
Pervasive Games Ten Years Later

A Roundtable Discussion with Markus Montola, Jaakko Stenros, and Annika Waern

In 2009, Markus Montola, Jaakko Stenros, and Annika Waern published *Pervasive Games: Theory and Design*, based on research conducted during the Integrated Project on Pervasive Games (IPerG) and funded by the European Union (E.U.) from 2005 to 2008. They wrote it—the first book-length treatise on the topic—before the widespread use of smartphones and the ubiquitous impact of gaming on mobile devices. The work documented an era that a number of scholars came to identify as the first wave (or generation) of pervasive games. In 2019 a full decade after the book's publication, the authors were invited to participate in a roundtable discussion as part of the Urban Play Spring Seminar event in Tampere, Finland, to reflect on the evolution of pervasive games and on the recent scholarship about them. Many of the claims *Pervasive Games* made, especially in relation to the design space of these kinds of games, have endured—even when such games are considered in technological and medium-specific frameworks. However, the book also featured claims and characterizations that to the authors themselves appear, in hindsight, optimistic, irrelevant, or simply inaccurate. The emerging genres of pervasive games the authors observed charted paths that later games simply did not follow, and their bold claim that commercially viable pervasive games would not compete with other games, but instead with pastimes, proved inaccurate. Even the delimitation they gave the phenomenon itself remains in flux a decade later—both the umbrella term they used for it and the types of games they included as part of it are still being negotiated. The following is a recorded and transcribed version of the roundtable discussion (including questions from the moderator Dale Leorke and the attending audience) edited for publication. It examines the validity of the term “pervasive games” in an era when games and playfulness have seemingly become ubiquitous, looks at the commercial potential of pervasive play and games, and investigates how these games can meaningfully be connected with the spaces of the cities, towns, and other environments where they are performed. **Key words:** alternative-reality games (ARG); Integrated Project on Pervasive Games; live-action role-playing games (LARPs); location-based games; pervasive games; urban play

Leorke: I wanted to start by asking you about the term “pervasive games” itself. This term was quite common in academic discourse leading up to your book’s publication in 2009. But since then it seems to have been supplanted by more common phrases like “location-based games” or “mixed-reality games.” So how valuable do you think the term pervasive games is now? Is it still relevant to describe games as pervasive or has play already succeeded in pervading the everyday environment, making this term less necessary?

Montola: When we were working on *Pervasive Games: Theory and Design*, I think back then already there were about two dozen competing terms, from “location-based games” to “ubiquitous games” to “big games” and others. We actually settled on pervasive games for the worst possible reason: basically, it was a field that could get funded by the E.U. [laughter]. And since our subsequent project name was Integrated Project on Pervasive Games (IPerG), that’s the term we chose for the book title. But the others would also have been fine, and it became a small struggle to predict which of them would become established in academia. I recently Googled the term, and I saw that, indeed, the number of hits begin decreasing after 2010 as academic use dropped through 2013. But I think the term, or at least the concept, remains valuable. As long as we live in societies where play is segregated into some areas or to some positions or temporal moments, we are stuck with the concept of the magic circle, whether we like it or not. And that then requires pervasive games as an idea as well.

Stenros: I agree in the sense that I still see its value as an analytical term. And one of the things I’m fond of about the term is that it’s technology agnostic, whereas many of the other terms are technology based. I think that’s an asset as an analytical concept: it will survive because it’s not tied to a specific technological moment. But it’s true there are very few fields where it survives, although there is one exception and that’s LARPs [live-action role-playing games] or pervasive LARPs.

Waern: You know that this came out of the project that Markus talked about, so I found this question really, really interesting. And I started to reflect on whether we who were involved in that project are using that term to describe our research today. And I would say that none of us do. Part of the reason might be that we just moved on when the project was finished. But I also think that we have kept other terms that we were using at the time to describe our work. For me, there has been another term that I have retained, the concept of “technology-supported games”—in contrast

to “technology-sustained games.” I’m working on the borderline between games and technology still, but not with any specific technology. So the term technology-supported games has become much more central to me than the concept of pervasive games. But I think there is a takeaway from that: why do we not use the term to describe our own research anymore?

Leorke: So, the book was published in 2009, and I’d like to ask each of you: What are the key things that have changed in the ten years since then? I’m thinking not just about developments in the design of pervasive games and related genres themselves, but also about how changes in cities, technology, social interaction, and so on have impacted them. It’s an incredibly broad question, so feel free to respond to whichever part of it you like.

Waern: The most obvious change came half a year after the project, right at the time the book was published, and that was the iPhone. The conditions for doing this research and practice became so infinitely different when smartphones came out. In some sense, this was both good and bad, but it was unfortunate that we didn’t have a chance to work with that technology at the time we were doing the research.

Stenros: The iPhone came out in 2007, then the App Store was launched in 2008. So, it was out already when we finished the manuscript. But *Angry Birds*, the first big hit, came out in 2009 after the book. Many of us had been involved with Nokia and Nokia N-Gage, and our belief in that kind of platform and that kind of webstore wasn’t that strong because of it [laughing].

Montola: I work nowadays as a game designer in the free-to-play industry. And there is a massive change that happened there, which is that people invented the formula of mobile free-to-play games that can make billions of dollars. And that has had a serious impact on the development of pervasive games, because until *Pokémon GO* location-based gaming and pervasive gaming weren’t one of those formulas. They were untested: maybe interesting, maybe not. So it sucked the attention and the focus of the industry away from pervasive games and location-based games for a very long time. And I remember when I and the startup company Grey Area were designing *Shadow Cities* in 2010 for the iPhone, it was still profitable to get venture capital for that project because the successful formulas had not emerged. And we had a great promise and we had a lot of trust from investors and so forth. But after Supercell [the developer of *Clash of Clans*] and other companies turned free-to-play games into really big business, it was impossible to get that kind of funding.

Stenros: But then there are things that are easy to forget. Like there was this moment when it seemed the combination between a hit TV series and a pervasive game was a thing that was going to happen. There was the ARG [alternate-reality game] created for the *Heroes* TV series and there was a Swedish production company, The Company P, that created basically a pervasive-ARG-LARP hybrid for the Joss Whedon TV series *Dollhouse*. And then Nokia had a new technology coming out on its phone, and the company had a pervasive game to push it involving a mobile game component and a street play in London and a web series in which Tim Kring from *Heroes* was involved that featured a number of actors from around the world. So there was this moment when it felt like this was going to take off.

Waern: I would agree that the business models have fused, which affects the kind of games that are being produced now. As researchers we're turning much more toward completely different uses of these games. My own research is very much directed toward use of them by municipalities, by museums, and so on. Because that's where you have the space to do something that's not governed by the fused business models, basically. I would also say that at the time when the book came out, much of the discourse around pervasive games was formed by ARGs, and I wouldn't say those are the games we see today. We much more often see mobile and location-based games, so the whole structure has changed quite drastically.

Leorke: I had a specific question about the business model or commercial side of these games, actually. Virtually ever since location-based games began to be developed and released commercially, there have been claims from both academics and mainstream commentators that they're going to revolutionize games, both socially and economically. This happened in the early 2000s during the first phase of location-based games, then with smartphone apps. But there really haven't been any long-term, sustainable and successful location-based games either by established companies or startups—with the possible exception of *Pokémon GO*, although it's still too early to tell. Why is this the case? Why isn't everybody playing more persistent, real-world, pervasive games on the same scale as console games, massively multiplayer online [MMO] games, and so on?

Montola: If I can quickly subvert your question, in our pervasive games model we had three dimensions in which pervasive games expand the magic circle: time, space, and social relations. The temporal expansion has surprisingly been the most important of these, and it's actually the one that makes those tens of bil-

lions of dollars every year. Because the way our mobile games nowadays are overlaid on top of our everyday lives through timers and energy mechanics and collecting lives and sending push notifications and all of that—that has actually become a massive industry. Everything that goes with turning a simple mobile game into a hobby and a habit and a kind of a lifestyle, that has become massive. In that sense, I think games are very much pervasive.

Stenros: During the research project IPerG, there was a researcher at the game research lab at Tampere who famously always declared that pervasive games would never become successful. And over the years, we started believing it—it seemed like that was never going to happen. But I remember in 2016 when *Pokémon GO* came out, we went drinking with Markus and we sent drunken messages to the researcher about *Pokémon GO*: “Now it has happened! You were wrong!” [Laughter].

Leorke: But *Pokémon GO* is really the one exception. It’s not the standard outcome for these types of games.

Stenros: Yeah, that is true. But for me it’s interesting to look at the other measurements of success as well, aside from the monetary. I think pervasive game elements have been picked up in the art world quite a bit, it’s been a fertile area where those kinds of experiences are being created. And I think what these games have done is that they have expanded what people feel that they can do in the street, and that is not always organized or monetized or even very technically creative. That is a valuable societal contribution that these games have made.

Waern: I would object to your statement as well, but from the perspective that the term “pervasive games” is actually very, very broad. As Markus said, it has these three angles of expansions and a game doesn’t have to match them all in order to be called a pervasive game. So that indicates, I think, that most of the games we play today are pervasive. It’s in fact very seldom that we sit in isolation in front of the computer screen to play. I think the shift happened, but we tend to think about pervasive games as the examples we have from 2006 or 2007, and those have not become the major form. And I would say that this is a very natural development of all new forms of games and all forms of technology, as well: When they first start, we don’t quite know how they’re going to be most successfully used. So the games we see today that are pervasive are different from the games that we examined in 2007, but that doesn’t mean that they’re not pervasive.

Montola: I think one thing that we discussed a lot—I’m not sure if it’s in the

book—was that most of these pervasive gaming genres have come into existence through a trailblazer game. There has been some really nice, really simple, true-to-form product that then spawned an infinite number of games. For instance, ARGs were born largely because *The Beast* was so successful. There's the whole genre of pervasive LARP more or less owing its existence to *Vampire*. And when the big, trailblazing location-based game finally happened, it happened in so massive a scale that it might have taken all the novelty and all the air from every other game. So just to get the numbers: *Pokémon GO* now has over one billion downloads. I Googled it this morning and found that there are currently 2.1 billion smartphones on the planet. And not all those smartphones can run *Pokémon Go*. So, the developers have pretty much gotten all the downloads that they can get. They have lost, I think, 800 million players or 850 million players, so they only have 150 million monthly active users left. So I don't know if we can really call it "the one exception." I mean, everyone else who wants to succeed in location-based games has to start with the fact that our potential players have played *Pokémon Go*, and so, how do we carve something out of it? And how do we reestablish novelty in this genre? How do we reinvent this? We had one trailblazer, and we have a business model that the trailblazer and other games are using, and now we're waiting for another trailblazer so that there would be a genre that you can latch on to.

Leorke: One of the chapters in the book deals with the ethics of pervasive games. When it was published, pervasive games were relatively small scale and lesser known than today, but now artistic and commercial games andLARPs are much more common. How do you think designers of these games have dealt with some of the ethical issues that you raised in the book, like respecting nonplayers and bystanders and being sensitive to the context in which the game is played? As these games become more widespread, how have these ethical dilemmas for players and designers evolved?

Stenros: When we wrote the ethics chapter we were very proud of it at the time because that was a topic that hadn't really been covered by other researchers. Some of these issues were being discussed, but they hadn't been brought together in that way. But going through the chapter today, it's obvious that there are gaps that we either didn't write about or didn't realize. Also, there is a sense that we were too excited about the possibility of transgressive play and the novelty of play involved. I think that is also visible in the ethics discussion: we're trying to find a way to transgress ethi-

cally. And I think when something moves from the niche to something as popular as *Pokémon GO*, then the point of view needs to shift as well. So that is one of the chapters that really does need revisiting in the book. But I think many of the principles we introduced are still valid. One thing that we didn't discuss enough was privilege. Because if we think about who is the envisioned player in this book, it is mostly a middle-class person. And there is also the activist ethos that you can find in the book, but even that activist is quite privileged. So that is something we also have to revisit.

Waern: I've actually used some of the ethical reasoning that we did in *Pervasive Games* in the context of HCI (human-computer interaction) research, which is increasingly moving into the field and doing more and more studies in public space. So I've seen that the line of ethical reasoning we had at the time is still highly relevant and relevant even outside of games research. But I would agree with Jaakko that we did not quite look at the privileged position you have us as an organizer or as an instigator. But I think the general approach to ethics that we had in the book is still valid and deserves maybe more attention than it's been given.

Stenros: We also wrote a longer ethics report at the time, which includes some of the things we cut from this chapter of the book.

Montola: I was invited to a playful cities workshop organized by the Asian and European ministers' summit, and I had a conversation with an artist from England and an artist from Jakarta, Indonesia. The English artist said he entered into playful cities because he believes that bringing play onto the streets will make the streets more alive and fresh, and make people happier, and bring joy to life, and so forth. And then the artist from Jakarta said that he wants to bring a game onto the street because the traffic in Jakarta is such a mess and a source of stress for him and others that he believes ludic structures might bring order to that chaos. And that was a moment when I realized that even though we tried very hard to not be too Nordic, even though we are totally Nordic [laughter], we were still extremely Western. And it's very obvious in the book, of course. But I also don't think there's anything in the ethics chapter that we shouldn't have said.

Leorke: Before we move on to audience questions, I'd like to ask each of you to name one particular recent pervasive game, let's say from the last five years or so, that is particularly innovative or meaningful for you, however you want to interpret those terms.

Montola: So, I'm a designer. I worked on *Shadow Cities* at Grey Area, and now

I work on *The Walking Dead: Our World* at Next Games. I find this whole trajectory of mobile, app store-based free-to-play location-based games very interesting. Now there's *Jurassic World Alive* and *Ghostbusters World*, and *Harry Potter: Wizards Unite* is coming. This whole genre is interesting because *Pokémon GO* is everywhere, and everyone else is trying to position themselves somehow to *Pokémon*. So, it's very much worth looking into.

Stenros: After looking at these games quite a bit during the four years of IPerG, we got the band together a few times after the project and looked at games that came out after 2009, like *Sanningen om Marika* and *Conspiracy for Good*. After that period, it's difficult to get excited about games because often they're using the exact same tools that have been used in other things. So from a formalistic point of view, it feels to me that there hasn't been as much innovation as there was happening in the period when we were studying these games quite closely. But what has happened is that people are using them in more meaningful and impactful, artistic ways. The genre that I mostly feel comfortable with is the pervasive LARP. I think the reemergence of the big-city *Vampire*LARPs, that for me defined the 1990s, is exciting. Probably the biggest thing is *Parliament of Shadows*, which I talked about at this seminar a year ago. It's a LARP that was played in Brussels inside the European Union Parliament building, and the fact that it was played under the radar inside the parliament building was quite exciting and it had an interesting message as well.

Waern: As I said earlier, as a design researcher I moved much more toward the public sector, and I'm working with municipalities and museums today, especially in the area of play design for children. We've started to work with fixed outdoor installations in collaboration with landscape architecture, so we are actually looking at transforming the physical landscape of the city to incorporate play in new ways. And I find that I'm excited still about this research because it's taking us in a very different direction, especially the connection to architecture and city planning—I think there's a lot that can happen in that area.

Audience question: My research is on wearables and games. My colleagues are introducing all these fancy wearables into games, but there still aren't many games that experiment with current wearables like, say, Fitbit or smartwatches. So, my current research is focused on that: how can we bring these wearables into mainstream gaming? Do you think that this can also affect pervasive games, and could they make them bigger than they are right now?

Montola: If this is a business and design question, my question as a designer would be: Why are wearables better than smartphones that we carry everywhere with us anyway? Perhaps it comes down to biometric measurements and figuring out whether you can make something interesting with that data. And one day when there's a massively successful trailblazer game that everyone understands intuitively, I think that can be a big thing. But until that day, I don't think so.

Waern: This is very much a market category question: How do you distribute the technology that's needed and how do you get it from the "sport freaks," basically, to others. It's a very big move in terms of audience. So yeah, the trailblazer game will do it, but it's needed to get there.

Stenros: Okay, now I have to get in as well, because I think some of the problems with it are cultural. It's the Google glass problem: it's creepy. And also, we're already giving out all of our information, do we want to give our poop times, too? [laughter]. Because that is where we're going, I just find it creepy.

Audience question: I had a thought during your discussion: Is there a movement from the concept of pervasive games toward one of pervasive play? Or is there room to expand the original concept in this direction?

Stenros: I certainly see that there is a movement from pervasive games toward pervasive play. When we were trying to get funding as the IPerG project ran out, the pervasive play idea was a big pitch that we looked into. Certainly, my research interests already during this time were starting to move toward flash mobs and more play-like structures. It's interesting when people start to perceive cities in a way that they can self-organize, and things like *Ravintolapäivä* (Restaurant Day) in Finland emerge. And there are a number of interesting examples of this. So yes, I do think that play itself is something that we're seeing more of and that these games have made that possibility more visible.

Waern: This is exactly the field in which I'm active at this time. When I'm working with municipalities and museums, we see a huge need to design in a way that players can self-organize. There needs to be a design in place that allows you to appropriate it for play in many different ways. So, definitely there is a space for this movement. The real question, though, is whether there's commercial space for it—whether there's room for pervasive play at a blockbuster concert, for example. And I don't know the answer.

Stenros: Why would that be relevant? [Laughter]. The thing about our book I'm most proud of is that it's technology agnostic. By which I mean, it's

not just about the technology, but it's also about the play, and at the time, we tried to reveal a longer history of play patterns. Now that we have the technology that makes accessing such patterns and sharing them with others easier, many of those traditional play patterns we were looking at have as a result become institutionalized as games themselves. But these games still remind us of those older play patterns. So, I don't think turning it all into profit is relevant at all!

Audience question: One aspect of the increased pervasiveness of mobile technologies comes from the fact that we all carry smartphones, so when you hop onto a bus or ride the Metro you find many if not all eyes glued to these devices all the time. Does this make any positive contribution to our society? Does it make our society and culture more ludic, more playful, more open, or does it do something different: Is it just creating a pervasiveness of social media rather than a pervasiveness of games and play?

Stenros: I think you're onto something here. When we were looking over the book together before this discussion and reviewing what we missed when we wrote it, we found certain patterns that we just didn't see at the time, like stampedes in *Pokémon GO*. Because back then there were no games so big that we could see that something like that might happen. Now, we know when Snorlax appears, five hundred people will start running in the same direction. A minor thing, maybe, but we were basically arguing that pervasive games made games more real by infusing some "everydayness" into them and that they made the everyday more magical by lacing it with "gameness." It all seems a bit idealistic now that the *Pokémon GO* phenomenon is completely mundane. It's so quotidian that people out in the audience right now, checking their *Pokémon*, are not really doing anything more than engaging in a type of social media. If we thought of ourselves as cows in a herd on a farm somewhere, we might think about that kind of repetitive behavior not as a game or as playful, but as a sort of chronic disorder.

Waern: One thing that we actually celebrated to an extent in the book, later became weaponized in our cultural wars: the blurring of fact and fiction. If I was writing the book today, I would take that section out. Or, at least, I would discuss it much more in depth in the ethics chapter.

Montola: At the turn of the millennium, I remember hating a term that everyone was using: "attention economy." Now that I'm working with mobile devices and trying to get users' attention to my app instead of some other

app, I'm starting to think that we're giving X amount of attention to the mobile device in any case, so then the question becomes: in which app is such attention spent? Some people bring up nostalgic notions like: "Wasn't it awesome to ride buses when you were just reading newspapers and talking to the people next to you?" But, in fact, most of the time—at least in Finland—we were simply staring out the window back then. So, what this device does—in both a good and bad way—is save us from boredom. I guess, of course, you could argue that boredom is valuable, but I don't believe it. Ultimately, now I think the question comes down to this: are you on Facebook or are you playing *Pokémon GO* when you're riding that bus?

Leorke: We're out of time, but thanks to all of you for being here today and reflecting on *Pervasive Games: Theory and Design* and the ideas it contains.