

An Interview with Brenda Laurel (Purple Moon)



Brenda Laurel brings a theater and acting background to computer software design. She earned an M.F.A. and Ph.D. in theater from Ohio State University, and her dissertation was titled "Toward the Design of a Computer-Based Interactive Fantasy System." Laurel designed and programmed computer games at Cybervision, and in 1980 was the director of software marketing for the home computer division at Atari. She worked at Atari Research laboratory in the early 1980s, where she explored artificial intelligence as a means of creating theatrical plots and characters in interactive media. Her research in areas such as human-computer interface design, virtual reality, computer-based agents, and interactive fiction led her to start Telepresence Research in 1990 with Scott Fisher. In 1992 Laurel joined Interval Research, where she was a member of the research staff until 1996, when she cofounded Purple Moon, a software company dedicated to producing games for girls, and a spin-off from Interval Research Corporation. Laurel has consulted on interactive media for Apple Computer, Citibank, Fujitsu Laboratories, Lucasfilm Games, the "Oz" Project at Carnegie-Mellon University, Sony Pictures, and Paramount New Media. Laurel is the author of *Computers as Theatre* (1991); and she edited *The Art of Human-Computer Interface Design* (1990). Her online collection of essays is entitled *Severed Heads: Notes on Computers, Art, and Nature*.

Q: How did you end up where you are now?

A: I got involved in computer games by accident in 1976. I was finishing an M.F.A. in theater and starting a Ph.D. and working part-time in a modeling agency, looking for something interesting to do, when a friend showed me a computer lab where he was working. Shortly thereafter he started a computer

software company—actually, they were building educational software for mainframes, but somebody walked in the door in 1977 with a little personal computer based on an 1802 chip, and it had four colors, you know, low resolution. And he called me and said, “Well, you’re a theater person, how about if you help us design some interactive fairy tales?” And that just seemed totally normal, so I said, “Of course.” So without knowing it was hard, I guess I learned how to write code, and did everything from graphic design to programming to making coffee, and then I was hooked. When that company folded because there was this little upstart called Atari starting to rise up on the West Coast, we said, “Gee, maybe we ought to go check that out!” I’d never seen the Pacific Ocean, living in Ohio—we were doing computer software in 1977 in Columbus. Anyway, I went to Atari, and for a while I was doing marketing—product-planning sorts of things—but then I had the opportunity to move to research. By that time, it had finally occurred to me that the connection between theater and computers was not intuitive to everyone, and that if I really wanted to be able to explain that and understand it well myself, I needed to put some time and energy into actually being scholarly about it. Alan Kay was my boss in those days, and he was really encouraging me to do that, so I was able to get my head out of day-to-day production in the crazed world of Atari and look at the relationships between computers and theater and think about interactive design and character in a pretty disciplined way. In fact, that ended up being my dissertation. So that’s how I got started in the business. I kind of tumbled into it, and it’s never felt like a split-brain experiment, although everybody else always says, “How weird! What a strange combination.” It seems perfectly natural to me.

We got to here, to Purple Moon, really because of the job I had at Interval Research starting in 1992. I knew I wanted to turn my attention away from VR and look at gender and technology. Actually, it was kind of an extension of the VR work, because in the process of working in virtual reality I discovered a lot of what I thought were pretty striking differences between the way men and women experience VR—the body-centric nature of women’s experience as opposed to the sort of disembodied stuff that you hear about from men when they talk about virtual reality, for example, and the use of narrative in VR, which in those days was not done much. We discovered when we were doing virtual reality, for example with the Placeholder project up at the Banff Center, that our most enthusiastic users were twelve-year-old girls, and that was unprecedented for virtual reality as a medium.

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I'm not working in VR anymore; I've tried to take technology innovation off my plate and focus entirely on content and interactivity design as the things I wanted to work on, because I've learned that if you try to solve six problems at once, you don't do a very good job at any of them. So I got back to the little screen and the keyboard, and I think we do have a pretty immersive bunch of products here, but it's not VR. The things that did come through were interest in folklore and narrative, interest in place, interest in embodiment—embodied points of view and rich characters. So you'll see some similarities to that work. Anyway, we were just going to go build Placeholder at Banff when I started at Interval (Interval actually cosponsored the Banff project). David Liddle, who is the CEO of Interval, and I agreed that my major job at Interval would be to look at gender-and-technology issues. So while Banff was going on, we were also starting the research at Interval that led to this project. That's how we got here to Purple Moon.

Q: What was your personal motivation for getting involved with design technology for girls?

A: In terms of our motivation for this project, David and I agreed at Interval that boys tend to have an advantage with computers because they achieve a certain comfort level with the technology by virtue of being motivated by video games to put their hands on it. This is not even about content now; we're just talking about thinking of the computer as an appliance, not being afraid of it, being comfortable with it, and maybe even thinking of it as a medium you might want to author in. Girls weren't getting that chance to the same degree because they didn't have things that motivated them in the way that video games motivated boys. When we started our research, we had the simple goal of asking, "What would it take to design something on a computer that would be as engaging and enjoyable to a girl as a video game is to a boy and would therefore motivate her to get her hands on the computer, feel comfortable with it, and start to think about it as a tool or an appliance, or to have it become transparent?" That little-bitty step doesn't sound like much, especially when you put it in the context of the rhetoric of "computer literacy" and "engineering" and all the other issues that come up for us, but in fact without that first little step none of the other stuff happens. And if we don't get to them by sixth grade, we run a very high risk of losing them. So what's the right question? Well, we decided the right question was, "How does play get influenced by age and gender?" Let's start there. We know that we're trying to do something interactive, so entertainment isn't the right model. Play is much closer to be-

ing the right model because play is more interactive, at least in the way we define it.

Strategically, we made a conscious decision to make our products specifically for girls. If boys think that a product is for them, and they play it and don't understand it, then they trash it. I can imagine a boy opening "Rockett's New School" and saying, "What's going on here? There's all these girls talking, you know, and they're fighting and writing in journals and worrying about who to sit with at lunch, and this is stupid! This is awful!" Then the girls can't really enjoy it or feel proud of it because it's been trashed. So we decided that we wanted to send the message, without beating people over the head with it, that this is really for girls. We basically said, "Boys, you need not apply," because we wanted to protect the experience as being something girls could own, something that could be theirs, so that they could say, "This is mine, this is for me. I own this and you don't get to make fun of it." Boys may make fun of it—although we did quite a bit of research to make sure that our name, for example, was one they had trouble thinking of bad jokes about—but what they can't do is pronounce it lame in the sense of, "This is a failed game, this is not a good game." What they can say is, "This is really dumb girls' stuff," but that's a different critique.

Q: Can you talk a bit more about the research behind the project and what you learned from it?

A: First we did a comprehensive literature survey in all the academic and scientific disciplines that we thought might have some useful information for us. Then we interviewed people in academia and industry and ran focus groups with adults who spend time on the ground with kids in play situations—playground and computer lab supervisors, teachers, scout leaders, coaches. But the biggest and most intensive part was actually talking to kids and parents. We did in-depth interviews with over a thousand children, and eventually narrowed the conversation to just seven- to twelve-year-old girls. We talked to them a lot about technology and learned, for example, that in general both girls and boys believe that video game machines are "boy things" and that computers are gender-neutral. This is contrary to Sherry Turkle's finding, and that was the main reason why we decided to make computer games as opposed to video games, at least for starters, because, again, you don't want to fight two battles at once. You want to be clear about what it is you're trying to do and not make it harder on yourself.

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We started talking to girls about computer games and got lots of information about what they hate. Now let me back up and say that they will play boys' games if there's nothing else to do, and they even like some of them, like "Sonic the Hedgehog" or "Super Mario" or "Ecco the Dolphin." But they never become maniacal about it in the way that boys do. (For this we should be grateful!) But they don't even get enthusiastic most of the time; it's not over the threshold. And there are a lot of things they actively dislike and get angry about. For example, they hate to die and start over. That is, like, way stupid and intolerable. They are not interested in climbing a real steep learning curve just to be able to say they've achieved mastery of something. Mastery for its own sake is not very good social currency for a girl. They demand an experiential path, and something has to happen right away. It can't be that you die in the first five seconds and you have to keep hammering at it day after day, like the old action games used to be. They hate being stuck behind an obstacle or a puzzle that you must solve in order to move forward. They're also not interested very much in beating the clock, which was a surprise to me. It's just sort of orthogonal for them to the enjoyment of a puzzle or a game. Another kind of surprising thing is that girls will play games together whether or not the games are designed for multiple players. Looking back you can say, "Oh, of course, that's a no-brainer," but I was actually surprised when I first discovered that they have no trouble at all playing what's obviously a single-player game in a collaborative way.

The industry typically has believed that girls don't like computer games, and when they've tried on those few lame occasions to build computer games for girls, they've assumed that the games are too hard, so their solution is to make the projectiles move more slowly. It's the computer game equivalent of pink Legos. But they're not understanding the play pattern here, so they haven't asked the right question. The one huge thing that the game industry has missed is the tremendous attraction for girls of complex characters and narratives and materials for narrative construction. I mean, it's not only that the characters are lame in most boys' games, it's that they're so lame you can't even make up an interesting story about them. You can't even do projection on it. That was not a surprise to me, but it would be a surprise to a lot of people in the business, I think. The overwhelming importance of relationships was stunning, if not surprising. It was stunning to see how very important that is and how much more fond girls are of an activity that has more than one character in it, or characters with whom you can form relationships, than of an activity where there's "girl against the world" or an individual character doing this

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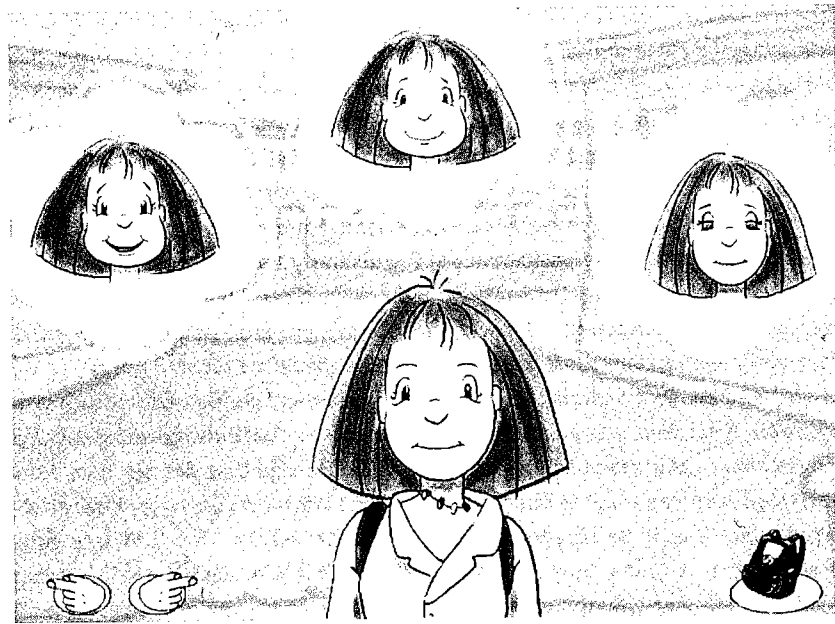


Figure 5.1: The decision screen in "Rockett's World" allows players to rehearse different emotional responses to social situations and their consequences. Reprinted with permission of Purple Moon. Copyright 1997.

or that. It's just a major difference. When you ask a girl what an adventure is, well, it's about exploration, and it's all about relationship. She'll say, "I go on a quest with my friend or for my friend or to find my . . ." The relationship is there all the time. There were very few exceptions to that in the fantasies that girls played back to us. An adventure is something where you have to figure out what the right thing to do is, as opposed to overcoming an obstacle that someone else put in your path. Anyway, that whole elaborate thing—complex emotional navigation of social space is the subject of a lot of play, a lot of fantasy play. There's a lot of emotional rehearsal that goes on there.

So we have tried to make that an area of expertise for ourselves, and the "Rockett" series is really about that kind of play. The premise of "Rockett's New School," the first title in the series, is that you're a brand-new kid in eighth grade, you don't know anybody, clean slate, and you've got to navigate your way to the end of the day. It's just that. And then there'll be another day and another, and when you get tired of looking at the action, you can go behind the action. You can see what Rockett's written in her journal and what pictures

she's taken, and depending on who showed up in the scene, you can visit other characters' lockers and see what's in there and discover things about them, like, "Oh, I know why Cleve's so mean! Because his father is never home. Look at this note! Dad's missing his birthday party!" This is material for narrative construction. It's also material about relationships, and it's emotional rehearsal for social navigation. And, by the way, we've designed a cast of very diverse characters to carry that play pattern forward, and when we tested those characters with kids, they felt very positive about the diversity. So you'll see a lot of different kinds of groups, a lot of different kinds of individuals, a lot of different relationship patterns, but a lot of really recognizable stuff going on in terms of social navigation and those kinds of fantasies. (See Plate 2.)

And also, just to finish the rap on that, at this age, the eight- to twelve-year-old age is really the time of self-construction. That's the project that's going on there, very explicitly so. It's one of the things that defines that break between seven and eight, where it's not about kings and queens and baby dolls anymore; it's now starting to be about my persona—"Who am I? What's going on with me?"—and acting out some of that stuff in a much more relevant and close-to-home way. So the other play pattern that we wanted to focus on, which is also related to this business of self-construction, is much more about the inner world. Its setting tends to be in nature, and it tends to be a romanticized view of nature, where, for example, there are magical properties. Animals may speak, and there may be fairies. Girls will tell you, "We're too old for fairies," but if you show them one, they're really into it, so you have to be careful. You can show them but not talk about them, or you can call them something else—if you call them "magical creatures," it's OK. They're very sensitive about how mature they are at this age, which I totally respect. But this is fantasy, and this is where the flying stuff might happen, for example. But it's very much about the inner self, constructing the inner self: "What's beautiful, what's really beautiful?" Well, flying is really beautiful. Love is really beautiful. Stories of certain kinds are really beautiful. Caring for each other is really beautiful. You get lots of nurturing behavior over here in the inner world. Whereas in the social world, you're looking at a lot of exclusion and affiliation and staying on top of it, over here in the inner world you've got a much more embracing emotional tone to that kind of play.

We thought we understood both of these things pretty well, so in the last phase of the research, after we'd gotten it clear—well, in the second-to-last phase, I guess—we built paper dolls and props and stuff, and sent them to girls about a week ahead of time and said, "OK, you guys, work up something, and

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we'd like you to do some improv for us, or a show." And they'd come back and do stuff. Well, the kids who got the "Rockett's World" characters and desks and school things did what we expected them to do. I mean, yup, it was right on the money. The only thing I can remember that was a huge surprise was that we didn't have a school principal in the characters that we sent out, and a whole bunch of kids made a principal. And the office was very important—it wasn't just where boys got sent when they were bad, it was also where you could call your mom. Another thing that actually surprised me was that the adult characters they would play back to us were much more exaggerated and cartoony than the kid characters. I mean, Charles Schulz (creator of Charlie Brown, Snoopy, et al.) knows this, but I hadn't figured it out. Then we went over here to this other kind of fantasy space, the inner world, and we sent them little animals and fairies and flowers and trees and paths and said, "OK, you guys, work up something," and was expecting that they would take care of the plants and flowers and nurture the little birdies and make the garden beautiful and that sort of thing. Instead they came back and said, "Well, I come here when I'm sad, I come here to be alone, I come here to find out stuff about myself, I come here to think. I sit under the tree and dream. MAYBE my friend comes. There are no boys here. There are no grownups here." Suddenly we got a very different picture. I get goose bumps thinking about it because it was just so radical when it happened. I mean, these little people were totally contemplative in this spot.

It was very interesting, a different picture of the world than we'd had before, and it really guided us in developing the "Secret Paths" series in a different direction than it would have gone. In both cases, in both worlds—I know I've said this before, but I'll reinforce it—relevance, personal relevance, is incredibly important to them. It's so strong. And that was a surprise to me, I think, because you traditionally think about fantasy as being off somewhere—you know, Cinderella, folk tales, fairy tales, superhero stuff. I mean, I watched *Superman* when I was a kid. So I was really struck by the demand for personal relevance and the way they'd take even a fantastical scenario and turn it around until it was, "MY heart, MY life, MY values, the things I'm worried about, what comes up for me." Those things just kept getting worked into the play, and I think that we learned a lot from that and took our cue from that.

We also were able to flesh out a pretty good map of the social structures that exist for girls in their peer groups: what kinds of groups tend to appear, what the differences are among those groups, what kinds of relationships happen among those groups, how they compete with each other, and strategies

that girls have for figuring out where they belong. This turns out to be the quest in the "Rockett" series: "Where do I fit in this social scenario? Who is my friend, who are my friends, whom do I want as my friends? Who am I, whom do I affiliate with? How do I decide?" The cool thing about it is that if you don't like what happens you can back up and do it again, unlike in life. This is why I think we'll have a strong secondary market in adult women who really want to go back and do junior high right. I should add that there isn't a right way to navigate through Rockett's day; there are just a lot of different ways, different things that can happen, and the way you make choices in that series is to decide, "Well, how is she feeling now, after this thing that just happened?"

Q: In the games, do the girls play themselves or do they play other characters?

A: We decided to have the girl take the point of view of the second person. The first-person point of view was a little too much of a blank page. We fooled around with it, but you spend so much time constructing yourself that it's more problematic in terms of constructing a character. So then we thought, well, let's give the girls a choice of different protagonists they can help through their first day, thinking that there'd be a lot of differences and that girls would gravitate to different characters. But it turns out that Rockett has enough characteristics that are aspirational for almost all girls that, when we tested it, it became clear we didn't need multiple protagonists. She's a very flexible character, she can go in a lot of directions. And what group she's going to end up belonging to is really up for grabs because she's so flexible. In a funny way, she's the least fleshed-out character because she has a lot of range. She's kind of Everygirl, I guess. And I know that there are issues there about race and size and things, but the thing to remember is that the cast itself is extremely diverse in that way. But the interface is second person in the sense that you're helping Rockett, you're deciding, "Go with your feeling about this guy. Don't sit down with him at lunch." So there is this aspect of guiding another person.

In "Secret Paths" the scenario is that you enter the product in a treehouse, (see Plate 3) and it's just you and the treehouse, and you can customize it and change how it looks and change what you see outside and what time it is and what you hear and stuff. And then you learn through the Book of the Secret Paths, this very old journal you find in the treehouse, that you can invite girls to come in and talk to you about what's going on with them. The girls are in this magic box you open. There's one of those friendship chains—remember those paper-doll chains?—and if you click on those girls, they get invited. It turns out that those girls are the girls you met over in Rockett's world, except

they look a little younger, because when kids are in that headspace they're not older, they're eight, ten, twelve, you know? So you'll see Whitney, whom you've met over here in Rockett's world in the eighth grade and over here in "Secret Paths" when you invite her to your treehouse. When these girls come in, they tell you what's going on with them, and you get to decide if you're going to help one of them find insight by going on a vision quest into the forest on that girl's own Secret Path. So little Whitney, who in the social world is a crabcake and a snob, over here—in the inner world—is distraught because her parents are divorced and her stepmother's trying to throw her a birthday party, and it doesn't feel OK to her, and she's got all these issues about it. So another opportunity for narrative construction between the titles is to say, "I know why she's like that: because of this," or, "It's interesting that she's going to turn out like that." You start managing and thinking about constructing the lines of causality and the relationships of the characters because you have this other way to look at them.

If I decide to help Whitney, she tells me a little more about what's going on with her in a kind of animated flashback, and if I commit to her—you have to commit—then I go on to her Secret Path in the forest. (This is the first title in the Secret Paths series. The second title will be "Secret Paths to the Sea.") And on that path, my goal is to find magical stones—story stones—hidden there. The stones are for her, they have information for her. Your job is to find them, and of course there are puzzles involved with finding them, and there are lots of other cool things that just happen, because these are interesting environments to poke around in. (See Plate 4.) If you don't find a stone on this part of the path, you can go on the next part, and if you don't find all of them in one day, the program will put away the stones you've found in the magic box, and they'll be there when you come back, and you know how many you have to look for. It's very forgiving.

With many of the puzzles, once you've solved the puzzle and you've found the stone, you can actually dial up the level of difficulty, if you want to go back and play it as a game. We learned that girls love to do that; they love to challenge themselves. This is another strong way that they act out their competitive impulses. And they'll work a very long time to figure out a hard puzzle. We tested a help agent at one point. We had this little bear character whom you could call if you needed help, and we couldn't get a single girl to call the bear. It was like, "Please ask for help." But the girls would say, "I'm not going to. Get that bear out of here! I don't want to talk to the bear! Leave me alone, I'm working on this."

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