning, doing, and being. As a result, I believe we all have to begin thinking of space as a physical and virtual meld; begin dealing with spaces and groups as squishy and not well-bounded; and begin thinking in terms of attractors, affinity, affines, fellow-travelers, home-bases, and home-based clusters.

Affinity spaces are primarily defined by an affinity for solving certain sorts of problems. As such they always involve the development of certain sorts of skills. My Catholic affinity space dealt with the problems that most religions do, problems about how and why to act; why bad things happen to good people; and what the meaning of life is. Today you could probably not name a problem that is not an attractor to one or many affinity spaces. Such problems today include things like media production, citizen science, political activism, women’s health, fan-fiction writing, video games, and specific diseases—all of different specific types—and almost anything else you can name. In these affinity spaces people very often act, teach, learn, and produce without regard

to credentials, ages, outside status, or degrees of expertise (Andersen, 2012; Hatch, 2014; Hitt, 2013; Shirky, 2010).

### Video Games and Affinity Spaces

I want now to discuss one specific area where we can see quite clearly some possible uses and implications of affinity spaces for teaching and learning. Video games have become a very interesting area where we, as educators, have a good deal to learn about how to organize interest and passion around problem solving (Gee, 2003, 2004).

A video game is just a set of well-designed problems to solve, where the very design of the game teaches and mentors players to solve the problems, using good principles of teaching and learning. A game can be designed around any well-defined and challenging set of problems, e.g., designing civilizations (*Civilization*), fighting wars (*Call of Duty*), solving algebra equations (*Dragon Box*), building a family and community (*The Sims*), or cleaning a house when you are a four-inch-tall house-cleaning robot (*Chibi-Robo*).

Gamers do not just play their games. When they have a real interest or passion for a game, or a type of game, they often take their game-based learning, ideas, and skills into modern affinity spaces (Gee & Hayes, 2010, 2011; Squire, 2011).

For many gamers, their gaming room at home is connected not only to the virtual spaces of games, but to the virtual spaces of many different sorts of fan-based, interest-driven Internet sites where they discuss, learn, and teach about the games they play. For these gamers, their gaming rooms are also connected to other physical spaces, such as gaming rooms in friends' homes where they play together; places where LAN parties are held; gamer convention spaces; meetings of gamer clubs; and, perhaps, too, places where the gamer plays related non-digital table-top games. This whole set of physical and virtual spaces (and the physical and digital routes among them) that characterize the comings and goings of gamers with a shared affinity is an affinity space. These sorts of affinity spaces today are often really squishy. They are fluid and ever changing and hard to strictly demarcate.

Such affinity spaces are rather magical sorts of things. Each one differs somewhat for each gamer and, furthermore, changes across time for that gamer, as some physical or virtual spaces drop out of his or her gamer itinerary and others are added in. An affinity space is defined by what given people do, where they go, and who they are with. We must map an affinity initially in terms of a person or persons we take as our reference person or group. Then we can draw more maps for other people and look for types of overlap among different but related people.

So imagine we take one gamer—call her “Sue”—who

is devoted to playing and designing for *The Sims*, the best-selling set of games in history. We can take a certain period of time—a day, a week, a month, or many months—and map out all the spaces, physical and virtual, and all the routes among them, that Sue takes in pursuit of her interest.

We will make the boundary lines on some spaces and routes on the map thicker than others, based on how much time Sue spends in that space or on that route or set of routes. The thicker the lines, the more time she tends to spend there. We can also, if we like, color-code various spaces and routes based on the sorts of things Sue does in them or the sorts of activities with which they are associated.

This is a map of “Sue’s *Sims* affinity space.” It maps a big terrain with various sub-spaces and routes in and across it. The sub-parts of Sue’s *Sims* affinity space—whether they are small parts like her gamer room at home or larger parts like a gaming convention space (with many rooms) or a fan-based, interest-driven Internet site (also with many “rooms”) devoted to sharing information about the game—I will call “affinity sub-spaces.” Just as a gamer convention has a certain sort of social and interactional organization, so, too, do fan-based, interest-driven Websites.

Now take the map we have made for Sue. It is, in some respects, unique to Sue—certainly her moment by moment pattern of movement and activity is. But if we compare Sue’s *Sims* affinity space to other people’s *Sims* affinity spaces, we will find more and less overlap with Sue’s. The set of people who have a significant overlap with Sue’s map constitute a squishy (not rigidly bounded or defined) group. We have called this group “fellow-travelers.” Who is a fellow traveler varies with time and circumstances and some people are more stably together longer than others. It’s fluid.

Sue interacts with or, at least, has ample opportunity to, with these fellow travelers, though anyone who has been in one of her affinity sub-spaces or on one of her affinity routes is in a yet larger and more amorphous group with Sue. These are people we have called “affines.” Just because Sue sees some of these people rarely, any given interaction might be significant and, so, nobody can be discounted, and frequency of contact is not the only significant variable here (what we are talking about here is akin to strong and weak ties in the sociology literature).

An affinity space can be nested inside a bigger one, for example, Sue’s *Sims* affinity space might be nested inside a larger digital games affinity space or an even larger games (digital or not) affinity space. Or, Sue’s *Sims* affinity space might not be nested in any larger games space, but, rather, in a larger fan fiction affinity space, because what Sue largely does with the *Sims* is not play it, but make graphic fan fiction from Photoshopped images from the game joined with text she has written. On the

other hand, two of Sue's affinity spaces could be related but not nested one within the other (they may just be like two states in the U.S. that she moves between). These related affinity spaces might be a *Sims* gaming affinity space and a Photoshop affinity space (which Sue uses to learn about designing images from the *Sims* for graphic fan-fiction, but learns to Photoshop other images as well).

It might be that one interest-driven Website—for example *TSR Workshop* (<http://www.thesimsresource.com/workshop/>)—is so central to Sue's *Sims* endeavors that we can focus on and study it alone as the heart and soul of Sue's *Sims* affinity space, though still tracing where Sue comes from to get there and where she sometimes goes from there (or is led to). We have called such sites "home bases." People could have several home bases, or none, and some can be physical and others virtual.

### An Example

Today many young people appear to get deep and important skills from their travels in affinity space. As one example, consider a 15-year-old girl named Alex who has a large following as a fan-fiction writer who uses *The Sims* to create graphic vampire-romance stories (images with text). Alex has to make her own images (using tools that modify images from the game), write and edit (with help from fans) her own texts, and maintain a Web presence to keep contact with her thousands of readers (Gee & Hayes, 2010). *TSR Workshop* is one of her home bases, and her own Website is a home base for an affinity space organized around her which her devoted fans occupy.

In her work across the many spaces in and through which she carries out her passion with her fans and fellow fan-fiction writers, Alex has learned the following skills at a mastery level [Note: Many of these are no longer necessary to create stories in *The Sims 3* and *Sims 4*. Alex originally used the in-game story mode but later switched to posting stories on her own website, so I will use the latter as the basis for this list]:

- Knows *The Sims* as a piece of software inside and out.
- Knows in-game design tools and Adobe Photoshop thoroughly.
- Created and maintains a very good and highly trafficked personal Website.
- Knows how to link Website and stories to other *Sims* fan sites to create a network.
- Knows how to make custom characters, events, and environments. (This requires knowing how to import into Photoshop, use Photoshop editing tools, and save files, then import back into the game.)
- Has mastered different sorts of custom software designed by other players.

- Knows how to use "cheats" to change or remove unwanted in-game features.
- Knows how to access tutorials for various skills as needed and how to design and build a tutorial for others.
- Knows how to write compelling narrative.
- Knows how to match compelling images with text.
- Knows how to recruit readers (i.e., where to advertise her stories, how to create banners as advertisements, "teasers," etc.).
- Knows how to edit and stage her story images (i.e., shading, cropping, etc.).
- Knows how to post text and images on her Website to recruit new readers and motivate old ones.
- Knows how to respond to fans, especially emotionally, and how to connect them into a community (this requires a very different style of language than she uses in her stories).
- Knows how to work with volunteer editors from her fan base.

So Alex traverses her own *Sims* affinity space (with her affines and fellow travelers) and is the attractor of her own Alex affinity space, which many of her teenage readers clearly adore and find deeply helpful in dealing with their problems in being teen girls in the modern world (I base this comment on the e-mail Alex receives from her readers). She is gaining 21st Century skills that would be the envy of any good school not beset by our current test-prep regime.

### A New Type of Architect

We can imagine that there will be—that there should be, at least—a new type of "architect," what I will call an "Affinity Space Architect." An Affinity Space Architect would be an architect of interest and passion in melded physical and digital space in the service of building new types of schools and other learning spaces. Such an architect will consider, based on a given passion as an attractor, all the physical and digital spaces currently available and new ones that need to be designed and built, and how to meld them and turn them loose to squishy fellow travelers and affines and then let these spaces evolve, spilt, and transform, live and die. An Affinity Space architect's goal is to transform interest and passion in the name of participation, interaction, making, and teaching and learning for better, more equitable, smarter, more moral, and resilient people, groups, and societies.

The weakness of today's "out of school" affinity spaces is often not their digital spaces and routes (which are copious) but the physical ones. Face-to-face embodied communication is primordial and foundational for humans and will never be replaced, unless and until we become a different species altogether (Gee, 2013b;

Tomasello, 2014). Face-to-face embodied interaction with people and the world is where “the rubber meets the road” and where we get real impact and change in the physical world in which we all live. How do we build good routes from and to positive physical spaces in a digital world in the name of learning and transformation?

An affinity space architect must know material “stuff” as well as he or she knows immaterial “stuff” (like values, emotions, and virtual worlds). The affinity space architect must always realize that the social worlds of affines and fellow travelers that form us, sustain us, and transform us, nonetheless, start with “Sue,” that is, start with individual people who need fellow travelers and affines for their full development and flourishing in the world. □

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# Cultural Alignment and Game-Based Learning

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Jessica Hammer  
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Culture can be understood as systems that produce and reproduce meaning, or as stable sets of meanings within a community. The authors illustrate how educational games produce and reproduce meaning, both related to the content being addressed and about the educational process itself. Educational games also rely on shared meanings and norms, which can often be sites of conflict among educational stakeholders. Cultural alignment in games, then, is the degree to which the meanings constructed through game mechanics, game content, and the socio-cultural context of gameplay reinforce one another. Current research on educational games suggests that a high degree of alignment should support learning. However, cultural misalignment can also be educationally productive in some situations. To enable both approaches, a reflective process around cultural alignment in games is needed.

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### Introduction

What is the role of culture in game-based learning? To understand that, we must recognize that culture is not just one thing. Kashima (2000) outlines two broad ways of thinking about culture. First, culture can be understood as *systems that allow meaning to be produced and reproduced*. For example, Lave and Wenger (1991) argue that groups develop methods of “legitimate peripheral participation” that train new members to participate in activities the group values. Second, culture can be understood as a *stable shared set of meanings and values within a community*. Different communities can assign different meaning to the same symbol, or value the same activity in different ways (Rohner, 1984). In this essay, we will explore the

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