Shrink Rap Radio #394, March 13, 2014, The Benefits of Playing Video Games

David Van Nuys, PhD, aka "Dr. Dave" interviews Isabela Granic, PhD
(transcribed from www.ShrinkRapRadio.com by Nick Munson)

Introduction: My guest today is Dr. Isabela Granic, professor and chair in the Developmental Psychopathology Department at Radboud University Nijmegen in the Netherlands, and lead author of a fascinating article on "The Benefits of Playing Video Games" which appeared in a recent issue of the *American Psychologist*. Be sure to go to our website for more biographical detail on Dr. Isabela Granic. Now, here's the interview:

Dr. Dave: Dr. Isabela Granic, welcome to *Shrink Rap Radio*.

Dr. Granic: Thank you very much. Thanks for having me.

Dr. Dave: Well, it's really a pleasure to have you on the show. I'm very excited by the topic and eager to get into it. Now, you're professor and chair in the Developmental Psychopathology Department at Radboud University Nijmegen in the Netherlands. I'm sure I butchered that pronunciation. How should it be said?

Dr. Granic: Actually, almost all of it was perfect except Nijmegen is [phonetic: [Nahy-mey-guh n; Dutch: Nahy-mey-khuh n, -khuh]; IPA: [ˈnɛi̯ˌmeːɣə(n)]], but I mean, I certainly did that for a whole long time before I got out there.

Dr. Dave: You went to school at the University of Toronto for your doctoral work. So, are you Canadian? Are you Dutch? What are you? [*Laughs*]

Dr. Granic: It's not a simple answer, actually. I'm Canadian, yes, but I was born in Romania, and I lived most of my life in Canada. I spent about six, seven years in the States, as well, and now for the last three and a half years I've been in the Netherlands.

Dr. Dave: Wow, what an interesting background. I've heard of departments of developmental psychology, but this is the first time I've ever heard of a department of developmental psychopathology. It certainly makes sense to me, but I'm wondering if that's unique to the Netherlands, or uniquely European, or what?

Dr. Granic: No, I don't think it's unique to the Netherlands, but the discipline of developmental psychopathology was really pioneered by people like Dante Cicchetti and Alan Sroufe, and those folks. So, it's also got its, sort of, flagship journal development in psychopathology, and so it's been trying to be a sub-discipline of its own for quite a while. But indeed, a whole department named for that is relatively rare, yes.

Dr. Dave: Yes, it sounds pretty unique. I was delighted to discover your article in a recent issue of *American Psychologist* on the benefits of playing video games. I have the impression that *American Psychologist* is not an easy journal to get into. Did you have to do a lot of rewrites?

Dr. Granic: I surprisingly did not, and I have to say I am most surprised by that than almost anything that has taken me through this journey of video games, because the American Psychological Association isn't particularly positive, usually, about video games and their impact on children, adolescents, and adults, as well. So, I was quite shocked at how open they were to this perspective.

Dr. Dave: [*Laughs*] Well, maybe they are evolving. I certainly think they have evolved somewhat over the years. For a long time I didn't bother to be a member or to go to conferences because I felt I was so different from them, from "them". Then a few years back I went and discovered that really the field had changed, and that there were a lot of people who were more open to a wider array of perspectives than at the time when I first got my degree when it was pretty much all behaviorism and experimental psychology.

Dr. Granic: Yes, that certainly resonates with my experience as well. They have had some really excellent review articles that surprised me. One of them that comes to mind is a review on the psychoanalytic approaches and how misinformed we are about the outcomes of psychoanalytic treatment approaches, and I was very surprised that the APA would want to put that in there, but it's an excellent article as well.

Dr. Dave: Great. Well, as you point out in your article so much of the research that's been conducted on video games has been on the dangers of addiction and various other negative effects. Part of the reason I was so happy to discover your article is that I've long felt that since video games seem to be so powerfully engaging and motivating that there should be ways to harness them for positive and healthful uses.

Dr. Granic: That's exactly it. You just basically summarized the entire thesis of the article.

Dr. Dave: Well, as I say, I've felt for a long time that thinking about it is one thing and doing the work that it takes to establish that is quite another [*Laughs*], so I'm really impressed by the work that you've done and even just the work of your review of the literature, and so on.

Dr. Granic: Oh, thank you.

Dr. Dave: And your review of the literature, not surprisingly, shows that children and adolescents spend an enormous amount of time playing video games.

Dr. Granic: That's right.

Dr. Dave: Do you remember any of the statistics off the top? I didn't write them down.

Dr. Granic: I think the most common statistic now that is emphasized is that video games are basically ubiquitously played by children and adolescents, and adults as well. It's up to 97% of youth are playing regularly, which is approximately anywhere between a half hour to an hour a day. That's really across cultures as well, unless we're talking about very, very poor sorts of contexts. Almost everyone, just like TVs, are playing games now.

Dr. Dave: You know, one sort of collateral thought that I had as I was thinking about this--and it's something that I've reflected about on the show before--is that childhood has changed so much and, at least in this country, kids don't go out and play in the neighborhood the way they used to. They're driven around to ballet, and then to soccer practice, and then to a play date, and so on. So, they're in their silos. All of our homes have become like little silos. So, maybe one aspect of the social component of video games is a way of trying to reach outside the silo and make contact with other people. [*Laughs*]

Dr. Granic: That's a great point, and I think that because of this sort of general protectiveness that we have… You know, I'm a mother of two seven-year-old, almost eight-year-old twin boys, and coming from Toronto where we really are always about keeping children inside, our play dates are hyper-supervised... It's not like when I was growing up where I would go out for six, seven hours on the weekend and my parents had no idea where I was and what cavern or ditch I was playing in. [*Dr. Dave laughs*] It's very, very different right now.

I think children are growing up much more protected in that way, and these video games are becoming these virtual playgrounds where they spend a whole lot of time. But, unlike that more stereotypical view of what a gamer or a kid who's playing video games a lot looks like, they're not doing this alone in the basement, kind of locked up and antisocial. They're almost all playing the majority of their games in a social context either with their friends and peers in the same room, or they're playing online with their friends and peers. So, it's almost always a context where they are playing with others, but indeed not necessarily in fresh air.

Dr. Dave: [*Laughs*] Hey, incidentally I'm also the father of twin boys...

Dr. Granic: Oh, wow!

Dr. Dave: [*Laughs*] Yes, and because I'm older and my twin boys are grown up now… Well, one of them was really into video games. I've been a computer guy all along, so they get some of that from me. I also have done market research consulting over quite a

span of years and got involved in that when the whole personal computer industry was taking off. I was doing research work for companies like Atari, which at the time was a major game producer. So, I would bring home these games and the kids would be the first people on the block to see some of these games which were still in development. One of my sons we were really concerned that maybe he was addicted, or just way too involved with video games, and he's still involved with video games. He's like… I lose track after a certain age, but I think he's thirty-two. [*Laughs*] Thirty-one or thirty-two, and he still looks forward to playing video games, but he has a wife, and a job, and a baby, so he has become a productive member of the adult community, I'm happy to report. [*Laughs*]

Dr. Granic: Yes, of course. And one of the really, really interesting things about diving into this kind of research in this generation is that most parents now themselves grew up with video games, which is really quite unique to any other cohort because before that we can pretty much count on the parents being very much separated from their children's experience of gaming. But now, a lot of the parents that I'm now working with in our research context and clinical context themselves played games, and can readily accept the fact that they aren't just evil things in their homes.

Dr. Dave: To what extent do they provide a kind of bonding experience between game-playing parents and game-playing kids?

Dr. Granic: Well that's a fantastic question, and one of the ones that I just cannot wait to get more into in terms of research, and there is pitifully little on this. So, the idea of co-generational play is really such a new one in terms of research. Almost nothing is done. We know that play bonds people in general. So, children do most of their, sort of, social connecting through pretend play and other forms of play. And we also know that when kids are young the adults around them, including their parents and teachers… The best way to bond with them emotionally and to feel close to them is to play games with them.

And those, of course, didn't have to be video games, but now since so much of our world is on the screen this is a great context in which I think parents can stay connected to their young adolescents as they get older and it feels like you're losing touch with them. And I think the context of co-playing with adolescents and parents is a wonderful way to keep that emotional warmness still there, and also allow the adolescent, for example, to take over and lead in one context that, you know, you usually don't get these children able to lead their parents into new learning experiences. But I think it would be wonderful to research the impact on the relationship that it has when children are able to lead their parents in a play context.

Dr. Dave: I think that's great. I would love to see that researched. I agree with you: that would be wonderful. And you know, when the video game phenomenon first started to happen I was very excited about it. I went to video arcades and Atari had a video arcade

on their premises for the development of games, and I got to take one of my buddies in and we played games all day for free without having to put quarters in the machine [*Dr. Granic laughs*], and we were just so excited about the dawning of this new age. But, I quickly discovered that I couldn't keep up with kids. You know, they were so fast, and so I kind of gave up years ago. [*Both laugh*]

Dr. Granic: I totally get that feeling, of course, all the time with my kids, and it is just amazing how quickly they figure out these systems. And there are such different rule structures from one game to another in some ways. Of course, in some ways they're very similar, and they're able to adapt so quickly, and all in this very new kind of 21st century learning style of learning as you go through trial and error rather than… You know, I'm constantly saying, "Wait, wait! Read the instructions." [*Dr. Dave laughs*] And there's no way. They're just ahead of me, just pressing everything and figuring out what to do, you know, as they go. It's a really different kind of learning style that these kids have, and it's really effective in some contexts, of course not all contexts, but some, for sure.

Dr. Dave: Yes, now you also point out that in--I thought this was amazing given that the Oscars just happened here--that in 2010 video games brought in more than $25 billion in the US alone, which was twice as much as Hollywood's box office sales. That really speaks to what a huge phenomenon this is.

Dr. Granic: Absolutely, and it's only growing. I mean, every single estimation by the entertainment industry, by academics, and so on, say that the video game industry is only exponentially growing and going to grow. And really what I'm most excited about is that even the designers and these big triple-A companies are starting to recognize that the whole "shoot 'em up, stealth, fighting, military" kind of games are still there--and they're the blockbusters, of course--but there's this huge, burgeoning Indie--independent--game world out there that is just beginning to develop and find its legs. And those games are just incredible in terms of their potential to evoke a whole range of emotions. Not just frustration and aggression, which can be fine in some contexts, but things like awe, and a sense of wonder, and a sense of social connection, and sadness even, and all sorts of emotions that we never thought games would have anything to do with.

Dr. Dave: Wow, that sounds very interesting. Now, as a mother are there games that you restrict for your seven-year-old twins?

Dr. Granic: Oh, of course. And, I mean, the whole idea of there being any kind of benefits, or problems, or harms that can come out of games… Of course, all of these things have caveats in terms of the developmental age of your children, and the kinds of contexts that may… There's all sorts of individual differences in children's ability to deal with stressful contexts, or sad contexts, and so on. So, of course, with my kids I restrict

extremely heavily in terms of content. They're not playing first-person shooter games that are showing any kind of blood.

But that's exactly what I do in terms of film, or books that we read together, and… You know, they haven't gotten past the first Harry Potter book for good reason, or the movie, and so it's the same idea. I think care should be taken by parents, and I think it's one of the things that as psychologists doing research in this area we need to do a much, much better job of figuring out the nuances of the gaming effects instead of making them either "evil" and ready to teach your children the worst of violent behaviors, or all good, and positive, and fun. There's a huge range in between there that I think has to be investigated, and we really need to start doing a much better job of that kind of research.

Dr. Dave: Yes, I totally agree. I think that a more nuanced view is definitely called for. And we do seem to… We kind of reflexively want to make--not just video games, but in general--to make a judgment about things: pretty much black and white, this is bad or this is good, rather than strengths and weaknesses, advantages and disadvantages, for some people, at what times, in what contexts, etc.

Dr. Granic: Exactly. And you pointed it out earlier that what's struck you for a long time has been how games have this incredible potential for teaching new thoughts, behaviors, all sorts of cognitive, emotional, behavioral patterns because they're so incredibly engaging. They pull you into a world and keep you in that world because game designers have become these wizards of that kind of engagement. So that can be for anything, and I think we can all agree--even those pretty hardcore zealots of the negative impacts of games--if you're going to suggest that you can have such huge, negative effects of these video games, then surely you have to, in the same breath, acknowledge that that context and those engagement potentials also have these amazing good potentials to really create different kinds of behavioral patterns or emotional patterns. And that, I think, is completely untapped: that learning potential in the positive realm.

Dr. Dave: Yes. I mentioned earlier that I was involved in market research, and I still am, and so it's interesting to see that in the market research world and in the commercial world there's a big movement to do "gamification" on websites and various kinds of tools where they're trying to get consumer opinions and to have people be able to earn points and little badges as if they were in a video game. And evidently… And I say that with a little bit of skepticism; I'm not totally on board with all of that. To me it seems a little gimmicky. But, evidently it does play into some kind of, I guess, fairly universal thing within us that wants to keep track and wants to know how we're doing.

Dr. Granic: Yes, and I think that intuition that we all have about what is so engaging about games is exactly why this gamification movement has taken off so much in advertising and in the workforce in general. But, I think your hesitation is also an

incredibly insightful one, because in my mind a lot of what gamification is about is it's simplifying what games are in a way that completely loses track of the real magic. Just putting points on things or making cool graphics that are associated with the product you're trying to put out there isn't enough to make it into a real game: a game that you walk into and suspend disbelief and engage in practices that allow you to feel in a totally different way than you would in real life. I think what psychologists have done in the learning context--in education, for example--is start to realize that these games might have an impact, but the games we develop are *horrendously* boring so far.

Dr. Dave: [*Laughs*] Right.

Dr. Granic: It's just, it's god-awful. It's this… you know, I shouldn't say this across the board, but there are some real limitations in the ways that we started to develop these games because we're novices. We're not artists, we're not… we haven't learned how to use the game mechanics in ways that the commercial world has really been learning for decades, and so we get a lot of really boring learning games. And really, there's actually very few mental health games, but I have a sense that if we start there they're also going to be pretty boring at first like most gamification sort of contexts are.

Dr. Dave: Yes, that was actually something I was going to be asking you about because I had kind of a similar intuition about that, I guess. Because I think when we try to grab 'hold of something and bend it to a teaching purpose or whatever, often it does violence to fun, basically.

Dr. Granic: Exactly. Bang on. And, in fact, one of the things I do really try to stick to almost as a religion with games with my kids is to never, ever tell them that this is a learning game versus other games. So, you know, if they get extra screen time it's like, "You know what? If you do this well, you're going to be able to play that math game: *Rocket Math*," and I don't differentiate because I want them to think in ways that--all of this--all learning is fun in any kind of learning context, and you really lose that when you make it into a "learning game" or "educational game". I think that there's going to be some really fantastic opportunities to combine the "art and craft" of game design with what we know already in psychology after decades of research. And when you combine those two and these domains and disciplines talk to each other openly and use their expertise jointly, then I think we have some really great potential.

Dr. Dave: What you're suggesting… I can imagine that there might be some new academic departments that would emerge, or…

Dr. Granic: Yes, in my ideal world that's exactly… You know, I'm writing grants and thinking about this so much these days. It's the idea of really taking what we know in basic psychological science about the ideology of things like anxiety, depression, bullying, and taking also what we know in clinical practice about the best evidence-based practices that might have to do with things like cognitive behavioral therapy or

exposure treatments and things like that. You take these two scientific-based fields of knowledge and then sit down at the same table--before you do anything, before you create anything--with real, commercial-grade game designers, and think together about the "felt experience" you want to create in a game, and how you want to change that felt experience to something more positive. I think there's huge potential in that.

Dr. Dave: I just had a flash that we're living in the science fiction future… [*Laughs*]

Dr. Granic: Yes! [*Laughs*]

Dr. Dave: … that this conversation couldn't have been had in the '50s or '60s, and I was struck with that this morning when my wife said something about, "Oh, you should Google that." And I said, "That's a line straight out of a science fiction novel or something: a word like "Google" and "googling that."" [*Both laugh*] Before we leave the violence, one of the things that concerns most adults is how violent some of these games are. What does research on the effect of that violence reveal?

Dr. Granic: Ok, so the first thing is that there's been these two meta-analyses done by the two camps: the one being the "violent video games cause directly children and youth to be violent" camp, and then the other being the "these games have absolutely no effect on children's aggressive behavior" camp. So, these are two meta-analyses conducted on almost the exact same database of studies out there, and they came to radically different conclusions: one of them saying, "See, there's obvious evidence for this connection between violence in games and violence in real life," and the other one saying, "There's absolutely no connection." And the reason for that has a lot to do with boring methodological reasons about how these studies are conducted, but it also has to do with the fact that violence and aggression is an incredibly complex behavioral pattern. And, of course, it has a lot to do with socioeconomic status and parenting.

So the question is really: what does research say about the connection between violent video games and kids' and adolescents' behavior, right?

Dr. Dave: Yes, right.

Dr. Granic: So, when you have a balanced look at the literature and the hundreds of studies that have been conducted on this connection what you find is no very convincing direct causal connection. Once you take into account things like socioeconomic status and parenting--which make a huge, huge difference in children's lives and the tendency for them to be aggressive--what video games add to that is very, very small. Now, of course, if you're spending eight hours a day behind a video game that is shooting up the whole time and you're thinking aggressive thoughts all the time while you're playing this it primes you. So, what you do find is studies that show that after playing a violent video game you're more likely to have more aggressive cognitions, and you're less likely to perhaps help others.

But, here's the really interesting stuff that's coming out more recently: the same violent video games, if you play them competitively you get some of these priming effects of having these negative, aggressive cognitions afterwards, but if you play them cooperatively--the same games--you get the opposite results. So, you get children feeling more helpful towards others afterwards, acting out in more pro-social ways, playing still those violent video games, but in a cooperative way. So that's a really important thing to keep in mind: how those games are played is just as important as the content of those games.

Dr. Dave: Fascinating. And maybe this is relevant: one of the games you discuss as an example is the *World of Warcraft*, and you point out that 12 million players regularly log on. I was visiting Sweden a couple of years ago, and I was somewhat surprised to discover that my hosts--you know, an adult husband and wife team--are both aficionados of *World of Warcraft*. Now, the title makes it sound so violent, but these are not violent people. What's the pull? Is it, in fact, one of those cooperative things that you're talking about?

Dr. Granic: Indeed, and that's the big pull. When you ask *World of Warcraft* players why they play, overwhelmingly the motivation is the social connection they get. They are getting into this online world in which you cannot proceed successfully without cooperating with other fellow players who are often playing across the globe with you. So, you need to have the skills to approach people in pro-social ways and ask them to join you to play, for example, in the same "guild"--so on the same team--and then cooperatively you guys have to come up with a plan to go and, you know, "get the bad guys" in a way that everybody agrees.

And they have these studies now that people who play these kinds of games--these games where you have to build teams together and go out and accomplish goals together--those are also the people in real life that tend to be more civic-minded. They're the ones that tend to volunteer more, who tend to be the ones who go out on political campaign trails and are active in real life. And these are the same people who are drawn to things like *World of Warcraft*.

Dr. Dave: Fascinating. Now, even though there's been little research up to this point on the benefits of video games you point out that we *do* know quite a bit about the adaptive functions of play. So--and I know that's a big topic--but what's the role of play, and why is it important?

Dr. Granic: Yes, this is a near and dear topic to my heart because my graduate training was in developmental psychology, and the pioneers in this area of developmental psychology, whether it's Piaget, or Vygotsky, and so many others--John Dewey--all talked about the incredibly central role that play has in children's development. So within play context and game context this is where children learn how to cooperate, how to

regulate their emotions. If you look at a four-year-old or a five-year-old who loses at a game, they will immediately start bawling their eyes out.

Dr. Dave: [*Laughingly*] Yes!

Dr. Granic: [*Laughs*] You know, getting one of these tantrums going, absolutely. It is so predictable, it's amazing. But they keep playing, and they keep playing, and then by six, by seven--thank goodness, by the way--they have learned how to regulate those emotions. They know that it's coming. They know that failure's coming and they already have strategies to cope with that failure. Not only that, but they become resilient in the face of that failure so they no longer think of failure as something that's a "do or die" situation, but they learn that failure teaches them something, and that they can go back and learn to do it better if they failed the first or second time.

And this is nothing to do with the video context. This is play in general. This is about playing in pretend play. This is about being in playgrounds and falling off of the swings. All play has this sort of simulation aspect to it that allows children to role play or practice the skills that are so essential for the rest of their lives. Those are emotion regulation types of skills, but also social of skills as well. And evolutionarily--I mean, I can go on and on about this--evolutionarily animals other than ourselves play, and that play serves a real important function to create tighter bonds among primates, for example, or to be able to allow for this expulsion of negative emotions like anger in a relatively safe context, and then to move on. So, you know, evolutionarily it's been selected for, this play capacity. And so, yes, now what we're talking about is some of the same sorts of contexts, but now they're just online because we're on the computer; because that's where we're spending a lot of our lives.

Dr. Dave: Right. Now, you have a section in your paper on the cognitive benefits of gaming. What are some of those cognitive benefits?

Dr. Granic: Yes, so if there's one area that's researched most it is the cognitive benefits of gaming. What you find there is over and over… Even meta-analyses have been done on a whole group of studies now that show that spatial skills and other kinds of basic cognitive skills are learned through playing video games. And a lot of this research is done with these kinds of first--they call them action games in our research reports and our journal articles, but in fact when you look at what the games are they're first-person shooter games--these games overwhelmingly, when you randomly assign players to either play these violent action games versus other kinds of games, you see that they train people up to be more spatially skilled. What's important--what's absolutely crucial--about that is that spatial skills… There have been longitudinal studies over twenty-five years that have been conducted showing that spatial skills are one of the most powerful predictors of STEM expertise: of science, technology, engineering, and mathematics. If you are good at spatial skills, if you have strong spatial skills, you're going to be better in

those areas of expertise. And those are the ones that we really, direly need now to cultivate in our children.

Dr. Dave: Interesting. And you also talk about the motivational benefits of gaming, which we've kind of touched on. Do you want to say a little bit more about that?

Dr. Granic: Sure. So, all the other benefits that I talk about in that article really are less researched, so it's not a, you know, a very… It's not a given fact, let me just say. But with motivational components we know, for example, that people go to games of their own volition and they spend hours and hours--sometimes much to our chagrin--in these games. We know they're motivated to play, and what we think from some of the gaming literature and some of the media psychology research is that that "state of flow" that is so often reported by players is part of the reason why people stay motivated to complete the goals in a game. Game designers have figured out how to keep players in what Vygotsky called "the zone of proximal development": in this sweet spot of feeling challenged enough, anxious just a little bit to just figure it out and get it right while not feeling disheartened. That place where you're constantly feeling like you're learning just enough to keep yourself at that edge of just about to accomplish your goals is an incredibly motivating state, and what some of the research is showing is that these kids who are playing these games tend to be kids who have more of what some people are calling "grit". They are more resilient in the face of failure and learn through gaming that you can accomplish whatever goal there is out there if you just put in enough of that time and effort. What a great lesson we want to teach our children.

Dr. Dave: Hmm, that's interesting. I was also thinking about skiing, which is incredibly motivating and you're constantly on your learning edge. At least, I am constantly on my learning edge feeling like, "Ok, I could get a little bit better," and, "If I could just do this, or just do that." And also computer programming very much has that quality.

Dr. Granic: Yes, and you just named two of some of the most common tasks that people report feeling flow in: feeling in that state of ideal match between your expertise and the demands of the task.

Dr. Dave: You also talk about the emotional benefits of gaming. What comes to mind in regard to that?

Dr. Granic: I think one of the most basic things is a lot of people turn to games simply for a rest from their everyday lives and to help regulate positive emotions. It feels good to play that *Candy Crush* for some reason. And so, you know, when you're feeling stressed and frustrated you can easily open up one of these casual games and start feeling a little bit better and a little happier, so that's just a basic thing. But also--I think it's a very under-researched area--I think--and one of my passions is to look at how games teach children to regulate their emotions better--it's such a basic, and probably one of the most important things that children and adolescents need to learn to function

better in their adult lives is: how do you regulate those negative emotions? When I feel really sad, when I feel very anxious what do I do about that, and how do I work with those emotions to meet my goals?

And what I think games do is teach players that things like rumination--which leads to depression as we know--things like that ruminative rehashing of problems and trying to rehash those problems in that exact same way doesn't work. And so it's never rewarded in a game context doing the same thing over, and over, and over again and expecting a different outcome, and what is taught is things like reappraisal. Reappraisal is the ability to basically shift your perspective on a seemingly impossible, frustrating, anxiety-producing situation and shift that perspective into something that is more positive, and by shifting it you're able to see entirely new ways of solving a problem.

And because games so often change the rules somewhere in between the games--you know: Level 1 and 2--you're constantly being trained up to reappraise the situation. When you are frustrated in the actual context of feeling frustration or anxiety you are forced by the game to shift your perspective. [xx] … hopefully what you learn is that in your real life contexts, if you do the same thing try to shift your perspective rather than getting stuck in that same one perspective that keeps making you feel anxious or frustrated. Then you are able to get through it better.

Dr. Dave: I had the opportunity to hear Jane McGonigal--one of the people you cite--I had a chance to hear her speak at a positive psychology conference some years ago, and she spoke about a game that she developed to help her recover from the brain trauma of a serious automobile accident. She was a very exciting presenter and very motivating, and I rushed to download her iPhone game--which I think is called *SuperBetter*--and it's got reminders or nags to do little activities that would tend to increase one's optimism and happiness. But, after a while I found myself ignoring those reminders to do those sensible activities. Something we touched on earlier is the danger that games which have been developed to achieve a "serious goal" may not in fact be fun or compelling.

Dr. Granic: Yes, I really am glad you keep coming back to this point from different perspectives because I think it's such a crucial one. I too, by the way, signed up for *SuperBetter*. I too love Jane McGonigal. I was so optimistic that I was going to restart my yoga practice, and what you just said was that these prompts were nags, actually, and it is exactly the feeling I got as well. And this has got nothing to do with Jane McGonigal herself because I think it's an incredibly difficult, challenging task to make a game that is really, really good, and we underestimate how hard it is. As psychologists we have these really good intentions but I do think that the fun aspect of the game often gets lost because of those good intentions.

And so my passion really is to work with these talented people who have figured out what's fun, and to listen to them a little bit more than sometimes I'm comfortable with

when they keep telling me, “That’s gonna really suck if you put that in the game.” [*Both laugh*] It’s absolutely crucial that the fun factor is what will get your players to come back the second or third time, and unless we have players playing our games over, and over, and over again the very sort of behavioral and emotional patterns we want to improve in them won’t be improved because one of the main things you want a game to do is get players to practice those things, and you only practice in games if you love what you’re doing in that game.

Dr. Dave: I see that you also are co-founder of something called The Play Nice Institute. What can you tell us about the work of your institute?

Dr. Granic: Yes, so we founded this institute in order to have a context in which we can develop. This is really about developing the games, not the research on the games per se. My university context allows me to do the research on these games, but really this is the place where I get to dream the big dreams of pulling in these commercial game designers and playing with them. So the idea for thePLAYNICEinstitute is to take to heart this melding of science with the fun of games, and from the get-go when we’re designing a kind of intervention game we stop even calling them “serious” games because what a terrible way of thinking about games… [*Both laugh*] So that’s what The PLAY NICE Institute was developed for. We want to make it a place where we can apply for funding so that we can create these very different kinds of games with different kinds of missions in those games, but still have that fun factor absolutely central to it.

Dr. Dave: Now, do you see in the future, or is this something that you’re working on, or sort of, mental health interventions…

Dr. Granic: [*Laughs*] Yes!

Dr. Dave: Talk about that.

Dr. Granic: This is what keeps me up ‘til two o’clock in the morning and gets me out of bed really excited is this idea of taking… In the educational world there has been a zeitgeist that’s been started about using games for learning, and what I would love to do is try with The PLAY NICE Institute and my colleagues to spearhead a similar kind of revolution in mental health. My dream would be that children would be skipping to their treatment programs for anxiety, or a prevention program in a school for bullying would have kids going, “Oh, it’s almost three o’clock. We almost get to go and play that game,” and in that game they learn skills that will prevent bullying or victimization. I think it’s really, really doable; we can develop games to promote mental health and to prevent anxiety, depression, aggression - all sorts of things by using these gaming principles. So yes, I think it’s very doable.

Dr. Dave: What if there are some young people listening to this interview? There might be. I know that we have students and graduate students that listen. If somebody got all

fired up--as I would if I were young and listening to this conversation--how would they get their foot in the door to get involved in this kind of work?

Dr. Granic: Well, first of all they can certainly come to thePLAYNICEinstitute and click on there and send me an email, but the idea is to be the kind of person that really can feel comfortable in that uncomfortable space of not being in one discipline. I think that creating excellent games for mental health is going to require this multi-disciplinary approach that really allows scientists to talk to artists in a different kind of way. So these young people right now… God, would I ever want to go to somewhere like MIT and learn technology and psychology at the same time and develop these games. But I think there's lots and lots of opportunities, and it's a wide open field.

So we've developed a new game. It's our first game that we've started from the ground up called *Mindlight*, and it's such a great example not because--yes, of course I'm excited because we developed it--but it's a great example because all of the neuroscience basic research that I got all fired up about is now being applied to a game to change children's anxiety levels, and the fun of creating this game with these commercial game developers was unprecedented for us. We just had a ball. And now we have these randomized control trials giving kids the opportunity to play this game that has this neurofeedback component so they can change what's going on in the game by just changing their mindsets. And watching how engrossed these kids are and how much fun they're having while unbeknownst to them they're learning new emotion regulation skills, I can't tell you what a turn-on that is. It's just been fantastic.

Dr. Dave: I can hear it in your voice. [*Both laugh*]

Dr. Granic: Most people can, I guess. [*Laughs*]

Dr. Dave: Have you had an opportunity to present at MIT?

Dr. Granic: No. No, they haven't called me yet. [*Laughs*]

Dr. Dave: You might have to call them, because I think that's such a wonderful idea. A place where I think you would find the raw human resources to go in really interesting blended directions… If you could inspire a few people there - you know, they're famous for their media lab. Maybe you can figure out a way to get an entrée there. I wish I had a contact for you. I don't, but…

Dr. Granic: Thank you. These are the kinds of contexts I'm trying to make and it's a really interesting thing feeling like I'm in mid-career and yet really feeling a novice now. Yet, on the other hand, that's what's so exciting about this new adventure. When we get the data for the game for *Mindlight* I think that's also a new opportunity to start a conversation saying, "Hey, this actually works." Of course, given that it *works* we'll use the data…

Dr. Dave: Right.

Dr. Granic: But that's going to be another way of getting our foot in there and trying to convince people that's it worth it. So many people still think of games as these trivial things that you do on the side, and I think if we all just played a little more we'd realize it's not just that.

Dr. Dave: Now is this a commercial venture as well?

Dr. Granic: So far, no. Although, my colleagues now out in California have started to convince me in a very interesting new way that maybe going commercial is the exact way to go. I've been in intervention research for fifteen years, and the big problem for us is even when we have a program that works relatively well the dissemination of those programs, or those techniques, or those ideas is such a slow-moving process, and the uptake is really slow in schools, and so on. Whereas when you have a game and if you actually made the game fun enough that somebody would want to take it off the shelf to play just for the sake of playing, the impact you can have is exponential from what we've already had. So instead of having to go to a school and ask for a program or whatever, you can just download a game. I think that we would have a much bigger impact in terms of promoting children's mental health. I haven't gone much further than just starting to think about the commercial possibilities. It gets the game and the intervention in kids' hands who it would never have otherwise been in, and also families and parents playing with their children. So, commercializing now is something that we are thinking about for that reason.

Dr. Dave: And when will you have the data in on *Mindlight*?

Dr. Granic: *Mindlight*'s randomized control trials should be done in May, and then we'll know a lot more. There's this conference called NeuroGaming that I'm going to be presenting at in May in San Francisco, so I'm hoping to present that data. I'll certainly also put up our findings on the website as well. So it's really going to be very, very soon. We're going to be comparing it to standard conventional treatment programs. I want to see if we at least do as well as them, but also if the motivation for these kids is higher so that they would share these games with their friends, because you can imagine then the impact just grows exponentially.

Dr. Dave: Yes. Boy, I might want to attend that conference in San Francisco since I live not that far away. NeuroGaming, it sounds…

Dr. Granic: Doesn't that sound great?

Dr. Dave: It sounds very science fiction future-y. [*Laughs*]

Dr. Granic: Absolutely, it does. Yes.

Dr. Dave: Well, as we wind down I wonder if there are any final points you want to make.

Dr. Granic: That's a good question. I think my main point that I want to get out is this call to researchers and psychologists to open up their minds and their labs to the powerful impact that games can have on children and families' lives and to start thinking together about research programs that, as we talked about, investigate the nuances--the bad with the good, the social and the antisocial--and try to put a stronger scientific foundation underlying this game research so that the products we come up with are just all the more effective and engaging. It's just more of a call for research and practice, I guess.

Dr. Dave: Yes. Well, Dr. Isabela Granic, it's been absolutely delightful speaking with you, and I want to thank you for being my guest today on *Shrink Rap Radio*.

Dr. Granic: Well, thank you for really reaching out, and I've had a lot of fun with this. So, thanks.