

Book Review

Annalee Newitz

Scatter, Adapt, and Remember: How Humans Will Survive a Mass Extinction

New York: Doubleday, 2013

Reviewed by Michael Popejoy

Yes, we have seen blockbuster films, TV shows, and even Science Channel documentaries on the prospects and possibilities of mass extinction of the late, great Planet Earth; and yet, we are still here—so far. Even the History Channel has done episodes on past extinction events with a fearsome emphasis on the next one in line with the tagline; not if it will happen; but, when it will happen. One characteristic of a “Mass Extinction Event” is that no one will be around to say “told you so.” Even if a series of pre-set video cameras were to be set up around the planet, no one would survive to watch the events unfold.

Only a journalist trained in her craft at M.I.T. would have the temerity to offer some plausible technical explanations on how humans can survive a “Mass Extinction” event and live to tell about it. If anything, she does offer us some glances back on previous events which we did survive the moment of doom so that it can be a reflection today on how we did survive it. So, should we begin building another Ark and begin to beckon all species of critters; two by two to get on board? Of course, given the current health crises that are currently plaguing cruise ships, it is unlikely that the Ark is the best way to go. As Norman O. Brown writes in *Life against Death* (1959: 305):

Utopian speculations... must come back into fashion. They are a way of affirming faith in the possibility of solving problems that seem at the moment insoluble. Today, even the survival of humanity is a utopian hope.

This book seems perfect for *The Innovation Journal*—how would indeed humans survive mass extinction; by its very title, a mass extinction event means all of us are gone—so, who survives and how? The author, Annalee Newitz, takes the long view—we must scatter, adapt and remember. We scatter to new places in the universe; we adapt to whatever environment we might find there, and then remember, how it was—back here, back then; a strange confluence of events that allows human stock to survive an earthly mass extinction event.

Newitz makes it pretty clear that we are way overdue for a cataclysmic event and we should be prepared to survive our just deserts; and she believes *Homo sapiens* have a pretty good chance at survival in the future because we have survived in the past. She identifies episodes in the past when we dodged the bullet and she believes we are in a better position today than ever to dodge the next bullet possibly already speeding our way. In her highly speculative book, she identifies a few times we all came close to

buying the farm, yet here we all are, survivors; and adapted and emerged even stronger than before.

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How? Well, she examines the potential for underground cities, space elevators, space colonies, new advanced science to stop pandemic disease attacks, to study how other species are finding long term resilience; and, how can humans modify their morphology to choose life over death by changing how we are structured physiologically. Strange stuff here; but, then that is the lynchpin of radical innovation.

Humanity must equip itself scientifically, intellectually, and emotionally to face what the future holds and what would be demanded and required in order to survive. She never states that it would be easy—only doable. Newitz starts the book with the comment that humanity is at a crossroads. How does she know? She watches the bees. They are devolving into an inexplicable disorganization never seen before. Worker bees just fly off and never come home; adolescent bees wander around the hive aimlessly leaving hive jobs undone. Soon, production stops and eggs die of neglect. Of course, scientists have to call it something; so, why not call it *Colony Collapse Disorder*. According to some agricultural scientists, if the bees go, we all go. So, there you go—mass extinction follows the collapse of the bee hives.

But, Newitz points out an interesting observation, we all want to save ourselves and someone else along with us as well. No one wants to be the sole survivor and then live alone. We need some company. She writes; “All survival strategies, however small, are signs that we harbor hope about the future. The problem is that most of our strategies...are focused on personal survival...we are prepared to help ourselves and a few close companions” (p. 7). She adds that we must move from individual survival strategies to survival strategies that could help our entire species make it through a mass extinction. Hey, that is carrying altruism a great distance forward. I do not even like my immediate neighbors all that much.

Now let’s break down her subtitle a bit. Scatter simply means get out of the way of whatever event is about to befall us—a flood, volcano, a new ice age, etc. We can move out of the way if possible. If it is planet-wide; we can get off the planet. We just need to know where to go and how to get there and when to leave—and be willing to leave. Then there is adaptability. Animals that are very adaptable (like humans) can eat a variety of things. Humans can live anywhere and eat just about anything in order to survive and they can understand why they are adapting as they are doing it. Humans can also choose to breed fast and adapt through an extinction emergency and again understand why we are doing it. Well, maybe my neighbors do not look so bad now after all. Finally, humans survive by planning for the future through storytelling—we remember and through storytelling, we share what we remember. Even fiction about tomorrow can provide a symbolic map that tells us where we want to go. These are qualities in human beings that we have yet to see in other species on the planet—it is a characteristic of intelligence that allows us to understand what is happening and what must be done to cope with what is happening. Newitz states that; “Humans are creatures of culture as well as nature.” (p. 10). Newitz calls our storytelling “tales of pragmatic optimism.”

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Of course, toward the end of the book, Newitz offers some really grounded innovations that would tickle the intellects of those innovative groups who might be reading journals such as *The Innovation Journal*. How do we prepare for an asteroid strike that would take out the majority of the planet's infrastructure? How do we gather the accumulated knowledge needed to rebuild the planet? Someone has thought of that in the form of a 13 gigabyte computer document called CD3WD and just about all you would need to do is to find a computer still functioning and boot this document up for all the information you would ever need to reform Earth. Newitz does offer us the reality that Earth is probably not the safest place to be if we as a species wants to survive for the next million years or more.

However, the most innovative thoughts to come from this book are that our bodies are optional as we see them today. Humans living off world would be very susceptible to failure to adapt to the harsh environments expected. So, we need to adapt in many new morphological ways to make that adaptation possible. Newitz asks; "how would we go about modifying ourselves to be more space-worthy?" (p. 246). Now, things get interesting. So, she is discussing the potential of using "synbio" (synthetic biology) to make us into Martians. But, these synbio Martians can be bio engineered to tolerate long term space flights and then be able to live in extreme harsh environmental conditions wherever they may land at the end of that spaceflight. Now, that is innovation way out there—beyond—can we live on Titan's beach and Titan is a moon of Saturn. We can get there but can we live there? Would we want to live there?

Newitz finishes her book with the following: "Things are going to get weird. There may be horrific disasters, and many lives will be lost. But don't worry. As long as we keep exploring, humanity is going to survive" (p. 263).

About the Author:

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Reference

Brown, Norman O. 1959. *Life against Death: The Psychoanalytic Meaning of History*. Middletown, CT: Wesleyan University Press.