Chapter 7
Intertwingled Inspiration

Andrew Pam

Intertwingularity is the idea that everything is deeply interconnected on multiple levels. I will therefore describe my own background and experiences with Ted Nelson, comment on some issues raised by other contributors, and describe my views on the intertwingularity of modern popular culture.

I have always been interested in both technology and culture, and I attribute this partly to my background. One of my early recollections is that when I was very young and my mother was carrying me around in her arms I would actually reach out to light switches and flip the lights on and off. From the age of about three or four I was particularly fascinated by "exclusive or" light switches, where you have a room with the need for switches at two different doors and so they are wired up in such a way that both switches control the light and you can turn it on or off from either door. As a child I then went on to explore in sequence: electricity, electronics, digital electronics and early computers. We had ancient computers at my school. We had a PDP-8 and then an LSI-11 and an Apple II and so on up through the history of computers. I was interested in each level of hardware: how the physics of transistors worked, how digital circuits were put together, and how CPUs operated. When I was young, I designed a simple CPU and a simple operating system. I asked my brother to sit underneath a desk, fed him instructions, and had him execute them.

In parallel with that interest, I have also always been interested in culture, both national cultures and popular culture. My grandfather was an Austrian Jewish industrialist who was murdered by the Nazis, and there is a commemorative plaque for him in Vienna. My grandmother was part of the Bohemian movement and fled to Australia via England, where my father was born. My mother is a musician, and my father is a very educated and cultured gentleman who founded and conducts the Melbourne Musicians orchestra. We always had a lot of books in our house, and as a young boy I read *The Complete Sherlock Holmes*, *The Complete Lewis Carroll*,

A. Pam (✉)
Project Xanadu, 138 Lincoln Rd., 3136 Croydon, VIC, Australia
e-mail: xanni@xanadu.net

Shakespeare, Arthurian legends, and so on. I was encouraged to read and became quite a rapid reader. At school I read the entire school library. I started with the things that most interested me like fantasy and Science Fiction, and then I worked my way though all the fiction until ultimately I'd read all the detective fiction, all the romance novels, and everything else as well. Sometimes I'd go through ten books a day! In the process of reading through the school library, I was very fortunate because they happened to have a copy of *Computer Lib/Dream Machines*. That was my first exposure to Ted and his ideas.

This was about 30 years ago, around 1984. I was still in high school, I was sixteen at that time, and I immediately wrote off to Project Xanadu, which I believe was sponsored by Autodesk at that point. Ted's book included an invitation to get involved in the project, and he responded by sending me some documentation. I continued to receive periodic postal updates from the Xanadu Project for the next few years. I even got an early Xandle, a *Xanadu Handle* intended to be a permanent unique network identifier. A few years later I met my lovely wife Katherine Phelps who is a writer. She was born and raised in the United States and got her BA and MA degrees there. She then completed her doctorate in creative writing for digital media in Australia after we married. I introduced her to Ted and his work that she found just as fascinating as I did. When we took a trip to visit her relatives in the US, we contacted Ted and Marlene and asked whether we could meet them while we were there. We stayed with them on their houseboat and hit it off immediately.

Katherine and I subsequently organised a speaking tour for Ted in Australia. I became Ted's system administrator and have run his Xanadu servers including email and websites since 1994. I've also had the pleasure of assisting in various other ways. I did an early text-based prototype of Zigzag, and we did some experimentation with very early belt mounted Pentium III wearable computers. They radiated considerable heat into your body! More recently I was delighted to participate in Ted Nelson Month at the Internet Archive.

I'm an avid collector, and Katherine and I collect all kinds of media. We've always needed to have a house big enough to accommodate a library. We have a computer game collection, a book collection, a comic book collection, and a video collection. Professionally I've been a computer programmer and a system administrator, and I have always had an interest in computer-mediated communications. Computers are now central to the way we communicate. Katherine and I used to run one computer bulletin board. It grew into a three-state network of bulletin boards, and we got involved in the Internet. I was involved in implementing connections between the early Internet and teletext technologies very early in my career. Over the years I've spent a lot of my spare time either following along relatively passively or actively participating in Ted's work. Thanks to Kay Nishi, I've had the joy of working with Ted in Japan for a while, and I hope to continue collaborating with Ted for some time to come. There's still plenty more to do!

I find that one of the reasons an event like this can be productive and inspirational is because it allows people not only to discuss each other's work, but also to talk about other interesting connections and see how they might relate to their own ideas. I was delighted to see the little video from Frode Hegland's students because it's

certainly true that Ted's work has continuously appealed to new generations, and each new generation has found something to like about and connect with in Ted's work. It's often said that you don't really want to try and do Shakespeare scholarship because there's so much Shakespeare scholarship already that you're reduced to finding the tiniest little niche to do a doctorate. With Ted's work, there is so much yet to do because he has taken on such a grand challenge. There's so much opportunity for people to leap in and join in the project.

During the conference, there was some discussion about books as an operating system. A prominent use of that concept is by the British novelist Jasper Fforde in his *Thursday Next* novels. Fforde explicitly features the idea of a book operating system as a device within the novels. Additionally, many of the characters are aware that they're fictional characters moving between different levels of reality into and out of different fictional worlds. He also applies the concept to the print books themselves. On his website he asks his readers to apply patches and to write in the frontispiece of the book what version of the book they currently have after they've fixed errors in the book as originally published.

I also have a story about simulations. A school was using simulations as a teaching aid. They had some software that allowed students to simulate running their country. There was a 10-year timespan in the game. One group of students realised that they could apply a bit of meta-game thinking. Because the simulation was going to end after the 10th year, they could pretend the world did not exist in the 11th year, and they could just completely loot the treasury and do all kinds of things that took advantage of this discontinuity. This is unexpectedly realistic emergent behaviour. It is analogous to what politicians often do when they know they can't be re-elected due to term limits. I like this story because it shows that the assumptions encoded in the design of a simulation do often reveal quite a lot in and of themselves.

I also wanted to respond to Noah Wardrip-Fruin's comments about games with shooting as a primary mechanic.[1] I've long been interested in computer games as a medium—they're fun and good way to learn. It is of course very well known that many computer games are about shooting. One of the reasons for this I think, as some game critics have said, is that it's partly because when you're looking at ways to interact with a virtual world, destruction is one of the first and most obvious ways to have an effect on the world. It's kind of a 2 year old's way of dealing with the world: poke at things and see if they break! A big check-box for game designers was "can we add more destructibility to the environment." Thankfully, we're now starting to move beyond that and explore other things that games can do.

Finally, one of my great passions is the intertwingularity of popular culture. I'm very interested in what is usually referred to as "fan fiction." Fan fiction isn't really a separate thing from other fiction and never has been. Published authors sometimes play in other authors' worlds. For example, Neil Gaiman wrote and published an H. P. Lovecraft spoof called *Shoggoth's Old Peculiar* and contributed a story called

---

[1] See in this volume, Noah Wardrip-Fruin, Chap. 14: *We Can and Must Understand Computers NOW*.

A Study in Emerald to an anthology combining the worlds of Arthur Conan Doyle and H. P. Lovecraft. Many authors have written Sherlock Holmes stories, including Lois McMaster Bujold. She wrote a story called *Adventures of the Lady on the Embankment*. The story features a protagonist called Cordelia Naismith. The character would later became the genesis of the initial protagonist of the same name in Bujold's series, the *Vorkosigan Saga*. John Scalzi, a noted Science Fiction author and recent president of the Science Fiction Writers of America, wrote his own reimagining of an H. Beam Piper novel which he (Scalzi) wasn't originally intending to publish. His agent liked it and contacted the Piper estate to obtain permission to publish it.

There have been a number of "shared worlds" in the past where authors or publishers chose to invite multiple authors to write within the same fictional universe, and Amazon is trialling a system where authors can grant permission in advance for other people to write within their worlds. In Japan, the animation studio Gainax famously started out as a bunch of fans who eventually became professionals. There's always a conversation between the audience and the creators. To some extent we're all both consumers and creators of culture. This has always been the case, but the Internet has acted as a force multiplier for this just as it has for many other things. Ted's ideas for structuring the "docuverse" are still very much needed to provide more powerful ways to see the connections and the context of the relationships between works.

I've recently become interested in the 2010 relaunch of the 1980s children's TV franchise *My Little Pony*, not only because Katherine and I are animation fans and as has been discussed by numerous media articles and three separate documentaries so far it has surprisingly broad appeal well beyond the core demographic of young girls but also because it is dense with references and has become a particularly good example of this kind of culture as a group activity. *My Little Pony* has a sequence which is intentionally a shot-for-shot remake of a scene from *Star Wars* and a recurring character based on Q from *Star Trek* and voiced by the same actor, John de Lancie, who constantly makes references to shows like *Harry Potter* and *Mary Poppins*. The franchise has also frequently incorporated ideas originating with the fans. This kind of interaction with other works is considered post-modern, but it's also made very visible something that's always existed: that culture is really one big intertwingled thing.

Of course many other fandoms have become popular enough to support significant creative communities, for example *Harry Potter* fandom has spawned "Wizard Rock" as a musical genre. But toy company Hasbro, the owners of the rights to *My Little Pony*, have been unexpectedly willing to tolerate and even support the fan activity. Much to their credit, they have realised the opportunity to benefit from the fan works and have on many occasions chosen to permit the use of their trademarks rather than use them heavy-handedly to ban fan works. A company called "We Love Fine" produces and sells a wide range of T-shirts with *My Little Pony* fan art that requires both copyright permission from the fan creators of the art and trademark permission from Hasbro. Hasbro have also begun licensing the creators of 3D models based on their characters to sell 3D prints of those models, starting with *My*

Little Pony and planning to expand to their other toy franchises such as *Transformers*. This is very forward looking because 3D printing may soon come to have a significant impact on the toy market.

These kinds of interconnections between cultural works, and between the creators and the fans, are great examples of the increasingly prominent intertwingularity of the modern world. I hope that Ted's Xanadu ideas will continue to inspire the tools we all use to navigate this ever more interwingled Internet world and will enable people to more easily create interconnected works and discover and communicate the connections between them. I look forward to discovering what the next 30 years will bring and as Ted says, "onward and umpward!"