

Wildlife, Natural and Artificial: An Interview with Peter Watts

INTERVIEWED BY IMRE SZEMAN AND MARIA WHITEMAN

■ The publication of Peter Watts' *Behemoth: Seppuku* (2005), the final volume of the *Rifters* trilogy, brought to a close one of the most intellectually ambitious and compelling science-fiction narratives of the past several decades. Watts' four-volume trilogy explores a six-year period of the near future (2050-2056), a time in which humanity encounters a virus that threatens the very existence of the species. Even before the virus, everyday life was already a mess: political order is barely maintained through the extensive use of surveillance and military technologies; communication systems are overburdened by computer viruses and other forms of electronic wildlife; and the environment is teetering on the edge of a man-made abyss. And, in yet another parallel to our own global circumstances, access to sufficient energy resources remains a primary imperative of government and business. In *Starfish* (1999), Watts introduces us to the world of the rifters, people who have been modified technologically and biochemically in order to be able to work in deep sea environments. Rifters are designed to maintain facilities that draw energy from thermal vents in the ocean floor to a world hungry for power; thanks to a mechanical apparatus that has replaced one of their lungs and other modifications to their bodies, they can endure the high pressures of the sea floor while sucking oxygen directly out of the water. Watts' memorable descriptions of the alien world of deep sea bioluminescence and deadly, paper-thin razor fish, is matched by his virtuoso exploration of the psychological struggles of the rifters with each other and

their own damaged selves, in both the tin-can confines of Beebe Station and the expanses of the ocean alike.

What appears at first to be a narrative focused on the consequences of psychological isolation and manipulation, opens up into a larger and more extensive exploration of the human drive for self-preservation—and for power. Over the course of the three books that follow—*Maelstrom* (2001), *Behemoth: B-Max* (2004), and *Behemoth: Seppuku* (2005)—Watts elaborates the characteristics of our near-future-to-come with great complexity, nuance and attention to detail. It slowly comes to light that the Channer Vent, where the rifters in *Starfish* work, is of interest as more than a source of power. It is also the home environment of a lethal virus—*Behemoth*—that is simultaneously a threat and a temptation for some who hope to harness it for their own ends. The great anti-hero of the trilogy, Lenie Clark, inadvertently spreads *Behemoth* far and wide in her quest to exact revenge on those who destroyed Beebe Station at the end of *Starfish*. The consequences of her march across North America from Vancouver to Sault Ste. Marie are disastrous. Lenie struggles with feelings of guilt and responsibility over being the “Meltdown Madonna,” and the frustrations of constantly being used as a pawn in larger game whose shape and purpose are understood only belatedly. Watts’ improbably confident prose (*Starfish* is his first novel) propels the entire narrative along on an effortless cool edge of scientific savvy and a remorseless vision of the limits and possibilities of human action.

Watts’ *Blindsight* (2006) shows his versatility and skill as a writer. Departing from the world of the rifters, *Blindsight* is about what Watts’ describes as “space vampires.” He introduces new sf elements to his repertoire (most notably space travel and aliens) and also new narrative devices. *Blindsight* switches back-and-forth between multiple first-person narrators and employs relatively simpler language, with the hard-science elements so admired in his trilogy pushed to the background (although, like his other books, the Notes and References sections bristles with the kind of references one might expect from someone trained as a scientist). The mood of dread and foreboding built up from the outset of the book stands in impressive contrast to the feverish dynamism of the later books of the Rifters trilogy. The bulk of this interview was conducted through a series of email exchanges in April 2006 before the publication of *Blindsight*; it was followed up in July 2007 with a brief exchange after the novel’s rave reviews and nomination for the 2007 Hugo Award for Best Novel.

Peter Watts received a Ph.D. in marine biology from the University of British Columbia in 1991. In addition to novels, he is the author of numerous short stories and scientific papers. The 1993 documentary, “Sealing Fate,” for which he penned the screenplay, received the Environment Canada Trophy for Best Film on the Environment in that year. He is an editor of *On Spec: The*

Canadian Magazine of the Fantastic. Peter Watts lives in Toronto. His website is: www.rifters.com

IS/MW: You have a long-standing interest and involvement in both science and writing. Can you tell us about your interest in both areas and how you see the relationship between them? Does fiction provide you with possibilities to work with ideas in different ways that science allows (and vice-versa)?

PW: I've wanted to be a writer since I was six. I've wanted to be a scientist (specifically, a marine biologist) since I was five. I remember the exact moment that each bug bit me— a CBC [Canadian Broadcasting Corporation] radio dramatization of *20,000 Leagues Under the Sea* and my discovery of a friend's ten-gallon aquarium, respectively—and at the time, they seemed pretty much independent. Looking back, though, I think both hooked me because of the aspect of *exploration* inherent in each. Science asks *how come* and science fiction asks *what if*, and there's a lot of overlap between those domains. I regard my writing very much as a series of thought experiments, a chance to explore the data without having to bombard NSERC [National Sciences and Engineering Research Council] or the NRC [National Research Council] with research proposals attempting to draw some link, any link, between thermoregulation in harbor seals and National Security In These Post-9/11 Times.

That said, though, I think that scientists might be among the worst people to write science fiction, at least science fiction dealing with their own fields of specialization. Beyond the obvious fact that we're straight-jacketed by our own expertise— we know so many arcane reasons why this, that, or the other thing can't possibly work that our imaginations are hamstrung— scientists as a group just tend to be really bad writers. We're trained from childhood to wring any trace of style from our words, trained to be as opaque and technical as possible because well-written papers are *comprehensible* papers, and referees tend to equate "comprehensible" with "insubstantive": "Well, of course, that's *obvious*. Nothing new here." Whereas an incomprehensible paper is more likely to be met with "Shit, this guy's way beyond me. This must be good." This isn't just my opinion. A couple of published studies have actually shown that the more badly written a paper is, the more prestigious will be the journal in which it ultimately appears. (Although granted, said research did not appear in particularly prestigious journals . . .)

I think that scientists might be better at writing sf in areas in which they have no real expertise, at least in terms of being able to entertain a wider variety of cool concepts. Maybe that's the best compromise: to have

the training in rigorous extrapolation, to have the *moves*, but to be unencumbered by all the conventional wisdom that accretes around you in the course of becoming an expert in something.

IS/MW: What are some of the ideas that compelled you to write the Rifters trilogy?

PW: I'd always been struck by the idea that western civilization is largely built upon the backs of its outcasts— the folks who make the breakthroughs, cure the diseases, derive the theorems are rarely the sorts of people you'd choose to hang with at parties because they're too damn driven, they're frequently clinically obsessive or worse. *Starfish* was to some extent a high-contrast example of that—put a bunch of head cases next to the Off Switch for the whole western seaboard, and see what happens when they realise how much power they actually have. (Actually, now that I think of it, it seems a little bit like a low-budget rehash of *Spartacus* crossed with *Atlas Shrugged*. Now try to get that image out of your head.) The obvious answer, of course, is that nothing happens, because they really have no power. The folks who run the system are not going to be dumb enough to give them any. So all my early plot experiments involved the rifters getting squashed like bugs the moment they rose up to throw off their chains. This was a bit too depressing even for me, so I had to rig the game, as it were, to give them a chance. The Ganzfeld psionics was a small example of that. *Behemoth* was a big one.

IS/MW: Did you imagine it as a trilogy from the outset?

PW: No. *Starfish* originally ended with Lenie Clarke crawling up onto the west coast and bleeding out there on the shore. She dies, a million microscopic hitchhikers debark, curtain. But my editor pointed out that I was writing for an American publisher, and they thought that something a bit more— well, I suppose “triumphal” is as good a word as any— would have wider market appeal. So *Starfish* ends with a clenched fist and the strong sense that someone's gonna pay for all the shit that went down over the preceding 95,000 words.

So, great. I'd thrown out all these little enticing lines about environmental refugees and monsters in the Net back on shore, safe in the knowledge I'd never have to flesh any of it out. *Starfish* was a single-set play, after all. Ninety percent of it took place on the Juan de Fuca Ridge. It was my first novel; what did I know about building whole worlds? But now, Lenie makes it out and Tor's asking for a sequel, with a decent advance

this time. Now, I've got to actually *describe* the world I only hinted at before, because another claustrophobic one-set play would have put me into a rut on my second trip out. I was not pleased.

(Neither were a fair number of readers, by the way, who picked up *Maelstrom* expecting to get *Starfish 2.0* and ended up getting clobbered by a whole different vibe. Getting into a rut probably would've been better for the bottom line, in hindsight.)

IS/MW: You are described by some reviewers as a hard science sf novelist. True to form, each of the books in the trilogy ends with a Notes and References section that provides the scientific background (complete with journal citations) for many of the concepts and ideas you work with in the novels: smart gels, Ganzfield effects, the biochemistry of character, the properties of Behemoth, and so on. You write (tongue partially in cheek) at the end of Behemoth: Seppuku that the notes “hopefully serve as a valuable educational resource, even though they are primarily intended to cover my ass against nitpickers” (293). How do you understand the relationship between the Notes and the rest of the novel? Is it essential that readers understand the scientific grounding of your ideas? Is it important to get the science right?

*PW: It's important to me to get the science right, because I'm anal-retentive about such things and I've still got the ghosts of colleagues past staring down their noses at me from the back row. Whether it's important to the audience, or the genre— as I've already said, I'm not convinced that scientists make the best storytellers. Interestingly, the ideas that people find most inspiring in my books don't have anything to do with marine biology, which is where my background is strongest. Certainly, you get the usual reviewer's comments that *boy you can tell this guy's a marine biologist, look at all this marine biological verisimilitude*, but the ideas that really seem to have taken off involve my take on the future of the Internet. I keep seeing computer science geeks raving about my grasp of AI; I get occasional e-mail from a guy down at the Lawrence Livermore Labs, who says that my work has actually inspired him in his own (which is a bit scary when you consider what those guys actually do down there). And yet I have no expertise in computer science at all. I just applied Darwinian rules to an electronic system, which seems like a remarkably simple and obvious thing to do— and a whole bunch of chipheads pricked up their ears. And at the same time, I've never got a fan letter from a marine biologist.*

It's like I said before: knowing too much about something blinds you to radical possibilities. The most hard-sf story I ever wrote was cutting edge when it sold, and obsolete by the time it saw print. The only outright fantasy I ever wrote— a completely unresearched, ignorant little number based on the premise that clouds were inhabited by colonies of airborne microbes controlling the world's weather for their own purposes— turns out to have been plausible enough that Israeli scientists were setting out to try and catch the little buggers ten years later.

IS/MW: This leads to a larger and more general question. What do you see as the role of contemporary scientific developments in the development of science fiction as genre? One of the things that is impressive about the Rifters trilogy is how well hard scientific information is incorporated into the narrative without impacting on the energy and pacing of the story; you seemed to have mastered the ability to create a balance that imparts both a narrative considerable drive and scientific realism to your novels.

PW: It's kind of you to say so, but Jesus it's hard to stay ahead of the curve. Contemporary scientific developments are— well, if they're not killing science fiction as a genre, they're certainly engaged in an extremely ruthless cull. We live in a real world in which cloning and teleportation are almost passé, in which legitimate aerospace authorities are saying we could have an honest-to-god faster-than-light drive in less than a decade. Other techheads argue that the Singularity is only a few decades away, that before mid-century Humanity and its machines will have bootstrapped themselves into some kind of post-Human transcendence literally inconceivable to contemporary minds. If they're right, we sf authors can reasonably speculate maybe two or three decades ahead. Beyond that, what's the point?

Sure, there's a whole new breed of science fiction writers out there who specialize in post-Singularity fiction, but guess what: they cheat. They tell stories about the people who got left behind in the Great Technological Rapture, or about transhuman characters living in comfortable, comprehensible simulations because their minds would be blown by the reality they actually inhabit. These writers do not show us life after the Singularity, they show us life in a nature preserve— and really, what else can they do? By definition, whatever happens on the other side of that curtain will be as incomprehensible to us as our own civilization would be to a colony of gerbils. One almost hopes for societal collapse, or for some environmental catastrophe to stop the headlong rush and reset the clock back into some context where conventional narrative isn't quite so close to its expiry date. (I know, I know—"Be careful what you wish for" has never sounded more ominous . . .)

IS/MW: How do you imagine (political) power to be organized in the world you describe in the Rifters trilogy? Though the details vary, the general organization of power on the globe seems in the main to be an intensified version of our own situation. The world is divided into new power blocs—N’Am, the M&Ms, the Chinese—which are animated by corporations and large-scale bureaucracies that either act independently of governments, or, since there seems to be almost nothing resembling traditional governments in the novels, act in their stead: the drama of globalization extended fifty-years into the future. In Maelstrom we are told that “damage control” has long contributed to more than half of the Gross Global Product. This is a system of power with enormous access to information and an equally enormous capacity for violence, but one which seems to be spiraling out of control even before Behemoth makes landfall.

What do you see as the motive that keeps the system going? Profit? Access to energy? Forward momentum? Self-preservation at any cost?

PW: That last thing. You’re right, the system as described is beyond repair before the story even begins. The reflexes, the language of capitalism persist, but that’s pure galvanism. The system is a jumbo jet, overbooked, overweighted, out of fuel over the Atlantic and already ten thousand feet below cruising altitude. Short-term economic concerns led to the overbooking; profit margins dictated skimping on the fuel. But nobody gives a shit about those things now. Now, the guys in the cockpit are just trying to keep the nose up in the forlorn and desperate hope that by some miracle, everyone won’t be killed on impact. Now, the best-case scenario involves being alive when the sharks find you.

IS/MW: What can one do about such a system, if anything?

PW: I don’t know. The nanotech and transhumanist gurus may be able to save us at the last minute, if their self-replicating nanobots and immortality bootstraps enter the real world in time to clean things up—and if unexpected side-effects of *that* new technology don’t dump us into even worse straits. If the whole bloody race got together and really decided to work the problem, we might be able to save our own bacon even barring nanotech magic; we’re a pretty innovative species when we have to be. But even now, we lack the motivation. We’ve already dropped from ten thousand meters to two and we’re *still* more interested in Jessica Simpson’s colonoscopy than we are in next Thursday’s self-made apocalypse. There’s this cognitive disconnect between what we know to be true and what we *feel* to be true. No matter how convincing the data are, we won’t act unless

we feel the danger in our guts—but we evolved to fear approaching predators with big teeth, not little graphs showing global temperature over time. No matter how compelling, how irrefutable, numbers just can't feel real to us. Only when the danger is as imminent as an attacking grizzly will we really believe in it, and of course by then it'll be far too late. Dan Brooks, a professor up at the University of Toronto in whose lab I'm presently working, put it nicely: "The neocortex allows us to predict our own demise, the brain stem keeps us from believing it."

IS/MW: "It's all just pattern." One of the most intriguing elements of the trilogy is the way you draw attention to the links connecting the biological, geological, meteorological, technological—indeed, all systems. All are, at their core, defined and shaped by information; the outcomes differ only by virtue of the character of the systems through which information travels. You write at the beginning of Maelstrom that "life is information, shaped by natural selection" (M/28); and a few pages later, "a storm convected from ice and air. A storm constructed of pure information. Beyond the superficial details, is there any significant difference between the two?" (M/31). The frantic passages where you describe the evolution of the Madonna or Lenie programs in Maelstrom and the two Behemoth books makes this connection explicit: Lenie Clark passes from organic life into the wildlife of the future Internet, where it/she engages in the life-or-death dance of self-preservation that structures natural systems, too.

Information is also power—or at least potentially so. The novels are full of attempts to know: to learn about Behemoth, possible enemies, the whereabouts of Lenie Clark as she marches cross-continent to Sault Ste. Marie, and so on. But N'Am's intensive surveillance society still seems to get things wrong as often as it gets things right. There seems to be a limit to which all of the variables in complex systems of any kind can be properly understood in order to enable the right decisions and effective action to be taken, even when it is essential to be able to do so.

Can you talk about the function of both these senses of information in the Rifters trilogy?

PW: I'm not quite sure what two senses you mean. I'm also not sure I agree that "There seems to be a limit to which all of the variables in complex systems . . . can be properly understood . . ." I mean, certainly, there's the Gödelian distinction between what's knowable and what's provable, and the idea that no formal system can fully understand every aspect of itself. And certainly complex systems, while deterministic, are functionally unpredictable in their behaviour. But I wasn't (consciously) trying to make

a point about the inherent opacity of complex systems; in my story, the information was unreliable not because the system was complex, but because different components of the system had conflicting agendas. The Internet was infested with wildlife that was motivated purely by Darwinian forces, and these tended to interfere with the goals of the surveillance state. But one can imagine a more efficient state with a pristine web, free of subversive elements (although that may not be possible in principle: perhaps messiness and autonomous agents emerge inevitably from a sufficiently complex system). In a system like that, it would be much easier to collect reliable information.

It would be much scarier to live with such a system, too, which makes me regard spam in a much kinder light. Before too long, self-replicating Viagra ads might be the only defense we have against the Patriot Act . . .

IS/MW: The world of 2050 is one in which the biochemistry of human character has been largely mapped out. The rifiers are adapted to deep sea life at the Channer Vent through sophisticated physiological and psychological tweaks. Natural personality characteristics and psychological predispositions are routinely enhanced (in the cases of Ken Lubin or Achilles Desjardins) or invented wholesale (Lenie Clark's memories of childhood sexual abuse). Loyalty to the system by those given key roles within it is secured through implants that secrete Guilt Trip (which is countered by the Guilt-analog Spartacus developed by Alice Jovellanos and her small rag-tag anti-system political group). The ability to manipulate human character biologically seems to confirm what Yves Scanlon says to Pat Rowan at the end of Starfish: "We don't have the slightest control over what we are" (S/308). The novels seem at times to suggest that human beings are fundamentally creatures of brain chemistry. Isn't this what the interesting epigraphs to Behemoth: Seppuku point to? ("The essence of humanity's spiritual dilemma is that we evolved genetically to accept one truth and discovered another"—E.O. Wilson).

Yet the drama enfolding many of the characters pulls in the other direction. Rowan, Lenie, Taka Ouellette, even Ken Lubin after he is set free from Guilt Trip, struggle with the dynamics and difficulties of guilt, responsibility, free will, and morality—with how to define and understand themselves in a world set loose from its moorings. How does the relationship between guilt and Guilt Trip work throughout the trilogy? Is it biochemistry all the way down, so to speak, or is there also free will (biochemical, too, no doubt, but perhaps of a different order or level)? There is certainly a difference between human beings and smart gels—a difference that could be reduced to this ephemeral thing called consciousness.

PW: The bad news is that ultimately we can all be reduced to sparks and biochemistry. In that sense we are robots, and our behaviour is utterly deterministic. There is no free will in a mechanistic universe. The good news is that we are complex systems, and complex systems—while deterministic—are also unpredictable to all intents and purposes. Our clockwork is so complicated that the accurate prediction of fine-scale individual behaviours is effectively beyond us—*unless* it is artificially constrained in some way, *a la* Guilt Trip. The kind of behaviour modification described in the trilogy does not work by understanding the human psyche in all its subtlety, but by using brute force to *suppress* enough of the psyche to leave the remainder less subtle, more tractable to manipulation. When Clarke, Lubin and (to a lesser extent, and far too late) Ouellette are released from their shackles, they regain degrees of freedom. They are still deterministic systems built of chemicals and electricity, but they have regained enough complexity to make them unpredictable to those who enslaved them in the first place. That may be the most any of us can hope for.

As for my take on “consciousness,” I’ve just written a whole other book on that one [*Blindsight*]. I would refer you to that, if not for the fact that its cover design violates several articles of the Geneva Conventions (I know, I know, the Conventions are “quaint”—but still) and I would not wish such a fate on either of you.

IS/MW: Is the Rifters trilogy an environmental allegory? Behemoth could be seen as the ultimate instance of the revenge of Nature. In the trilogy, Behemoth is described as the original inhabitant of Earth. Everything else originates from a panspermian event (Martian Mike) which brought life to Earth. After centuries of use and abuse of nature, is humanity merely getting its just deserts as Behemoth returns to claims what in some respects rightfully belongs to it?

PW: There’s obviously a huge Nature’s-Revenge element embedded in the tale, but I don’t see how it could be described as allegorical. The collapse of the biosphere as described in the books isn’t meant as a metaphorical representation of anything other than the collapse of the biosphere; it’s literal, and solidly extrapolative. Yes, there was a certain deliberate irony in casting Behemoth in the role of Earth’s sole native, and the whole DNA crowd as Martian immigrants, but even that Martian connection is a respected and plausible theory here in the real world— and let’s face it, we were already trashing the place long before Lenie Clarke let Behemoth loose on the surface.

*IS/MW: Human beings seem to exist in a exterior relationship to nature in the trilogy—organic, to be sure, but also deeply disconnected from the biosphere, too. In *Behemoth: Seppuku* we get the sense that insects and plants will make their way past the global bloom of *Behemoth*, come what may. It is less certain that people will do so—in part do to their own destructive and violent tendencies. What is the status of nature in the trilogy?*

PW: We *are* Nature. Our tendencies are no more “violent and destructive” than those of any other species on the planet; in fact, in evolutionary terms, they’re identical. There’s a widespread impression that Nature is somehow *efficient*, that only Humans kill for the sheer joy of killing, and so on. It’s a kind of noble-savage sentiment extended to every species that isn’t EuroCaucasian, but it’s flat wrong. Nature is only efficient when energy constraints force efficiency upon it. Predators frequently kill for the sheer sake of killing (at least, they leave their kills uneaten). The problem with Humans is not that we’ve isolated ourselves from Nature—it’s that we *embody* Nature, cranked to the nth degree. We are selfish, we care only for what works in the moment, and we have no real sense of future consequences—like every other product of Darwinian processes. The fact that we’re presently crushing the rest of Nature under our boot doesn’t mean that we ourselves are being “unnatural” when we do it. Cancer is natural, too.

IS/MW: Reviewers describe your trilogy as dark, pessimistic, dystopian. This seems right to us, even if the suggestion sometimes hidden in such descriptions—that it would somehow be possible to treat the future more gently and positively in fiction—also seem to us to be misguided. How do you react to characterizations of your writing as dystopian?

PW: I understand those characterizations, but I disagree with them. It seems to me that the system already has such great inertia that its trajectory can’t be altered enough to justify an “optimistic” view forty years down the road. We couldn’t stop climate change at this point even if we gunned down everyone in the upper echelons and replaced them all with dedicated ecologists. New and freshly-mutated diseases are *already* biting us in the ass every second Thursday. To write a story in which these issues aren’t felt in 2050 would be to describe some parallel universe in which we got serious about fixing things back in 1985. Hell, the mere fact that I’m describing high-tech Human civilization of *any* kind persisting into mid-century might be overly *optimistic*.

I'll go further: in at least one sense, my fiction is downright utopian, portraying an almost childishly optimistic view of Human nature. Sure, the environment has gone down the tubes in my novels; my protagonists are stuck in the horrible mess left them by previous generations. But how do they react? Patricia Rowan kills thousands, but only to save *millions*. Achilles Desjardins, psychopath and sexual sadist, spends most of his life utterly chaste because he knows that his inclinations are wrong, and he refuses to let them out. He only turns into a monster when his brain chemistry is altered without his knowledge or consent—and even the person who did *that* did it because she thought it was the right and moral thing to do. The closest thing to a real villain in the whole damn trilogy is Lenie Clarke herself.

Now, what *don't* you see in the tale? You don't see anyone invoking God or Allah or some Invisible Purple Hamster That Lives In Their Butt to justify genocide. You don't see war profiteers. You don't see kings and presidents deliberately provoking conflict to line the pockets of their buddies in the oil industry. In my books, people only behave badly because they're *forced* to, because it's the lesser of a myriad evils. Seriously, what could *be* more childishly utopian?

IS/MW: Dark, troubled, disturbed, heroic: Lenie Clark is one of the great characters of contemporary science fiction writing. A sympathetic protagonist despite her outward coldness—and the fact that her rage at the Grid Authority leads her to seed behemoth across North America. Ken Lubin, too: a character about whom we know almost nothing beyond his capacity to expertly assess situations and to act on the results, but whom readers nevertheless see as on their side against the threats of the world. How did you come to create Lenie? What are the special challenges (if any) of writing about characters like these?

PW: Lenie Clarke was my attempt to imagine what was going on inside a woman I was briefly involved with back in grad school. It was one of those relationships that lasts maybe two months, tops, tosses you around like a pebble in a cement mixer full of broken glass, and then spits you out in the certain knowledge you'll never see your partner again. You know all this going in, of course. You know the relationship has no future. And you do it anyway, because hey: what *does* have a future, these days? And at least you know you're alive in the meantime.

The special challenge, of course, is that I probably got her completely wrong. But I rather suspect she's been dead for some time, so she's not likely to contradict me. And other people, who hail from similarly dark

places, tell me that Lenie feels real to them. This honours me. I haven't been fucked over nearly as much as these people have, I'm basically a pampered poser playing let's-pretend-we've-been-sexually-abused. But if my prose can convince people who've actually been there, that's something.

Unless, of course, they were just sucking up to me. That happens too. Not as much as it should, sadly.

*IS/MW: The first volume of the last book, *Behemoth: B-Max*, begins with an author's note describing the publishing industry logic that led to your trilogy being published as four books (we really require a new word for such an object).*

PW: How about "rip-off"?

*IS/MW: You write that publishers are leery of books over 110,000 words, since they don't trust the sales they may generate. At over 150,000 words, *Behemoth* had to be split in two to make it in the market.*

PW: To make it *to* the market. Once there, by all accounts it tanked. Even split down the middle (or perhaps *because* of that).

IS/MW: What is your sense of the place of science fiction in the contemporary publishing market? Are there limits (explicit and implicit) placed on you as a writer by the financial constraints publishers are working under today?

PW: For one thing, if you're a midlist sf writer, you're just asking for trouble if you write a book of more than a hundred thousand words. Big retailers simply won't stock them (at least, this was the excuse I was given for the *Behemoth* split). I'm not a particularly successful writer within sf, perhaps because the genre contains a high proportion of technophiles who want stories in which problems get *solved*, dammit, and what's more they get solved by science and technology. I'm no technophobe. I'm bitterly impatient with kneejerk railing against "mad scientists" and "technology run amok" by people with no understanding of science or technology. But my writing reflects the fact that while human scientific ingenuity has the potential to solve our problems, human stupidity always seems to get in the way. It's not always a welcome message; I once received a rather apologetic rejection from *Analog*, which admitted that their audience simply wouldn't accept downbeat stories about intractable problems. So while my stuff tends to get glowing reviews, it doesn't sell that well, and in turn Tor doesn't invest much effort in promoting it.

IS/MW: What is your sense of the health of science fiction as a genre? Science fiction has always (unfairly) been seen as the poor sister of what is taken to be serious, middle-brow fiction. Yet it seems that recently science-fiction themes and issues have been seeping into the work of a number of mainstream fiction writers (the one that comes most forcefully to mind is Kazuo Ishiguro's Never Let Me Go).

PW: The conventional wisdom is that science fiction as a commercial genre has had its day, and the foreseeable future belongs to fantasy. A quick strafe of any major bookstore will attest to that. I think that at least in North America, people are recoiling from future shock. Fantasy, on the other hand, offers a kind of comforting faith-based solution in magic that doesn't force you to think too much. (I'm speaking here of the elves-and-warlocks novels that seem to be spreading like herpes across the Chaptigos and Amazons of the land: New Weird fantasy like Miéville and VanderMeer are notable and welcome exceptions.)

Yes, mainstream fiction is definitely becoming more science-fictional— but that's because the real world is becoming increasingly science-fictional. Yet somehow, the stigma of the genre remains: Margaret Atwood is infamous for her strident insistence that *The Handmaid's Tale* and *Oryx and Crake* are not science fiction, and the creators of mainstream hit television shows like *Lost* and *Alias* admit that the real trick was getting a science fiction show on the air without ever actually calling it science fiction during the pitch. Perhaps we are converging on an endpoint where explorations of all the most relevant science/societal issues—cloning, artificial intelligence, nanotech, environmental catastrophe—are absorbed into the mainstream, and all that remains of science fiction is a half-empty marketing husk full of lurid covers and derivative far-future tales about Roman Empires In Space. Science fiction will be alive and well beyond those borders, and more respectable than ever—but we won't call it science fiction any more. We'll call it mainstream. (William Gibson and Bruce Sterling are already well down that path.)

IS/MW: In Philip K. Dick's The Man in the High Castle, we come across a character reading an alternate history—a science-fiction novel that in the context of the alternate history of Dick's novel itself is a fiction that accurately reflects our own reality. What strikes us as particularly interesting about this is the very presence of narrative fiction in Dick's novel: science fictions—printed, narrative fictions in general—seem to be generally absent within science fiction narratives.

Which leads us to wonder: isn't there something strangely old-fashioned about writing a novel to discuss scientific and technological ideas? Or do you think that the novel is a communicative technology that has a specific and lasting power that makes it a suitable space for the development of ideas, characters, and stories like the ones in the Rifters trilogy?

PW: To some extent it depends on how you define “novel.” If you define it in terms of the medium of its transmission— written prose, delivered via paper or pixels, linear or hypertexted— then yeah, the form might be approaching its expiry date. Certainly, written novels demand at least rudimentary reading skills on the part of the audience, and as a society we seem to be growing less literate. But I'd prefer to define the novel in more functional terms: a long story, told to an audience. By that reckoning, movies and television series qualify as novels in their own right. Even supposedly-interactive computer games like “Half-Life” and “Homeworld” qualify; there may be no prose in such games, but there is story, and the player can't change the plot beyond the boundaries imposed by the author. These games are basically train rides, and the player (any illusions of autonomy notwithstanding) is just a passenger. He can get off at any given station (i.e., die, or get stymied by a certain puzzle) but he can't change the route of the tracks themselves.

That's a vital difference from multiplayer online games such as “World of Warcraft,” where the designers don't bother with narrative at all: they simply build a world, and the interaction of the players determines the plot. These are not stories, but simulations—social thought-experiments, if you will, and I think they have enormous potential to generate insights into the real world (I also know of a number of professional writers and actors who use WoW as a testing ground for developing plot and character conflicts in their own work). But they're not very good avenues for narrative storytelling because everyone's just making it up as they go along; there's little chance of tight plotting, surprising twists, multileveled dialog, or well-planned, long-term set-ups to conceptual punchlines. That kind of control is especially important when you're trying to make a point about arcane scientific and conceptual topics. Neurosurgeons in the midst of an operation don't generally hold plebiscites on their next move.

The bottom line is, as long as someone has something to say, and as long as they want control over how they say it, there will be a place for storytelling. We may all soon be writing for Sierra and Relic instead of Tor or Ace—but in terms of the concept, we will still be writing novels.

IS/MW: Do you feel that there a strong science-fiction writing community in Canada at the moment?

PW: There are certainly many excellent science fiction authors writing in Canada, and there's a hugely promising next generation coming up through the ranks (as a fiction editor at *On Spec* I get to see a lot of the latter, and steal their ideas, and squash their hopes and ambitions before they can pose a serious threat). Whether that constitutes a community is a different issue. It may be better to speak of communities, or even (in some cases) warring tribes. There was a lawsuit that split the Toronto-area crowd just after I moved out here, and the bad blood from that persists to this day. The west-coast crowd does their own thing. There's a vibrant stand-alone sf community in Quebec which interfaces with ours occasionally. I don't know what's going on further east—not necessarily because nothing is, but because I'm simply out of the loop. I've more or less withdrawn from even the local factions over the past few years—I hang with a fair number of fans and writers one-on-one, but I steer clear of the politics. And I've noticed that it's become increasingly difficult to get into a good argument about anything interesting without blundering into politics.

I subscribed to the SF-Canada listserver for a number of years; it was the one place that Canadian sf writers could get together online to bat around controversial ideas, seek advice, get answers to arcane questions. But something changed. It gradually became impossible to discuss sacred cows without pissing people off. Suggest that the religious impulse might be a temporal-lobe malfunction and the Christian faction gets bent out of shape. Talk about rape in evolutionary or biological terms, and half a dozen postings brand you a misogynist. There's a certain mindset that refuses to draw a distinction between *discussing* something and *endorsing* it, that assumes that the moment you describe a behaviour as natural you're somehow excusing it. That's common enough in society at large, but dammit, here in sfdom we're supposed to be the Literature of Ideas, we're not supposed to be afraid of hot potatoes. Didn't the late Theodore Sturgeon—one of the giants in the field—once write a story exploring the positive ramifications of a society based on incest?

But that was almost forty years ago. We've become more timid since then, less willing to explore dangerous ideas, more worried about pissing off the torch-wielding peasants. And some of those torch-wielders ended up on the SF-Canada listserver. It wasn't fun to argue any more. You'd start debating an idea and end up fighting about whether you should even be having the debate. Postings got nasty, took shots at people instead of positions. So I left.

Still, let me emphasise: I know a lot of people who *are* fun to debate, who'll argue until your server bodily pushes you out of the bar at 2 AM, and a lot of those folks are sf geeks same as always. I treasure them, I treasure the interaction, and I come away smarter and richer for it. But I think of them as friends and sparring partners. I don't think of them as the Canadian SF Community.

Which is, I guess, a pity.

IS/MW: What's next?

PW: An abyss of uncertainty. For the first time in fifteen years there are no novels in my head crying out to be written. I have unwritten worlds in my head, I have places yet to explore that were only hinted at in *Blindsight*, but it's only now, two years after finishing that book, that I'm beginning to rekindle my enthusiasm for writing. I came out of *Blindsight* disheartened— not so much with the writing as with the industry end of the profession. Midlisters are pretty powerless in this business; publishers who drop the ball on us don't have much impetus to pick it up again, and I've discovered that even discussing that imbalance in public is enough to get one branded a difficult author. And there is a school of thought in the business, with far more expertise than mine, to the effect that the kind of stuff I write simply lacks the commercial appeal to warrant anything more than publication in the small presses. Last I heard Tor was willing to do another book with me, and given my sales figures I'm probably lucky they've stuck with me as long as they have. Harper Collins would have dumped me years ago.

Bottom line: I would very much like to keep going at this. I honestly don't know if it's sustainable, though. It's nice to get good reviews, but they don't pay the bills.