CHAPTER 10.

UNLOCKING A MYSTERY: DESIGNING A RESILIENT PLACE-BASED GAME

BY JOHN MARTIN

For 20 years I've spent the majority of my summers helping direct a rustic deep-woods camp for boys. No electric or phone lines run into the camp, the boys sleep under mosquito nets in platform tents or three-sided Adirondack shelters, we make our own wooden and canvas canoes and use them on trips, and every week every boy in camp goes on a four-day adventure. I design outdoor games, train counselors, and teach camping and canoeing skills—skills that often lean heavily on collaboration, improvisation, and adaptation that are learned through contextualized authentic experience. The contextualized experience provides an embodied urgency to learn. For example, holding a paddle in a canoe and needing to get from Point A to Point B provides a *situated learning* opportunity to gain canoeing skills.[1]

I was captivated, when I started working there in 1993, by men in their 70s and 80s who would wander into camp to visit and regale us with their memories of their time at camp. One particular line of stories about a set of defunct trips—the *Mystery Trip*—in particular delighted me, and I dreamed of resurrecting them. This chapter tells the story of resurrecting that trip with mobile technologies.

THE *MYSTERY TRIP*

Before I begin with the story of my game creation, however, we must understand the origin of the original *Mystery Trip.* As the old-timers described with such enthusiasm, between the 1920s and 1950s, a spat of heinous crimes took place in Maine that were nearly unsolvable but for a group of young campers whose woods skills and problem-solving ability were legendary. Though the crimes and stories often varied, all stories end with victorious boys. This is one of the sleuth stories of a 1927 crime, recounted by a camper, H. B. Price, who ended up buying and running the camp for about 50 years after he solved his first mystery:

> *Something terrible had happened; I am sure that I don't remember what. Plans had to be changed at the last moment, and all our energies were to be devoted to helping the local authorities, whoever they were, hunt down the criminals and*

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1. Lave, J., & Wenger, E. (1991). Situated learning: Legitimate peripheral participation. Cambridge, England: Cambridge University Press.

bring them to justice. At the same time we would uphold the honor of the camp, and in all probability bring fame and fortune to ourselves and our counselors.

The villains, whoever they were, had left clues and trails as they challenged us to track them down. Coded messages were found and deciphered. The net was slowly tightening. In tracking those undesirables, we learned more than we at the moment wanted to know about following trails in the woods.

Somehow or other we were all led to a remote spot to dig for treasure two days later on the final day of the trip. There had been codes and more codes to the point that we felt that none would ever be too much for us in the future. I don't think that I had ever bothered very much about codes before that Mystery Trip, but now I fancied myself an expert. It was the next winter that I was to read my first real adult book, a long account of German codes in World War II was one of the select; I knew what they were talking about.

Digging at the suspected spot began with anxious campers standing about ... waiting for the moment when the smallest boy in camp would unearth the treasure ... a large iron pot ... not filled with common ordinary chocolate bars, but with chocolate wrapped in gold foil to resemble pieces of eight.[2]

In *Mobile Media Learning*,[3] I wrote about using mobile and GPS to create a story line that frames such an adventure. With GPS-triggering, one doesn't have to trudge around in the wilderness planting physical clues (if setting up the mystery), or searching for clues (if trying to solve the mystery) that may have blown away or dissolved in the rain. One can just place virtual clues on a map (though it's important to know the area well enough to not place them in water, on cliffs, or in other dangerous spots). However, the power of the game came from the boys who supplied endless additional elements, as Price notes:

As a counselor it later fell to my lot to establish the groundwork for additional mystery trips. It soon became quite obvious that not much was needed to get the juices running, so to speak. Boys do have fertile imaginations, and many a mystery trip started out with the barest of plot. It was never long before the much-needed details were supplied by the boys themselves. Some heard noises in the night. Others put together bits and pieces of what they had read in their comic books; and finally they made the short step between dream and reality, and all we needed to start another mystery trip was to say the word, "go." Once started, things unfolded on their own.[4]

Story: How We Built Our *Mystery Trip*

Let me just start with the understatement that in 2006 it was *quite a challenge* to create a mobile-technology–dependent game, at a camp with no Internet and no way to charge devices, for boys who think nothing of swimming with GPS units in their pockets. The technology included Windows Mobile devices with separate bluetooth GPS receivers, running an MIT-media-lab–developed software called *Outdoor AR* (for "Augmented Reality"). For 2006, it was an amazing setup.

Today, with smartphones that sport GPS and Internet connectivity, and lightweight DIY-augmented reality platforms such as arisgames.org, building an adventure such as this can be done in a matter of hours. But the software and hardware don't really matter—they change like the weather. What matters is the process.

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2. Price, H. B. (1988). A bad case of moose pox. East Orland, ME: H. B Price.

3. Dikkers, S., Martin, J., & Coulter, B. (2012). Mobile media learning: Amazing uses of mobile devices for learning. Lulu.com.

4. Price, H. B. (1988).

While I was familiar with one version of the original *Mystery Trip,* I realized that it had often varied considerably from year to year. I also recognized that much of the camp's culture is grassroots, constructed by campers in odd moments on trips, full of inside jokes and popular culture references. It's a culture for the campers best created by them. My job, I figured, was simply to supply an experience or framework for them to fill.

Much like in an early *Mystery Trip,* I pulled a first group of campers aside as they headed out on their regular hiking trip and told them the story of the *Mystery Trip.* The boys carried a handheld GPS, notebook, and video camera, and they documented their progress as they explored the land with an eye toward designing an AR game. They created a rudimentary game narrative involving five characters (including Axman Sam, Pat the Pirate, and Harry the Hiker), and a few quests. The game narrative and map developed by this group provided a loose framework that the second design group was able to play off of, and design around, in their own attempt.

The boys in the second group, led by an energetic Australian counselor, played and critiqued the first game narrative, and they significantly changed the first game with a design based on the young-adult fiction series *Tomorrow, When the War Began* and the movie *Red Dawn*—in both a ragtag group of plucky rebels fight off much greater odds.[5] In the second group's narrative, a rival camp that caters to the very wealthy attacks and takes over their much more modest camp while the boys are away hiking in the area. The group is "contacted by videophone" (location triggers a video on the handheld computer) by a survivor of the attack and has to perform a number of quests in order to foil the rival camp's evil plan to construct a Grey Poupon mustard factory on the pristine lake. Quests include spylike activities designed by the kids to appeal to their peers, such as surreptitiously topping three nearby mountain peaks to triangulate and decode messages sent out by the fictional invading campers, setting up a low-impact campsite to avoid detection by the invading camp's scouts, and canoeing under cover of darkness to the center of the lake to broadcast a counter-message.

LEARNING BY PLAYING

Several themes and patterns emerged in my mobile *"Mystery Trip"* research, but some of the most unexpected speak to the above point of the power of fertile imaginations and allowances for participant agency.

Although the details of each experience are to a large extent filled in by the participants, in the final narrative experience, campers embark on a four-day "Trails" trip, for which they're told they'll be hiking some mountains in a local 5,000-acre wilderness. The narrative is a simple linear one with 13 parts/locations. As they hike, they get a message that the camp was invaded, and that the invaders are after them (see Figure 1). During the course of the four days, they get more information about what is happening at camp, and what they can do to help: Climb three mountains to triangulate a radio signal, decode the signal, and rebroadcast the decoded signal to the world to expose the invaders. The actions essentially require that they cover the same ground that their trip would typically cover, but the narrative opened opportunities for them to add their own details.

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5. Marsden, J. (1993). Tomorrow, when the war began (Vol. 1). Australia: Pan MacMillan; and Beckerman, S., & Feitshans, B. (Producers), & Milius, J. (Director). (1984). Red dawn [Motion picture]. United States: United Artists.
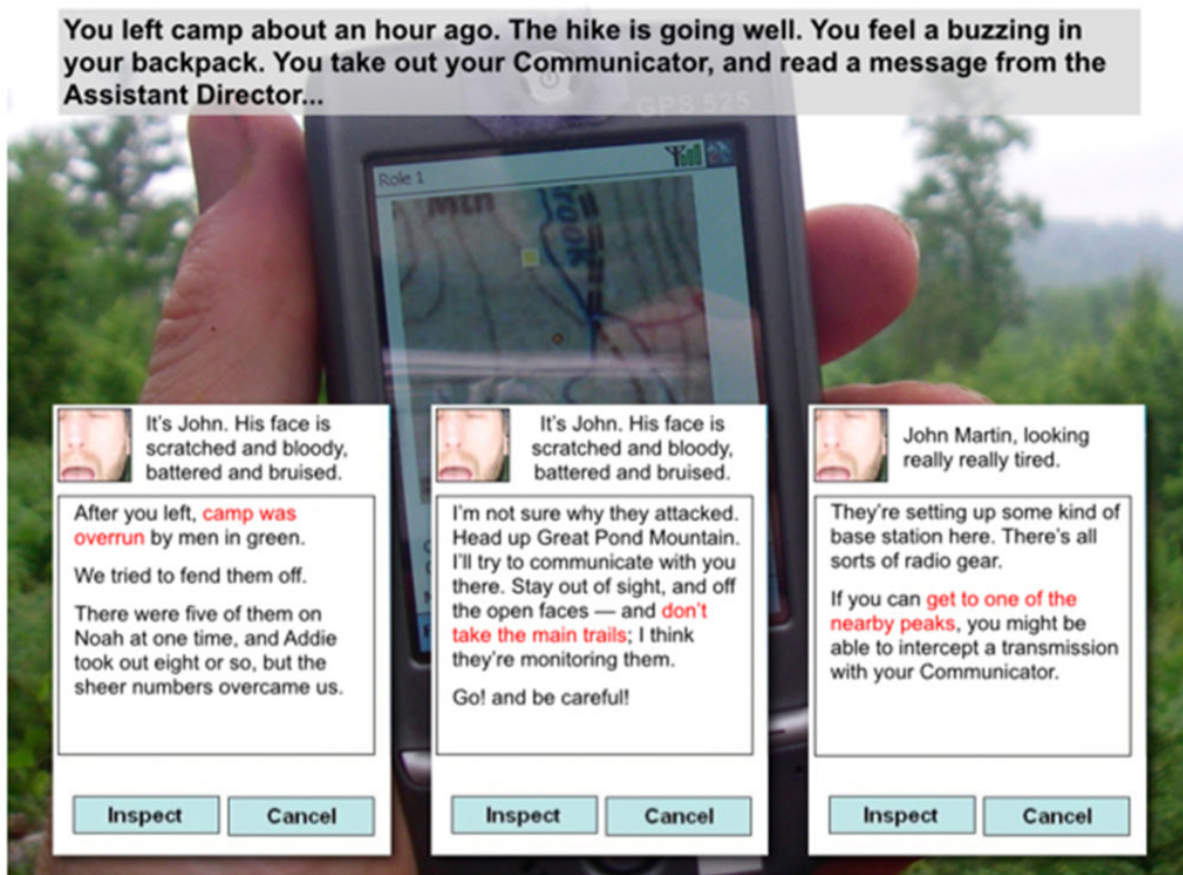
Figure 1. Preprogrammed "communications" that the players see to drive the narrative.

One example of narrative flexibility is that despite the linearity of the plot, the story line includes the idea that they are being followed by the as-of-yet-unknown "bad guys" who invaded the camp. This resulted in several groups' deciding that rather than blindly following the main trails, they should take alternative side trails, or bushwhack off-trail through the backcountry. In voluntarily choosing this plan, they discovered that they needed to improve their map-reading and orienteering skills, and without counselor intervention or prompting, they spent a tremendous amount of time discussing wayfinding, matching landmarks to the map, and choosing routes—something rarely done when the trail leads the way.

Because the story line was fragmentary—they received only short, vague messages about what was happening at camp; because in the story the sender himself wasn't really sure what was going on—they had plenty of space to fill in the details with their own musings and to apply their own experiences to the narrative plot. For example, on one trip, campers reported hearing other hikers on a trail and determined that these were the group of hostiles who were tracking them. In this case, they went into stealth mode and hid off the side of the trail as the other hikers passed. By moving off-trail and integrating with the woods (instead of staying separate from it on the trail), they increased their wilderness experience and knowledge and minimized their ecological impact for the rest of the trip. For the rest of the trip, tree stands built by local hunters became enemy lookout towers to avoid, every cabin they passed was potentially compromised, and they changed their group behavior from "obnoxious and loud boys" to "silent and efficient model hikers."

Other groups reported that the game narrative provided motivation to hike harder and endure more hardship in order to finish quests and further propel gameplay, providing a distraction from the physically demanding aspects of the hiking. One boy explained: "Instead of just walking around and going from one place to the next [on a regular trip], with the [game] you have an adventure, and you don't know what's going to happen next. That's really fun!" People like to play, and they willingly endure discomfort or boredom if motivated—in video games this is called *grinding.* This was also the case with these participants. When immersed in good games, kids often learn complex rules and structures of game systems, both to to better interact with and "play well" with other players and for cultural understanding of game narratives.[6]

LEARNING BY DESIGNING

One of the interesting elements in letting the campers design the game was that they began to view the terrain they passed through from multiple perspectives—both as low-impact hikers and as game designers. One said that instead of looking at a tree as something that a squirrel might use, he looked at groups of trees in terms of how the game could use them. Another commented that designing prompted them to alter reality: Rustling leaves became enemy spies, hunters' deer stands transformed into enemy sniper towers that players need to avoid, trails made easy targets for ambushes, and Leave No Trace—which the camp tries to instill into every outing—was common Ninja sense.

Participants also saw themselves as designers of an artifact for their peers, creating something larger than their own trip. Just as when we cook for others, we tend to step up our care and attention a notch; in designing for their peers they paid attention to details in the environment, looking for ways to surprise and delight their peers who would play it later. In some ways, as a designed tangible experience, it was an opportunity to leave a piece of their legacy on the trip.

DISCUSSION

Outdoor game playing has always been an American passion. Children grow up to be adults in the woods as they play and learn together. With the advancement in mobile technologies, we now have an opportunity to maximize the benefits from such activities. As Clifford Geertz argues, "No one lives in the world in general" (p. 262).[7] The creation of personalized narrative using mobile technologies can allow us to bridge the content and the space to shape the learning of the participants. To that end, I not only encourage you to create your own place-based adventure, but have your students get involved and make their own. The stories could be real, or they could be pure fiction—mixing reality and fiction leads to completely new ways of looking at one's world.

Making Your Own Experiential Narrative

Although the technology was considered novel when I first began, several software tools now exist for you to design your own outdoor light augmented-reality adventure: *ARIS, Taleblazer, FreshAiR,* and others.[8] As I mentioned above, I don't think the particular software is important—choose the one that feels best for you and that meets your needs. Or go old-school and create a Geo-cached

6. Gee, J. P. (2003). What video games have to teach us about learning and literacy. New York, NY: Palgrave/Macmillan.

7. Geertz, C. (1996). Afterword. In S. Feld & K. H. Basso (Eds.), Senses of place (pp. 259-262). Santa Fe, NM: School of American Research Press.

8. ARIS (arisgames.org); Taleblazer (taleblazer.org/); FreshAiR (playfreshair.com)

scavenger hunt–style adventure with real hidden paper clues. Whatever medium you choose, I have some suggestions for the design.

Use the Screen Minimally

There is a bit of irony in using mobile technology to help people connect more deeply with the wilderness places that they move through. But when I create these types of adventures, I try to minimize players' interactions with the devices (I also needed the batteries to last three days!). In the Mystery Trip, the device buzzed when the players reached their location. It was framed as a "communication device"—but it was partly "broken" and could only receive transmissions. The few "transmissions" players got were text based and very short. They conveyed very little information, but they prompted the players to be careful, watch for unusual activities (which really meant anything), and pointed out the next location on the map for them to head toward. The players were directed away from the screen into the environment that surrounded them. Because the screen offered them minimal information, they pulled out the map and compass, paid attention to the clues of the land around them, and looked to each other to solve problems.

Build Something for Different Player-Types

Bartle breaks down Multi-User Dungeon (MUD) game players into four types, based on how they act on and interact with other players and the world—Achievers, Explorers, Socializers, and Killers (see Figure 2)—but these four types apply to much more than MUDs or even video games.[9] The types are not pure, either; a player may have different levels of preference for more than one of these. I see myself, for example, as primarily an Explorer, but with strong secondary Socializer characteristics and some Achiever instincts.

As you design your narrative, try to address the different player interests in order to engage them. Do you have points or things for the Achievers to collect? Are there enough unknowns for the Explorers to discover? Will the Socializers have opportunities to play with someone? And do the Killers (people who like to cause distress for others) have an outlet for their aggression? In the *Mystery Trip,* the quest-narrative format (to save camp) prompted the Achievers to climb three mountains to triangulate the location of a radio signal. The narrative specified only locations, but it did not dictate any paths, which left plenty of exploring for the Explorers, as well as plenty of opportunities for the Socializers to engage with others. And by framing the group as a stealth group that was being chased, the Killers "won" their battles not by engaging, but rather by remaining unseen.

9. Bartle, R. (1996). Hearts, clubs, diamonds, spades: Players who suit MUDs. Journal of MUD Research, 1(1), 19.
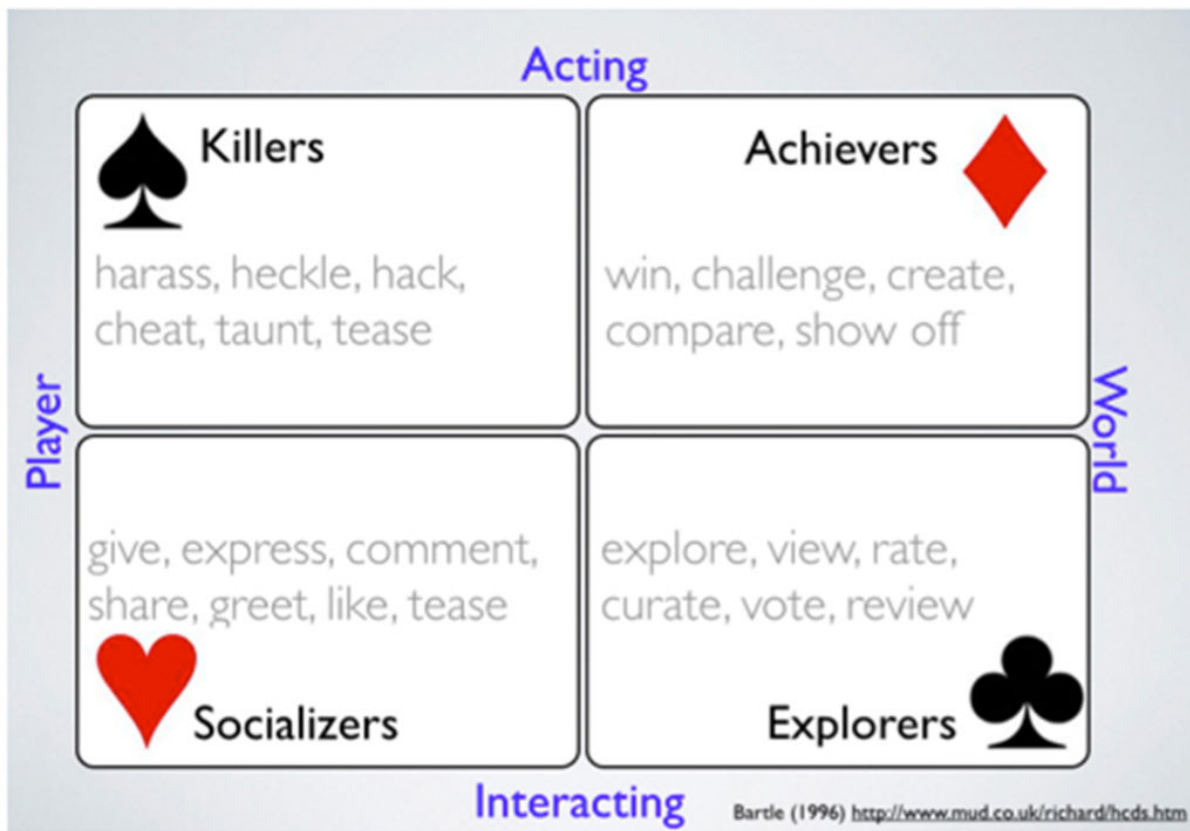
Figure 2. Bartle's four gamer types.

A game with just one of these elements—such as a game based only on collecting points—may risk being not very engaging for Explorers or Socializers or Killers. Even if you had only Achievers as players, adding the other dimensions rounds out a game and offers secondary options for players to fill their time while they wait for another round of the game elements that suit their primary interest.

Keep It Simple

By far the strongest outcome in the design of the second iteration (which eventually became the final iteration) of the Mystery Trip was a result of not having the time and energy to flesh out the story. For a four-day adventure, it contained relatively few details—only 13 transmissions. The story was a series of hints that left many gaps for the players to fill. And the players had great fun imagining the details, arguing and debating among themselves what was really happening—based largely on the particular, semi-random events that occurred as they were playing. Trust the imagination of your players and the randomness of the universe, and your narrative will fill in with a richness that J. R. R. Tolkien could not have envisioned and with plot twists that would make Agatha Christie envious.

Allow Improvisation

Building on the point about keeping it simple is the idea of allowing improvisation by players. Some of the best games we play in life are those in which we go off script and just use the game board for improvised play. We make up many of our own rules as we go along in life, but life offers us a game board and several constraints that shape our game. Remember to allow a certain amount of

looseness in the experiences you design because the physical geography and players' own experiences and histories will bring in their own structures and constraints.

CONCLUSION

Wilderness experiences are, by themselves, exceptional learning opportunities. Anytime a child (or adult) can spend time in the wild observing and communing with nature is a time rich with reflection. Because of this, outdoor educators have been reluctant to bring in media and screens. It's important to note this, and to recognize that the technology is not—and should not be—the driver of this type of activity. In this case it offered an opportunity to add a game narrative to an otherwise perfectly fine trip. In this case it was sparse enough to add, rather than detract, from the wilderness experience. And this is my hope and prayer for technology—that its supporting role becomes invisible in the moments of awe that drive learning.