CANADA AS A SUPERPOWER IN ELIZABETH BEAR'S SCIENCE FICTION: THE JENNY CASEY TRILOGY

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Abstract. English-speaking science fiction readers were impressed by Elizabeth Bear's Jenny Casey trilogy when it appeared in 2005. Along with the high quality of the novels, *Hammered, Scardown* and *Worldwired,* the American author surprised her public by a number of features that distinguishes this trilogy from most recent American science fiction. The aim of this article is to examine two of these features more closely: Bear's combination and revision of certain earlier science fiction genres and her depiction of a world of 2062 in which Canada and not the USA has the leading role in space exploration and global conflicts. The article uses both a comparative examination of science fiction genres and a qualitative analysis of those aspects of Canada that Bear chooses to highlight. American space fiction tends to be nationalistic, but the USA of 2062 is shown as suffering from ecological disasters that its weak and divided society cannot deal with. Canada, on the other hand, though not an ideal society, successfully upholds values like moderation, and is still able to rely on the loyalty of very different kinds of characters.

Key words: recent science fiction, women's science fiction, cyberpunk, American image of Canada, Canadian national values

INTRODUCTION

Although Canada has long been seen as a very well-off and technologically advanced society, its political weight in global politics for most of its history has been that of a secondary power acting as a loyal supporter of either Great Britain or the United States. More recently, Canada has stood up for its own point of view more often and in the last decades there has been a perceptible movement away from automatic agreement with its American neighbor on military, economic and ecological issues. Nevertheless, to find Canada depicted in an American writer's science fiction trilogy as one of two remaining world superpowers, the other being China, is a surprise. More than one reviewer who likes Elizabeth Bear's Jenny Casey trilogy has commented on this: Claire Brialey, for example, explains that she thought that Bear must be Canadian 'since it is so rare for an American author to employ Canadian settings or to ascribe a major role in the future to Canada itself' (Brialey, 2006), while Christian Sauve, who is himself Canadian, is also surprised that Canada appears as a superpower and admits that he kept checking whether Bear was not really a Canadian (Sauve, 2006). It cannot

be said that Canadian science fiction depicts the country as a superpower in space in the spaceship genre that Bear is working within. For example, one of the leading Canadian writers of science fiction, Robert Sawyer (b.1960), places only Calculating God (2000) in Canada, though on its opening pages the narrator confesses that it is surprising that an alien would choose to land his spaceship by the Royal Ontario Museum rather than in Washington. In this case, Canada is depicted as a technologically advanced state, but not a superpower. If a Canadian science fiction writer sees his country in this light, reviewers' surprise that a non-Canadian would give such a position to Canada is understandable.

Bear is indeed an American who writes what is known as speculative fiction, including both traditional science fiction and fantasy: born in 1971 in Hartford, Connecticut, the futuristic version of which appears in the opening chapters of the first novel in her series, she began, like most writers of speculative fiction, with short stories in 2003. She was already then working on the first book in the Jenny Casey trilogy; Hammered, Scardown and Worldwired appeared in January, July and November 2005. Winning more than one award, she has also become a significant presence on electronic panel discussions of speculative fiction.

The aim of this article is to consider how and why Bear presents Canada in her trilogy as the major Western superpower in space, a position generally occupied in American science fiction by the USA. The first of its objectives is to situate her trilogy as a new variant of different American sub-genres written since World War II, for Bear's novels differ in interesting ways from current science fiction. Another major objective is to categorize the Canadian realities that Bear chooses to highlight in her three novels as well as to distinguish the values that are implicitly and explicitly associated by the American writer with her image of Canada and which justify her giving Canada such a leading global role.

The methods employed in the analysis include the use of comparative literary history, analyzing the sub-genres of science fiction that are relevant to the trilogy, as well as a qualitative discussion of specific features concerning the image of Canada presented in the novels.

THE JENNY CASEY TRILOGY AS A COMBINATION OF SCIENCE FICTION GENRES

Very little about the trilogy is accidental. In an interview after its publication, the writer states: 'There's a lot in those books that's intentionally a tour of the last 30 years of science fiction: a cyberpunk thread, a military history thread, a singularity thread. They're very self-aware books, with a lot of participation in the "genre conversation" and looking at the way the various tracks in conversation interlink' (Robson, 2006). The trilogy includes many of the plot elements one associates with traditional American science fiction: spaceships, searches for planets to colonize and encounters with aliens, as well as rapid action, conflict between competing powers and what are known in Darko Suvin's term as

novums, Latin for 'new things', referring to technology well beyond that which readers experience in their current reality (Suvin, 1979; cited by Roberts, 2000: 190–191). At the same time, Bear belongs to and writes for a new generation.

Over much of the 20th century up to the 1970s, American science fiction was, as Adam Roberts asserts, 'male-oriented' or, less respectfully, 'boys and their toys': 'big gleaming machines [...] physical prowess, war, two-dimensional male heroes' (Roberts, 2000: 91, 95, 93). It had grown out of the cheap newsprint magazines of the first decades of the century, known as the Pulps, which Roberts dismisses as 'disposable adventure stories by hack authors aimed at a popular market', though he admits the 'crude energy and vigour of early adventure-based' science fiction (Roberts, 2000: 191-192). This led to better-written and longer stories which, as Brooks Landon states, focus on the science of 'rocket ships, robots and atomic bombs' (Landon, 2002: xv); he agrees with Pamela Sargent that these are still a 'boys' club' genre in which significant women characters never appear (Landon, 2002: 126).

The 1970s saw a major change in American science fiction with feminist approaches both in the criticism of the genre and among women writers who used the popular themes of aliens and the part-human, part-machine cyborgs to explore gender issues. Writers like Ursula Le Guin, Octavia Butler, Marge Piercy, Alice Sheldon, Pamela Sargent and Joanna Russ showed that it was possible to create a new kind of science fiction and, in the process, attract women readers in large numbers (Roberts, 2000: 96–105; Landon, 2002: 124–128). These authors were also articulate theorists and critics who brought a more serious study of science fiction into the academic community. However, looking back at feminist science fiction, Jenny Wolmark argues that it avoided dealing with hard science and is overly 'nostalgic' in its manner (Wolmark, 1994: 109).

This may account in part for the very different tone of the next major subgenre, which Landon calls 'oppositional science fiction', 'a group of young writers in the mid 1980s who proclaimed once again that the old science fiction was dead' (Landon, 2002: 159). The movement, which included writers such as William Gibson and Bruce Sterling, adopted a very successful label, 'cyberpunk'. Landon offers one of the clearest definitions of the term, with 'cyber' referring to 'a cybernetic world in which computer-generated and manipulated information becomes the new foundation of reality', while 'punk' suggests 'its alienated and often cynical attitude to authority' (Landon, 2002: 160). Although the futuristic world that cyberpunk depicts has spaceships, these are not the focus of attention anymore. Instead, Bruce Sterling identifies its thematic interests as 'the theme of body invasion: prosthetic limbs, implanted circuitry, cosmetic surgery, genetic alteration [...] mind invasion: brain-computer interfaces, artificial intelligence, neurochemistry' (Sterling, 1986; cited by Landon, 2002: 161). What makes cyberpunk narrative unique, however, is not so much these themes, many of which are not new, but the world in which they figure. As Adams states, cyberpunk sees the future as the contemporary world in a state of decay, 'a dirty, grim and exhausting urban jungle [...] populated with hard-boiled, streetwise

characters' and plots that combine science fiction with crime stories (Adams, 2000: 186-187). Mark Bould emphasizes that, along with frequent references to pop culture, cyberpunk novels like Gibson's Neuromancer (1984) or Ridley Scott's film Blade Runner (1982) focus on 'socially excluded, often criminal, characters living in the ruins and in the shadow of multinational capital' (Bould, 2005: 218). The leading nations of the past are now in decline, with power now held by global companies. In a number of ways, this world is similar to that depicted in noir crime fiction so that it is not surprising that women characters play only stereotypical roles as victims or fatal women as they did in noir thrillers just before and after the Second World War – only now the fatal women are as likely to be bionics, not true human beings. Cyberpunk was taken up by literary and cultural critics, but did not last very long, perhaps in part because it alienated women readers, who were becoming the dominant public for science fiction. Cyberpunk was replaced by a greater variety of sub-genres, while traditional science fiction suffered in market terms from the increasing popularity of fantasy fiction.

This brief review makes it easier to see what Elizabeth Bear means in her statement, already cited, that her trilogy is 'intentionally a tour of the last 30 years of science fiction' (Robson, 2006). The first novel, Hammered, introduces Jenny Casey, the only character in the novels who speaks in the first person, living in 2062 in a site out of cyberpunk. The United States has lost its status as a global power through catastrophic ecological disasters leading to food shortages and urban riots; in addition, decades of rule by an extreme conservative right-wing movement has limited individual rights, especially for women. Jenny lives in a small city, Hartford, Connecticut, in a neighborhood of slums and drug dealers; she has befriended a boy who is now the drug boss, Razorface, easily recognized by his 'mouth full of knife-edged, gleaming steel' (Bear, 2005a: 9). Her own life went into a sharp decline after a major accident which left her with an artificial left arm: 'from just below the shoulder it's dull scratched steel - a clicking horror of a twenty-year-old Canadian Army prosthesis' (Bear, 2005a: 8). Formerly a helicopter pilot in the Canadian peacekeeping forces, she has fled her country in protest against the increased power of the military co-operating with global corporations. Now she is cynical about the present and the future, even though, comparatively, her homeland Canada is doing better than much of the rest of the world.

Cyberpunk elements in the trilogy go beyond the decayed urban landscape of the formerly powerful USA. One of the major ones is the importance in this world of 2062 of neurological interventions which can alter the human body and heighten its natural powers. When Jenny does return to Toronto, she finds clubs with a fashionable 'body-modified crowd', people, for example, with 'lips that scintillate with purple and orange light' and 'a girl with tiger stripes and a lashing tail' (Bear, 2005a: 123-124; 134). She is courted by the new Canadian spaceship program, run by the army and the global corporation funding Canada, Unitek. It is promised that if she undergoes the newest surgery, not only can her rapid physical decline be stopped but her body will be sufficiently enhanced

to let her fly the newest generation of spaceships. The operations are painful and can be risky; some of those who underwent earlier versions of this surgery emerge capable of flying spaceships but unable to deal with any human contact: for example, the Canadian pilot Koske, whose 'neural implants' had turned 'his skin into a finely honed alarm system that could make him curl away and shake, crying, from an unsubtle touch' (Bear, 2005b: 20). In the less advanced Chinese program, all the pilots live constantly with a surgically 'induced form of acute hypersensitivity' that means they can never live with their families again (Bear, 2005b: 22). On the new Chinese spaceship the five 'fragile, essential, half-mad pilots' require special privileges, such as 'soundproofed bunks' and 'privacy' that are not granted to others working on the spaceship (Bear, 2005b: 21). Comparatively, the Canadian neurosurgeons have reached a higher level of competence, but even though in the trilogy most of the adolescents who undergo the new operations emerge with no real problems, one boy never wakes up out of a coma that the scientists cannot explain or cure.

Cyberpunk was fascinated by advances in computer games and new kinds of robots that went beyond the mechanical to become partially human and often rebellious. By the time that Bear was writing, current electronic and internet advances made it easy for her to imagine still further ones. In the trilogy Canadian teenagers are encouraged to get apparently innocent neural implants that allow them to take part in a virtual reality gamespace. This is really a funded project by the Canadian government and Unitek to select those who are naturally gifted for the work of becoming spaceship pilots. It is in this virtual reality that Bear first introduces Richard Feynman, who is an Artificial Intelligence, a new kind of being with human consciousness but which exists entirely on a cybernetic level. The historical Richard Feynman (1918–1988) was a famously brilliant and eccentric American theoretical physicist, a Nobel Prize winner (Gleick, 2014). In Bear's novels, the Canadian Dr. Elspeth Dunsany gave his name and personality to her single successful endeavor to create an Artificial Intelligence, and was sent to prison for ten years for refusing to hand him over to the Canadian armed forces. Feynman, who has survived on the internet, now enters the new game and is then able to move into the spaceship by entering Jenny's and other characters' minds. Unlike cyberpunk, which could not conceive Artificial Intelligences as morally positive, Bear's Richard Feynman repeatedly solves problems in the space program and, ultimately, helps to reverse some of the worst ecological tendencies like the dying of the sea so that earth can again become livable.

In Bear's more optimistic scenario, Jenny's leaving the United States and coming back to Canada is a refusal to remain in the cynicism of cyberpunk ideology. Here one comes to the crucial image of Canada, which will be explored in the larger part of this article, as an alternative way of thinking to the militaristic violence of the United States of the past or the China of the novel's present time. Bear does not have what Jenny Wolmark calls 'the nonchalance of cyberpunk toward the bad new future that is upon us' (Wolmark, 1994: 112). Although some Chinese and American leaders are mainly interested in power, and Unitek in both power and profit, the positive characters in the novels share a deep concern for the planet and for humanity's future. In addition, the trilogy has ties to what Donald Hassler considers a resurgence of 'hard science fiction' with huge spaceships (Hassler, 2005: 249). In the closing pages of the first novel, Jenny Casey reacts to the newest spaceship with the 'strong emotional responses' and a 'sense of wonder' that Landon finds typical of classical science fiction (Landon, 2002: 27). She stares at the Montreal, speechless, until she finally says, 'in a voice sweet with awe, "So that's what all the fuss has been about" (Bear, 2005a: 323-324; emphasis in original). In this way the trilogy combines a range of emotions rare in conventional science fiction, from pessimism about the earth's future to the romance of space exploration.

Finally, Bear returns women as central characters to the genre, although she does not do this in the manner of the feminist writers of the 1970s. Unlike them, she does not focus on gender issues in her novels. On the contrary, in the 2062 she describes, especially in Canada, women enjoy equality with men. This is shown rather than discussed, as it is simply taken for granted here that many scientific, technological and political positions are held by women. For example, the prime minister of Canada is Constance Riel; one of the heads of the technological corporation Unitek is Alberta Holmes. The leading scientist working on Artificial Intelligences is Dr. Elspeth Dunsany. Pilots for the new generation of spaceships, along with Jenny Casey, include teen girls in training, Leah, Genie and Patricia, all of them major characters. Brief but significant roles are played by other women like the Chief Medical Examiner in Hartford, Dr. Kuai Hua and the chief on the spaceship Montreal, Captain Wainwright. Late in the third novel, Worldwired, when the action moves to a United Nations hearing, readers meet the secretarygeneral of the UN, who turns out to be Agné Zilinskiené, 'a Lithuanian lady in her sixties' (Bear, 2005c: 226).

The old binary oppositions traditionally applied to women and men – weak/ strong, passive/active, emotional/rational - no longer apply in this world. Still, although all of the significant female characters are depicted as strong, active and successful in their lines of work, Bear does not place all of them in the positive camp in the space struggle between Canada and China. Certainly some of them can be classified as villains: Alberta Holmes of Unitek corporation has no moral scruples in seeking power for her corporation; General Janet Frye, leader of an extreme Canadian political party, collaborates with both the American secret services and the Chinese against Canadian interests; Jenny's sister Barbara is a pathological killer who murdered her sister years ago and now enjoys her sadistic work as a hired killer, or ronin. Other female characters are more ambiguous morally, like another ronin, Bobbi Yee, fighting now on the side of the more positive characters or the young terrorist Indigo in Toronto, carrying out a personal vendetta against those who condemned her brother to prison.

The simplest way to explain the large number and high status of women in Elizabeth Bear's trilogy is to remember that she is writing in the context of thirdwave American feminism. The earlier feminist science fiction novelists were

part of the second-wave feminist movement of the 1970s. By the 21st century, it is much easier to imagine a future version of society in which women enjoy real professional equality, even at the highest levels of power. What Bear does is to practice this equality in science fiction narrative, where the dominance of men is still largely taken for granted.

IMAGINARY HISTORY: THE CONTEXT FOR THE RISE OF CANADA IN BEAR'S TRILOGY

Elizabeth Bear's wealth of strong female characters has attracted only positive reactions from critics, who are more surprised by the disappearance of the United States as a leading global and space power and especially its replacement specifically by Canada. One reviewer, Christian Sauve even objects that Canada's rise is extremely unlikely, given a population only the tenth of the size of America's; he accuses Bear of not adequately explaining American decline (Sauve, 2006). On the one hand, this complaint is curious since science fiction describes an imaginary future universe in which many changes are possible. However, it does make sense when one sees to what extent American science fiction is fundamentally nationalistic, no matter whether the United States is presented directly or indirectly. Tom Shippey, writing about science fiction as socio-political criticism of contemporary societies, states that 'many American authors have produced critiques of America, or stories of the Fall of America' but he argues that such presentations, 'while arresting, are also evidently highly threatening, to many deeply unwelcome', forcing readers to 'step outside the comfort-zone of modern Euro-American consumers' (Shippey, 2005: 19-20). He suggests that 'only a minority, perhaps, is prepared to consider an alternative (national) habitus, a place where America in particular does not exist or has lost dominance' (Shippey, 2005: 20). Canada, it seems, is not an adequate replacement as a 'comfort zone'.

Despite Sauve's claim, the trilogy does provide a fair amount of information about ecological and political changes in the world up to the narrative present of 2062-2063. However, Bear chooses a variant of the traditional way in which changes are presented. Usually, at some early point in science fiction novels a third-person narrator or, even more commonly, an older character explains past history to younger protagonists. Instead of such long flashbacks, Bear prefers to scatter pieces of information in a number of conversations throughout the novels, along with very brief reflections by characters on political and climate issues. Readers are expected to put these together, accepting certain gaps in their knowledge. For example, the Artificial Intelligence, Richard Feynman, deliberately seeks out Gabriel's young daughter, Leah. She brags about Canada having more bases in space than any other country, though he points out that China's bases are entirely government-funded while Canada's are not. Leah agrees, referring to her father who told her 'that Canada would never have made it into space without private money. [...] he says that after the famine when we had to loan troops to the US, and then later, when the Fundamentalist government

was in power down there, it cost us so much money that we needed help if we were going to keep up with the Chinese' (Bear, 2005a: 22). A half-century has made a great deal of difference in world politics; when Richard asks Leah if she knows about the Cold War and the space race between the USA and the USSR, she dismisses this as 'ancient history' (Bear, 2005a: 22).

This vague historical survey is filled in later by Jenny, when the much younger American Bobbi Yee encourages her to return to Canada: 'things are better there. No crop failures. [...] The US is a war zone and it isn't going to get any better [in New York people are starving in the streets' (Bear, 2005a: 70–71). Jenny reflects that Canada is better off only in part: 'A smaller population was a mixed blessing during the really bad years, a quarter century or so ago [...] but it also means that my generation went almost entirely to the military, and our historic freedoms went out of the window with the Military Powers Act of 2035, following our little altercation with China over PanMalaysian trade' (Bear, 2005a: 70). Again, though Jenny is a more reliable historian, her thoughts are allusive rather than detailed. Ouite naturally she remembers mainly her own participation in historical events, how she worked as a Canadian peacekeeper but felt lucky she missed 'the peacekeeping action in New York City' and was sent to South Africa instead (Bear, 2005a:71). It is only in the second novel, Scardown, that Jenny again thinks about her army career, stating that she participated in World War III, 'for all they don't call it that. They call it the PanMalaysian Conflict [...] a war provoked by then-rising oceans, crop failures, erratic and burgeoning storms' (Bear, 2005b: 198). The destruction of Mumbai in India, probably during this war, is given only in lists in the third novel that mention other bombed cities like Dresden and Hiroshima (Bear, 2005c: 36, 209).

The very rapid decline of the USA is also closely related to ecological disasters, which Jenny summarizes as 'the summers got hot and the winters got cold. The US was awfully hungry for a while, too, - especially when the Gulf Stream quit from Antarctic meltwater' with the consequence of 'food riots and the Christian Fascist regime' (Bear, 2005a: 71). Some additional information comes through the Prime Minister Riel's consultations with her scientific advisor, Paul Perry, a British refugee from 'the Freeze of Britain', in which both the UK and Ireland have become entirely uninhabitable. He tells her (and readers) about menacing changes in ocean currents and algae populations which make it imperative to find other planets to colonize in the near future, though there are plans to 'reterraform Earth' - but only in a century or two (Bear, 2005b: 17-18). Other references to the consequences of ecological disasters appear almost accidently, as when a character in a New York bar watching the baseball World Series on television comments that 'the Havana Red Sox looked fit to win it all. Which was ironic, because Havana was under water and despite having kept the name, the Red Sox were based out of Argentina these days' (Bear, 2005c: 231). There are several very laconic references, such as the use of the name 'New Washington' for the present capital of the USA (Bear, 2005c: 223). The space race, then, is fueled by the desperate need to leave a dying Earth and find a home somewhere else

in the galaxy. It is unlikely that there will be enough room for more than a tiny minority of the human race, triggering the intense rivalry between Canada and China. One of the heads of the Canadian military, Colonel Frederick Valens, puts the matter in its crudest terms when trying to convince Jenny to undergo the operations that will give her the superhuman reflexes necessary to fly the newest spaceship and so overtake China: 'Call it evolutionary hard-wiring. Our kids or their kids. That's all it is. All it's ever been' (Bear, 2005b: 198-199).

There is one more player in this plan to save the human race: the aliens, often called the Benefactors since the spacecrafts they left on Mars became the prototypes for the latest super-spaceships. Though apparently concerned to contact humans, the alien manifestations are hard to interpret and at first seem impossible to communicate with. They appear near the spaceship as weird structures emitting patterned sounds and lighting; one of these the scientists nickname the 'shiptree' and the other the 'birdcage' (Bear, 2005b: 354; Bear, 2005c: 300-301). The episodes of scientific expeditions to these aliens are brilliantly conceived, but fall out of the limits of this article, which focuses on Canada in this futuristic world.

BEAR'S DEPICTION OF CANADA IN HER SCIENCE FICTION TRILOGY

Canada appears in Bear's three novels as a geographic space, the setting for much of the action that does not take place on spaceships, but the country is more important as a network of attitudes and values that emerge through choices made by characters and the government. Many of these are alluded to rather than stated outright, just as Bear does with the events of the immediate past. Features of Canada can be divided into place names, proper names with historical resonance, references to characters from minorities rather than the dominant Anglo-Celtic majority, the Canadian activity in world politics and, finally, the notion that Canadianism is an ideology marked by moderation. Bear assumes that her American readers will already have notions about Canada, and that these will include differences from the United States. These differences suggest her reasons for her choice of Canada rather than the United States as a leading power in the world of 2062.

Canada is situated in the novel from the point of view of American readers: a country that is not only geographically north of the USA but also a northern country in a more specific way. In this period of ecological catastrophes, this has played to Canada's advantage: in Hammered it is said that 'historically cold countries are still better off' since, although their winters have lengthened and become colder, their hotter summers and abundant water allow a good growing season (Bear, 2005a:72). Most of the details about Canada as a place, though, describe Toronto, which is the center of earth-bound action in the first two novels. In the opening sections of the first novel, many of the major characters

come to Toronto and are depicted as moving about the city with its real streets and buildings. As a genre, science fiction is not associated with this kind of realism, but Adam Roberts considers this view an error. He finds it typical of science fiction to use 'techniques like the accumulation of precisely delineated detail, sociological observation, characters accurately imitated from real life, and an avoidance of poeticism, melodrama, exaggeration and other non-realist techniques' (Roberts, 2000: 192). Bear's fiction certainly shows this kind of realism.

Bear firmly links each episode of the narrative to specific places through her frequent section headings, each containing a date and place name. For example, the second section of *Hammered* is headed 'Lake Simcoe Military Prison, Boyne Valley, Ontario, Friday 1 September, 2062' (Bear, 2005a: 12). It describes how Dr. Elspeth Dunsany, the rebellious scientist who refused to give up the Artificial Intelligence she created finally leaves prison and takes a bus to Toronto. Here the station is still the shabby building with passengers unloaded outside on 'oilstained concrete' that current Torontonians will recognize (Bear, 2005a: 14). The next section begins with '4:30 p.m., Saturday 2 September, 2062, Bloor Street West, Toronto, Ontario'; in it, the information specialist Gabriel Castaign is settling his two daughters in their new apartment. Col. Valens, the prime minister's military advisor is putting together a team of brilliant specialists to ensure that the new Canadian spaceship program will be better at space colonization than China. Gabriel, who was also an activist against increasing Canadian militarism, has left Montreal to join the project so that his daughter Genie, who has cystic fibrosis, can be given the extremely expensive medical care necessary to cure her. Jenny Casey, as a formerly superb pilot, comes from Connecticut for a combination of reasons: her love for Gabe, her need for new surgery and the overwhelming temptation to fly again – and this time a spaceship.

Canada and Toronto in particular are built up in the readers' mind through the major characters' movements in particular places. Bear can assume that her readers, especially American ones, will have a basic idea of Canadian geography; many are likely to have visited Toronto or at least have seen the city on television programs. Further, they will have an image of this large metropolis on the shores of the immense Lake Ontario, and know that, unlike many American cities of similar size, Toronto has preserved a residential downtown area and is clean and safe. Using both section headings and references within episodes, Bear mentions a number of major city streets: Bloor, Yonge, St. George, Queen, Wellesley and others. She also alludes to the University of Toronto campus in the heart of the downtown area with its large parks; her characters take the Toronto subway with its old-fashioned 'white-tiled subterranean architecture' (Bear, 2005b: 165). Some of them notice changes in names that indicate how powerful the military has become in the Canadian system. For example, once she agrees to join Valens' project, Elspeth's dying father is given a private room in what used to be the Toronto General Hospital but is now the elite National Defense Medical Center (Bear, 2005a: 72).

However, in a shocking climax to the second novel in the trilogy, *Scardown*, Bear has Toronto wiped off the surface of the earth by a meteorite hurled against it by the Chinese on December 21, 2062. Though the impact is mitigated by the heroic sacrifice made by Gabriel's older daughter, Leah, who sends her shuttle ship against the meteorite, the result is the destruction of the entire city, southern Ontario and American territory near it. The waters of Lake Ontario are poisoned; early winters settle in and leave only a few months of warmer weather. The Artificial Intelligence Richard, who 'habitually took refuge in numbers', calculates the number dead at about twenty million, 'something like one in every twenty-five Americans and one in every three Canadians', while 'the fallout cloud from the thirteen nuclear reactors damaged or destroyed in the Impact' affects eastern territories as far as Iceland (Bear, 2005c: 13–14).

What remains of Toronto is graphically described through the eyes of the Canadian prime minister and Col. Valens visiting the site again nine months later. Now the city appears in the section heading as the 'Toronto Evacuation Zone'; they look 'at the unseasonable snow that lay in dirty swirls and hummocks over what looked at first glance like a rock field, at the truncated root of the CN Tower rising on the waterfront like the stump of a lightning-struck tree' (Bear, 2005c: 35). The CN Tower on the shore of Lake Ontario has been the symbol of Toronto since it was erected in 1976; then it was the world's tallest free-standing tower. In the trilogy the Tower becomes the object that Bear uses to explain the sequence of events after the meteorite struck: 'Surprisingly, the tower had survived the earthquake [...] it had not survived the tsunami, nor the bombardment with meter-wide chunks of debris. Around it, lesser structures had been leveled to ragged piles of broken masonry and jutting pieces of steel' (Bear, 2005c: 35). Eventually, when Canada succeeds in reducing China's power by making it pay enormous compensation, a memorial park is built here.

Such references to Canadian places belong to the realistic framework of Elizabeth Bear's trilogy, while proper names with Canadian historical and cultural resonance are used both to refer to Canada and to embody Canadian difference. Some appear as those of major characters: the prime minister, Constance Riel, the Unitek director, Alberta Holmes and the traitorous General Janet Frye refer, respectively, to the nineteenth-century rebel leader Louis Riel, the province of Alberta and the literary theorist Northrop Frye. Canadian spaceships are named for cities: the *Quebec*, the *Montreal*, the *Calgary* and the *Vancouver*, while the smaller shuttle ships have the names of Canadian singers of the 20th century: the *Gordon Lightfoot*, the *Leonard Cohen* and the *Buffy Sainte-Marie* (Bear, 2005b: 301, 2005c: 98).

Interestingly, one of the American reviewers of Bear's trilogy objects to these names, asserting that naming shuttlecraft after singers is wrong for space fiction: 'maybe it's a Canadian thing to do, but the USA, following the UK for military names, would never do this'. J.G. Stinson does not clarify her idea, though it is true that Canadian spaceships and shuttles are not given heroic names like 'Endeavour' or 'Challenger' – part of the 'boys and toys' school of science fiction

which Bear is re-interpreting. Stinson approves of other subversive elements like the number of strong female characters in the trilogy. However, here she seems to be upholding an American-centered version of the genre (Stinson, 2007) which Elizabeth Bear is subverting. She displaces the United States as the central space story player and, in doing this, erases a boundary for the genre in American thinking. Stinson's remark shows that 'Canadianism' becomes readily identifiable when it is un-American, indicating that a literary genre can function as a national space in the American mind.

Other features included in the trilogy that are un-American refer to social issues on which the majorities in the two countries hold different views. As Ionathon Gatehouse asserts, the results of a major survey taken in 2005 show that Canadians consider that 'this country's greatest strength is its diversity of opinions, beliefs and lifestyles' (Gatehouse, 2006: 44). He quotes a Canadian sociologist, Reginald Bibby, who similarly explains: 'At minimum, as Canadians we are expected to be willing to tolerate differences, even if we do not approve of different ideas and behavior' (Bibby, 2006; cited by Gatehouse, 2006: 44; emphasis in original). Again, Bear does not offer discussions about social issues in the novel; she simply presents characters and episodes, leaving reactions to her readers.

One of these issues concerns homosexuality: historically, Canada has been a leader in liberalizing laws about sexual preference, while this is still a very controversial issue in the USA, and was even more so when the trilogy appeared in 2005. Comparative studies show that at this time, while only 38 per cent of Americans approved of homosexual issues, the figure was almost double among Canadians (George, 2005: 38). Bear brings up the issue in one of her surprising twists of characterization which make her science fiction, as critics note, stand out among many novels in the genre which use stereotypical characters (Brialey, 2006; Sauve, 2006). Col. Valens first appears as a villain in the minds of most of the major characters; he insists on military solutions and is too close to the corporation that finances Canadian space research for comfort. Gradually he becomes a little more sympathetic; his granddaughter joins the program as a pilot in training. Still, most readers are undoubtedly surprised when Valens goes home late one night to his suburban home and find that Georges, 'Valens' husband' is waiting up for him. Their conversation, after Valens 'bent down and kissed Georges on the mouth' (Bear, 2005b: 98), is that of any long-married middle-aged couple. Bear probably assumes that her readers of 2005 know that in reality American and Canadian laws on homosexuals in the army strongly differ. In 1992 the Canadian armed forces dropped all restrictions against homosexual soldiers. However, in the following year, the American law 'Don't Ask Don't Tell' meant immediate discharge for any homosexuals serving in the army who openly declared their sexual preference; this law was repealed only in 2011 (Belkin and McNichol, 2000; McVeigh and Harris, 2011). Therefore, when the trilogy was published, Bear's homosexual Col. Valens would have been a strong reminder of differences in this respect between the two countries.

Another feature associated with Canadian society is multiculturalism and the connected belief that racial and ethnic tensions are less extreme in this country than in the USA. Here Bear understands that she cannot whitewash Canadian realities. Still, she includes the fact that Canada has two official languages, English and French, and the status of aboriginals as significant aspects of characterization. Gabriel and his daughters, as well as Jenny, frequently use Quebec French words and phrases in their conversations. Sometimes these are translated in the text, sometimes not, forcing English-speaking readers to accept this foreign element that is considered natural in Canada. Issues related to Canadian aboriginals are not analyzed in detail; Canadian specialists like Daniel Coleman, whose White Civility (2006) argues that racialist thinking was a fundamental part of Canadian nation-building, may feel that Bear paints too optimistic a picture of the current Canadian situation. However, references in Jenny's reflections (she is of native origin) make it clear that aboriginals are still marginal in Canadian society. For years Jenny has never been able to admit to Gabriel that she ran away from home in her early teens and wound up working for a pimp as a street prostitute in Montreal; to discipline her, the pimp used acid to make her sterile. It is only when new surgery has restored her status as a pilot that she is able to confess what she sees as deeply shameful and become Gabriel's lover.

On the other hand, sometimes Jenny does draw strength from her aboriginal roots, especially in memories of her mother and grandfather. One noticeable result is that, though patriotic, she maintains an outsider's view of grandiose claims for Canadian actions. Speaking with Richard Feynman, she speculates whether Prime Minister Riel, after the meteorite attack, wants Jenny to 'kill a few million Chinese civilians for her' (Bear, 2005b: 329. She also reflects on broken promises of the past, the treaty her ancestors made with European colonists 'written in the symbols on a wampum belt. Two rows of violet beads side by side on a river of white: two canoes moving parallel down a stream, canoes whose courses were not to affect each other [...] It never works that way' (Bear, 2005b: 330-331). For the same reason, she is sceptical about Col. Valens' grand project to colonize other planets with those people he chooses, asking him 'And what about everybody who gets left behind? What about the damage we do on the way out?' (Bear, 2005b: 52). She remembers: 'I can all but hear my Haudenosaunee grandfather's wry comments as he stopped to pick up litter on the roadside. [...] Use it up, throw it away, you can always get more. I guess it applies to planets, too' (Bear, 2005b: 52–53). Though at times Jenny feels that her aboriginal identity has become superficial, the feather that Gabriel gives back to her on the spaceship has intense significance for her: 'Bald eagle feather, beaded to symbolize bloodshed and sorrow, wardenship and loyalty. A warrior's feather. A gift from my murdered sister. And a duty I need to start living up to again' (Bear, 2005b: 26). In the final scene of the trilogy, visiting the memorial stone in the Toronto Impact Site, she ties this feather to the stone, completing a ritual of loyalty.

Loyalty is one of the key words that are presented in the narrative as typical of Canadian values, along with moderation. These are hard values to

maintain given the ecological and political threats that face Canada in 2062. With the disappearance of Great Britain, Canada inherits the Royal Family, the leadership of the British Commonwealth and Britain's seat on the United Nations Security Council. Though also suffering from climate change, Canada is now the center of Western technology and the only strong opponent to Chinese plans to both control the earth and occupy any planets that could be colonized. The novel is conspicuously lacking in American participants in the Canadian project, although there are scientists from Commonwealth countries who play significant roles. Indeed, most American input is downright sinister, with Toby Hardy, the head of Canada's funder, Unitek, a corporation headquartered in the USA, pressuring General Janet Frye, to join a Chinese-American plan to reduce Canadian global prestige. An American secret service agent tells Frye that this would 'advance us [the USA] on the world stage [...] the United States stands to benefit from détente' (Bear, 2005c: 234).

Early in the trilogy Richard Feynman explains Canada's new global mission as a combination of historical accidents and national qualities: 'Canada's been in a lot of peacekeeping efforts in the last fifty years, which it couldn't have done without corporate money. [...] And with the United States tangled up in its internal affairs, there's been nobody else with the - the sheer stubborn - to oppose China's empire building' (Bear, 2005a: 22). What Richard distinguishes as Canada's 'sheer stubborn' is a characteristic seen in many of the Canadian characters, such as Elspeth who endures a decade in prison rather than surrender the Artificial Intelligence she has created or Jenny's refusal to return to the Canadian Army for surgery despite years of pain.

The trilogy's strongly pro-Canadian stance is given credibility since not all the powerful Canadian characters are morally good. Those who do not show loyalty over the course of the three novels generally wind up defeated and/or dead: the key villain in the first novel is identified as Alberta Holmes, the Canadian head of part of the Unitek corporation. She is eventually assassinated and passes out of the action anonymously in a body bag, just before the Chinese government sends a meteor hurling at Canada, wiping out Toronto. In the last novel of the series, General Janet Frye is the leader of a radical Canadian political party who sells secrets to Unitek, the Chinese government and special services within the American regime; she is a key player in the Chinese and American plot to discredit the Canadian prime minister. However, in her testimony at a United Nations hearing, she suddenly changes her mind. She has been affected by a conversation with a Canadian teen girl pilot about loyalty, as well as the prime minister's contemptuous remark, 'if you want to hand PanChina the keys to the castle, you can do it on your own watch' (Bear, 2005c: 311), referring to coming national elections. Janet is very ambitious, but she finds she cannot betray Canada so easily: 'her oath [at the UN hearing] was ashes in her mouth. She raised her right hand anyway and thought of Canada and the good of the commonwealth' and so begins her speech by betraying Unitek and the US: 'I was introduced by Unitek executive Tobias Hardy to a gentleman whose name

I was not given, but who was identified to me as an agent of the United States of America' (Bear, 2005c: 312). As the members of the United Nations react, shots burst out, Janet Frye is killed and Jenny Casey with others barely manage to save the Canadian prime minister's life from Chinese gunmen.

This episode is the exciting climax of the third novel in the trilogy; afterwards Jenny persuades Prime Minister Riel not to leave politics. Instead, Riel puts into operation Richard Feynman's plan: imposing enormous reparations on China so that the country can no longer afford an aggressive military and space program; creating a new global treaty organization to maintain peace; and implementing experimental scientific procedures that will reverse the slowing down of the Gulf Stream and remove poisons from the sea (Bear, 2005c: 385).

Other characters also explain major personal decisions by referring to patriotic feelings. The scientist Elspeth Dunsany returns to work with Col. Valens, the man who sent her to prison ten years earlier. She is still convinced that Canadian global military operations are 'stupid and pointless', but manipulates the situation to get freedom to work in a program she approves of more: 'I'm also a Canadian first and foremost, and a humanitarian, and I see the need for us to get into space' (Bear, 2005a: 293).

Jenny Casey, despite years of refusing to return to her homeland, is considered a Canadian patriot by those drawing her into the project. She herself denies this early in the trilogy, asserting, 'I stopped being a patriot a long time ago' (Bear, 2005a: 207). She feels that she is being loyal to her friends, and only once does she admit anything different to herself. This happens when she visits the Canadian consulate in New York City: 'The instance I'm back on Canadian soil, I feel different. Even a patch of Canadian soil a few dozen yards square, squatting on the eastern edge of America. [...]' (Bear, 2005c: 207).

In the whole trilogy, the Canadian government is portrayed as seeking compromise and consensus, an ideological bent that Elizabeth Bear seems to heartily approve of, since the narrative ends with the world at least temporarily at peace and ecological improvements implemented by Canada. It is not that Canadian governments are said to have been political innocents throughout the early 21st century. The military actions taken by Canada in the past decades and qualified as peacekeeping by successive governments are not very different from invasive wars. Moreover, the Military Powers Act grants sweeping rights to the government, as one character explains: 'The prime minister can essentially force anybody she wants into military service. Jail anybody – for no reason at all' (Bear, 2005b: 173). Twenty-five years before the action of the trilogy begins, in the fictional universe created by Bear, there was resistance to the way in which the armed forces were implementing their own priorities. At that time, Elspeth, Gabriel and Jenny all protested in different ways, but military power continued to increase within the older democratic framework of Canada. Now they have all been lured back to the Canadian space program by the feeling that this program is urgently necessary for a world sinking under ecological catastrophes. In addition,

they believe that Canadian leadership in space will be better for the world than that of the Chinese government, still a totalitarian regime with communist roots.

The strongest demonstration of Canadian moderation occurs after the meteor launched by the Chinese at the end of 2062 totally destroys Toronto. In her first reaction, Prime Minister Riel speaks of ordering a nuclear strike against China, but is quickly persuaded that this would lead to condemnation by the EU and UN: she agrees that Canada should not become a 'rogue state' (Bear, 2005b:349). Later, when Col. Valens, her military advisor, again urges revenge tactics, the prime minister insists: 'We try the legal route first [...] we're showing we're civilized' (Bear, 2005c: 37). Yet in Bear's view, Canada is not simply 'civilized' in comparison with the Chinese 'barbaric': among the Chinese military leaders there are also those backing plans for peaceful co-existence. Furthermore, the cybernetic exchanges between Richard Feynman and one of the Chinese pilots, who later testifies on Canada's behalf at the United Nations, make the narrative morally less stereotypical than many space war narratives with simplistic heroes and villains.

At the end of the trilogy, Jenny Casey refuses to take up the political career that the prime minister urges on her. Even more significantly, when Canadian citizenship is offered to the Artificial Intelligence Richard Feynman who has done so much to help the Canadian space program and reverse climate changes, he refuses: 'I can't guarantee I will take the commonwealth's side' (Bear, 2005c: 285). Just as much earlier the United States moved away from idealistic and democratic goals, so too, Bear's narrative ends by suggesting that Canada's current moderation does not mean it will always resist the temptations associated with being the leading world superpower.

CONCLUSIONS

In American fiction and film, Canada has figured more than once as the Other to the USA, most often as a northern wilderness to which those who do not fit into American society can flee, as did thousands of American draft-dodgers and objectors to the Vietnam War. For example, at the end of the film version of *One* Flew over the Cuckoo's Nest, the Native American character kills his friend who has been lobotomized and then escapes, as a voice-over informs the audience, to Canada. As the author of this paper can testify, Canadian audiences frequently laugh at this solemn pronouncement, which they find embodies a naïve and idealized view of their country. However, the film was produced in 1975, long before the decline of American power. In Elizabeth Bear's trilogy, the notion that in the 21st century Canada could represent an ethical alternative to the usual kind of superpower is handled much more seriously.

As has been demonstrated in the first part of this article, Hammered, Scardown and Worldwired constitute a combination of older spaceship narratives, feminist science fiction and cyberpunk, though in each case Bear questions and

alters these genres as much as she uses them. Furthermore, she develops her characters as thinking and principled figures, far from the stock figures typical of much science fiction. This allows her to present new approaches to the issues of ecological disaster and space wars beyond the limitations of solutions offered in American-centered narratives. Well-rounded characters encourage readers to identify with Jenny Casey and her friends and to accept their views of Canada. These characters gradually put aside their suspicions of the militaristic Col. Valens and Prime Minister Riel in order to support their space plan - though they often manipulate specific situations to put their own ideas on the agenda. For specialists both in science fiction and in Canadian studies, Elizabeth Bear's trilogy is a very unusual and interesting example in the American genre of science fiction of Canada being given the dominant global role. This analysis shows that it is probably the most intriguing way in which Bear takes a new approach to American science fiction.

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