



Two Lessons from Canada

(Written during COVID closedown period)

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In this cooped-up period, how is one to spend their time? Certainly, many of the usual opportunities to learn and explore are lacking. Think about the public library: it's closed to casual browsing! What books are you going to read anyway? How much international intrigue murder mysteries, and tense environmental dramas with the world about to end can a body stand?

Even before COVID hit, a trip to the library was an encounter with stacks of books, many by authors with unfamiliar names. What's worse than hauling a book home with a nice cover and a fancy recommendation ("New York Times Bestseller!"), only to cast it aside after reading the

first chapter and realizing that it's going to be a disconcerting experience? Well then, how about rereading some old novels you once enjoyed decades ago?

Problem is that some of them aren't on the shelves, as libraries desperately try to make room for the incoming cascade of new authors' works. Case in point: Desmond Bagley. Not on the shelves! He came from an era of prolific writers such as Alastair McLean, Hammond Innes, and Jack Higgins, who led fascinating lives in the military, as roustabouts, printers' apprentices, and labor in fields that gave them a broad perspective on humanity and different parts of the world before they settled in to writing books. With authors like that, you had a sense of how the book might end, because you know how World War II came out, or what was happening to the British Empire or the Cold War.

Fortunately, lots of the old favorites can be had as reprints, to wit, sixteen books by Bagley. I started with *Landslide*, published in 1967, which provided Lesson One. A tale of a young geologist working in the wilds of the British Columbia timber country. Notable for the absence of immediate communication. No cell phones, dependence on slow mail to get information. Even landlines were scarce. The few radios that the Mounties had available had limited range. Not a word about computers. This set the stage for individual determination and effort to address the challenges of nature and greed.

And indeed, that was something that's quickly been forgotten, with modern communications now enabling group action and quick access to help and information. Our minds and methods of living aren't the same now.

Lesson Two occurred on August 30, 2020, when something went haywire on the Internet, that wonderful feature that was not available in those older books. The Internet began with DARPA, the Defense Advanced Research Projects Agency, created by President Eisenhower as part of America's response to Sputnik. One of its lasting contributions was the notion that if military and critical facilities needed to communicate with one another, it would make sense to provide alternative communication lines, so if one were damaged by military attack, another could carry the signals. The idea gained current usefulness to the civilian population when brilliant minds came up with the notion of hyperlinks. With systems available to talk to each other for transmission of data, why not make it possible to click on a word on one source's document and have it take you to another source's document, even it was housed geographically somewhere else on the connected network. Why, even across the world!

Those of us who first read of this new concept had a difficult time comprehending its ultimate utility, but in a word, it was the World Wide Web. Those links we all click on that bop us from here to there are hardly given any thought today, but for it all to work, a massive network involving copper wiring, fiber cables, and satellite relays came into being. The simple page you call up with a click on a link started out somewhere, but what you see in your browser is a series of electronic signals arriving on your computer from all around the world. To be efficient, it's no longer a full page of code arriving directly on a wire from the source to you. It's a

complex series of code segments, following different routes and sent from different storage points, which get assembled in an instant on to the web page you are viewing.

Truly amazing that it works, and we're massively dependent on it, but it is complex, with thousands of worldwide players. One of the hardest lessons to learn is that you don't just go on the Internet, you have to go to a Place on the internet, something like nytimes.com, which in itself provides and calls information from thousands of other places on the Web. The connectivity observes international standards and roles, involving companies that you probably never heard of. These protocols have to work precisely for the dance of the electrons to work.

One such company is Level 3/CenturyLink, which you probably never heard about. One of the big firms that constitute the backbone of the Internet system. On the morning of Sunday, August 30, one of its data centers in Mississauga, Canada, issued an updated but malformed command that caused a massive disruption of this dance. Information packets could not get where they were needed. Not an attack, of which there are thousands daily, but a mistake which led to what was described as cyber chaos which halted 3.5% in global traffic.

Amazon, Cloudflare, eBay, Garmin, Hulu, PlayStation Network, Reddit, Starbucks, Twitter and Xbox Live were among those hit as the paralysis spread. During the several hours of the outage, corrective commands were caught in the electronic logjam. Not that serious, unless your medical condition was being remotely monitored from another location, or a time-sensitive financial transaction was lost.

Yes, life has changed, and any surprise if we wonder if it's all for the better?

I'm taking refuge in completing the rereading of the rest of Bagley's books, none of which feature the Internet, as he died in 1983 before it took hold as we know it. I highly recommend him.

After that, Hammond Innes's *Campbell's Kingdom*. Takes place in the Canadian Rockies, written in 1952. Definitely no computers or Internet in that one. Can't remember what's in that lesson!