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# **Reclaiming Imagination**

## **Speculative SF as an Art of Consequences**

An Interview with Isabelle Stengers  
by Casper Bruun Jensen<sup>†</sup> and Line Marie Thorsen<sup>‡</sup>

*Over the last thirty years, the philosopher of science Isabelle Stengers has written many path-breaking books, including Order Out of Chaos (1984) with Ilya Prigogine, A Critique of Psychoanalytic Reason (1992) with Léon Chertok, The Invention of Modern Science (2000), Cosmopolitics I and II (2010-11), and Thinking with Whitehead (2011). The most recent translation is Doctors and Healers (2018), co-authored with Tobie Nathan.*

*In recent books including Capitalist Sorcery (2011) with Philippe Pignarre, In Catastrophic Times (2015) and Another Science is Possible (2018), Stengers has written about relations between good science—threatened by intensified capitalism and the knowledge economy—and a broader ecology of practices that includes grassroots movements against genetically modified crops, neopagan witches, indigenous people that struggle against climate change, and also speculative science fiction writers and their readers. The latter is elaborated in her chapter “Science Fiction to Science Studies,” published in The Cambridge Companion to Science and Literature (2018).*

*In the following, Stengers weaves together science fiction as speculative thought experiments with other ways of world-making and addresses what social and other sciences could learn from such stories. The interview was conducted as an email exchange between October and December 2018.*

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Q: Since this is part of a special issue that considers the relation between science fiction and anthropology, we would like to ask what makes certain kinds of speculative science fiction and fantasy worlds important for social science to learn from? What makes a story worthwhile or interesting as a thought experiment?

IS: I would be a bit annoyed if my characterization of *some* science fiction as a thought experiment was to become a selective title, to be attributed or refused. Science fiction is a continent with a wide diversity of inhabitants, both authors and readers, and the last thing I wish is to “save” some of them from the general contempt they have all globally been the object of. Ursula Le Guin, one of the very few to have finally been judged a “true author” by literary critics, refused such a selection. In her November 2014 acceptance speech for the National Book Foundation Medal for Distinguished Contribution to American Letters, she announced that she shared the reward with “all the writers who’ve been excluded from literature for so long—my fellow authors of fantasy and science fiction, writers of the imagination” and she added “Hard times are coming, when we’ll be wanting the voices of writers who can see alternatives to how we live now, can see through our fear-stricken society and its obsessive technologies to other ways of being, and even imagine real grounds for hope. We’ll need writers who can remember freedom—poets, visionaries—realists of a larger reality.”<sup>1</sup>

Imagination and freedom—calling into existence a larger reality—Le Guin’s characterization is both inclusive and polemical. She struggles against what could be called “disenchanting realism,” for which what is not ugly, dreary, or constipated is but an “escapist” day-dream. But her “larger reality” is not for all that an enchanted one. As Donna Haraway emphasizes, Le Guin’s *The Word for World is Forest*, written in 1976, has a lot in common with James Cameron’s movie *Avatar*. In both cases, an indigenous people successfully resist the devastation of their planet by a “technologically advanced” power. “Except one particular detail is very different (...) Even as they condemn their chief oppressor to live, rather than killing him after their victory, for Le Guin’s ‘natives’ the

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<sup>1</sup> Ursula K. Le Guin. 2016. “Freedom,” in *Words Are My Matter: Writings About Life and Books, 2000-2016*. Easthampton, MA: Small Beer Press, p. 113.

consequences of the freedom struggle bring the lasting knowledge of how to murder *each other*, not just the invader, as well as how to recollect and perhaps relearn to flourish in the face of this history...There is no *status quo ante*, no salvation tale, like that on Pandora.”<sup>2</sup> Perhaps they will be able to recollect and relearn. They do not know and we cannot know, just as we cannot know if our own history makes us able to relearn what we need to. The “larger reality” does not bring the solution to our trouble but it situates it in a different way, it adds unknowns that resist the “realist” assessment of the impasse we are in, the rational certainty that the game is over.

To associate the continent of science fiction with thought experiments is not to define what would be a worthwhile science fiction. Even Le Guin’s 2014 proposition was not a definition, but rather a proud claim to belong to this continent, and a challenge against the guardians of “true literature.” This association is my way, as a philosopher and reader of science fiction, to relay this claim and to challenge other guardians, the academic guardians of what they call rationality.

The notion of the thought experiment, as such, does not disturb those guardians. From Galilean physics to relativity and quantum physics, thought experiments have been recognized as a way of thinking a hypothesis through consequences that escape observation in the “normal world.” Let us take the famous demonstration by Galileo that the Earth can move without its motion being perceptible. The Earth becomes a boat moving on a river. Let us imagine a man on the mast dropping a stone. Where will the stone fall? All known facts at the time corroborated the idea that free fall was a vertical motion. Thus, if the stone falls vertically while the boat is advancing, it should fall behind the mast. Whereas if the Earth moved, we would never see a vertical fall. Galileo is turning the tables. If, he claims, someone was to observe the boat from the bank he would not see a vertical fall, but the stone continuing to advance with the same speed as the boat while falling to the deck. The stone will fall at the foot of the mast! All the facts that testified for an unmoving Earth are silenced in one imaginative stroke. Needless to say, Galileo

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<sup>2</sup> Donna Haraway. 2016. *Staying with the Trouble. Making Kin in the Chthulucene*. Durham, NC: Duke University Press, pp. 120-121.

never performed the experiment, which would demand that the environment be frictionless environment (no air) and that the boat move very swiftly and regularly. All thought experiments demand such a fictive environment where everything that can blur the consequence to be dramatized has been eliminated. But what is not fictive is the relation they establish between a hypothesis and its consequences. The hypothetical “what if” is interesting only if it generates new possibilities of addressing what can be actually observed: it must be followed by “but then!” verifiable conjectures.

However, we find no such generativity in the thought experiments that abound in philosophy, ethics, or economics. In these cases, what is staged are the consequences not of a hypothesis but of a postulated analytical definition. Rarefaction here turns into a unilateral imposition, the finality of which corners its “victims,” asphyxiating their capacity to question the situation that entraps them.

As a result, the situation is typically nightmarish. Would you like to be a brain in a vat? Or to be a prisoner of a Chinese room? Or to be a trolley driver confronted with the choice to have your trolley killing one person instead of three? In terms of the real-world situations they would enlighten, these thought experiments first exhibit rarefaction as obscene violence.<sup>3</sup> The ethicists who dare ponder the morally justified character of the mother who gives her son, not her daughter, a chance to live, forget that the novel, *Sophie’s Choice* (by William Styron in 1979) is a tale of terrible guilt, leading to suicide. It can be said that the ethicists who ponder this choice are akin to the Nazi torturer who imposed it. Both treat the desperate mother as a “case,” a guinea pig for an interesting experiment.

In “The Moral Philosopher and the Moral Life,” William James refused to reduce such moral dilemmas to analytical clarity. Taking as an example a situation where millions of people would be “kept permanently happy on the one simple condition that a certain lost soul on the far-off edge of things should lead a life of lonely torture,” he invokes the “sceptical and independent sort of emotion” which would make us immediately feel “how

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<sup>3</sup> Or as in Oliver Sacks’ *The Man who Mistook his Wife for a Hat* (1985), a pathology that corresponds to the philosophical hypothesis that sense perception can be explained in terms of an addition of abstract sense-data.

hideous” the enjoyment of such happiness would be when “deliberately accepted as the fruit of such a bargain.”<sup>4</sup> But in the city of Omelas, to which Ursula Le Guin introduces us in a famous short story, this happiness is not hideous. The people living in Omelas, Le Guin insists, “were mature, intelligent, passionate adults whose lives were not wretched. O miracle! but I wish I could describe it better. I wish I could convince you.”<sup>5</sup> We must indeed be convinced in order not to escape the dilemma, in order to go on thinking in its claws. Because everyone in Omelas knows that somewhere in a basement a child lives a life of utter misery. “They all know it is there, all the people of Omelas. Some of them have come to see it, others are content merely to know it is there. They all know that it has to be there. Some of them understand why, and some do not, but they all understand that their happiness, the beauty of their city, the tenderness of their friendships, the health of their children, the wisdom of their scholars, the skill of their makers, even the abundance of their harvest and the kindly weathers of their skies, depend wholly on this child's abominable misery.”<sup>6</sup>

Is true happiness possible when you cannot ignore its price? Ursula Le Guin respects the abstract character of the thought experiment, she even strengthens its hold, asking us not to despise the people of Omelas, but she creates an unknown: some, silently, without arguing, just walk away. “Each one goes alone, youth or girl, man or woman. Night falls; the traveller must pass down village streets, between the houses with yellow-lit windows, and on out into the darkness of the fields. Each alone, they go west or north, towards the mountains. They go on. They leave Omelas, they walk ahead into the darkness, and they do not come back. The place they go towards is a place even less imaginable to most of us than the city of happiness. I cannot describe it at all. It is possible that it does not exist. But they seem to know where they are going, the ones who walk away from Omelas.”<sup>7</sup>

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<sup>4</sup> William James. 1896. “The Moral Philosopher and the Moral Life,” in *The Will to Believe and other Essays in Popular Philosophy*. New York: Longman, Greens & Co., p. 188.

<sup>5</sup> Ursula Le Guin. 2015 [1973]. “*The Ones Who Walk Away from Omelas*,” in *Black Box: A Record of the Catastrophe*, edited by The Black Box Collective. Oakland, CA: PM Press, p. 236.

<sup>6</sup> Ibid., p. 238.

<sup>7</sup> Ibid., p. 240.

Walking away from commanding dilemmas that demand an answer may be the challenge posed by the kind of science fiction from which I learned to those specialists who see nothing wrong in trapping their subjects in unilaterally imposed thought-situations. I thus read and relay Le Guin's short story as dramatizing the difference between the rarefied, fictive world of thought experiments that create a new generative perspective, and the impoverished, mutilated thought-situations of discursive analytical fictions. My way of relaying the "larger reality" that Le Guin was invoking is not a mysterious one. But it is one we are separated from when we accept ready-made perspectives and self-answering questions. It is one, the experience of which science fiction as thought experiment reactivates. Le Guin's story addresses the capacity of the reader, which analytical fictions presuppose she is deprived of—we could say the capacity of "staying with the trouble"—of not knowing whether she would leave or remain because those who walked away did not proclaim their reason, they just did it. It participates in a reclaiming of human experience against their appropriation by academic inquisitors, empowering them to answer abusive questions with a defiant 'This is none of your business.'

**Q:** In "Science Fiction to Science Studies,"<sup>8</sup> you write that Anne McCaffrey's novel *To Ride Pegasus* (1973) illustrates the imaginative freedom of science fiction to ask questions that should belong to mainstream social science. Rather than debunking errors and removing false perceptions social science might pursue a cultivation of "the art of the thought experiment" that aimed to "thwart any hasty judgments about or against diverging voices"? Can you tell us more about what is entailed by this suggestion?

**IS:** *To Ride Pegasus* can be read as experimenting with the double standard of scientific research. Since the acceptance of the gravitational force, physicists have enjoyed announcing the discovery of what had previously been thought impossible—think about the neutrino, a true phantom particle with no charge, no spin, and no mass until recently—however in the mainstream social sciences (including psychology) the famed "scientific scepticism" seems devoted to the bridling of imagination. The only surprises to

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<sup>8</sup> Isabelle Stengers. 2018. "Science Fiction to Science Studies," in *The Cambridge Companion to Literature and Science*, edited by Stephen Meyer. Cambridge: Cambridge University Press, pp. 25-42.

be anticipated are sad, dismal ones, demystifying or disenchanting what people are attached to. The difference, of course, is related to the fact that aside from physicists, nobody really cares about the existence of neutrinos, while the existence of so-called parapsychological facts would confirm non-scientific tales and experiences. Moreover, attractive possibilities also attract cheaters who thrive on peoples' credulity. It may be said that in such cases, science is serving public order, dismembering whatever might feed that which is consensually defined as irrational beliefs. In contrast, McCaffrey imagines a manner in which something that is the object of the utmost scepticism, parapsychology, could gain public recognition.

The interest of the question is that recognition will not be gained because it would be scientifically explained, that is, as a triumph of the "advance of knowledge." It starts with the chance discovery of a correlation involving a new encephalographic device and two gifted persons, Molly, a nurse with a healing touch, and Darrow, a pre-cognitive talent and victim of a car accident, who discover it. It also involves a strong pre-cognitive event—when Darrow awakes, he has "seen" that he is going to marry Molly. And they are the only ones to take seriously the singular peak drawn by the machine. For them, it is the signature of the event. Goosegg<sup>9</sup> is mute about the event itself but will become the key to gather, far from intrusive, suspicious eyes, others who also have experiences that they do not understand and which nobody accepts as such. With Goosegg's reliable verdict, the mistrust against would-be cheaters may be eliminated. They will learn together how to stabilize, cultivate and enhance their diverse talents.

We know that in experimental sciences a new promising observation must be stabilized before becoming a reproducible fact, which means that experimental facts are defined together with the environment they are found to demand. McCaffrey's fiction experiments with the question of what I would call polemic sciences, which address facts as suspects that have to be unmasked. If one considers the endless, boring, and meaningless tests that prevail when parapsychological "facts" are dealt with, it may be said that the environment they confront is the most hostile one, defined by distrust and

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<sup>9</sup> The term for the ultra-sensitive electroencephalograph, which detects unusual patterns in Darrow's brain.

maniac surveillance procedures. Even if disturbing effects manage to survive and succeed in troubling the experimenters, the trouble will mark them as suspects for their colleagues—they must have made a mistake—and for that matter, why did they spend precious time and money on such spurious, illusory claims. Suspicion extends to the researchers themselves.

McCaffrey has created a situation in which trust becomes possible. It is a fiction, of course, but it activates thinking. It may be the great weakness of the social sciences, intensified by a challenge of people claiming experiences that we deem impossible, not to have learned crafting situations that install what I would call an ecology of trust. This is not easy but whoever said sciences should be easy? Experimental sciences are inventive and demanding. Knowing the danger of misplaced trust entails no invention and it only demands that subjects accept procedures, which in fact humiliate them and which they would never accept if it was not in the name of science. But it makes it impossible to learn about what trust can make people able of.

The art of thought experiments is part of a dynamic of invention and the possibilities they may activate are a challenge for concerned scientists. As for philosophy and science studies, they could help if they defended this dynamic against crushing methodological imperatives that give it no room. They could dramatize the dream of many psychosocial scientists, which is that their “subjects” be indifferent to the situation they are confronted with, ready to do whatever they are asked to. They could emphasize that those scientists get the kind of knowledge that their dreams deserve. They could claim that the difference between a human (and, by the way, a rat) and an electron or a molecule, which are indeed indifferent to the meaning associated with the way they are dealt with, should make a positive difference, not appear as obstacles to be circumvented. They could also emphasize the relation between the protection of public order and the confirmation of judgements against diverging voices. In brief, they could address mainstream psychosocial sciences in such a way that we stop being astonished by the fact that, all in all, those sciences have not produced anything of great interest about what humans may become capable of when they trust that their ideas and experiences matter.

Q: Beyond social science and philosophy, would the possibility of inventing ecologies of trust also relate to how you have described SF as an ‘art of consequences’ to be explored with a public?

IS: I would prefer not to speak about the *invention* of an ecology of trust because invention often refers to an inventing subject. It is, rather, a question of accepting to be constrained by a trust which may be broken; that is, to accept that you are not the master of the situation. Ecology is about interdependency, the necessity to go through others in order to be what you are.

Anyway, the situation of the SF writer is a good example. Such fictions, at least the ones which interest me, do not indeed address a public, which would follow the writer wherever he or she wishes. They are a bit like detective stories since the readers in both cases are demanding amateurs, who will not accept to be cheated, and who feel empowered to evaluate the way they are addressed. In the case of detective stories, this might be if they are able to guess the solution too early, or if the solution rests on elements that were not made available in the story.

In the case of SF, readers do not wish to find “the” solution, they wish to accompany the exploration of a world. And this world should be thick and interesting. The fictional element must not be dramatized as such, and neither must its direct consequences. What matters is the way this element participates in the world. It may be something new to this world, the way it is affected by a first encounter, for instance, or something part of what is normal for its inhabitants. It becomes interesting through the questions, issues, ethical dilemmas, diverging interpretations, which flesh it out, which indeed are its flesh.

The SF public of which I am part appreciates the art of consequences, an art which does not tolerate simplifications and demonstrations, which certainly does not admit that consequences can be “explained” by the fictional element. Explanation presupposes the famous condition of “all other things being equal,” while here nothing can be taken as equal, or, more precisely, what remains equal marks the limitation of the artist. An ecology of trust relies on the demand that the writer does not just write about a world

made different by the fictional element she has introduced, but that she has allowed herself to be transformed by the worlding power of the situations that presuppose this element. That is, she has not freely thought “about” the consequences she wished to select but has let those consequences unfold in their many ramifying repercussions. This means that she is not the exclusive proprietor of her world. Consequences can unfold and ramify for readers too.

In dramatic contrast with the ecology of trust that has so far been cultivated by scientists among themselves (until now, because pathological drifts are now more and more frequent) we deal here with an ecology without boundaries separating those who are entitled to contribute and those who must remain on the outside. I am interested in how Science Fiction conventions assemble both authors and “fans,” the latter finding their own means to add to a particular SF world, even writing short stories of this world that may be published in anthologies edited by the original author, and thus becoming authors themselves. They do not mimic scientific communities, but are rather witnesses to the fact that the active imagination of scientists (not of mainstream social scientists), the generativity of their questions—“what if,” “but then!”—can escape the strict domain of verifiable consequences and nevertheless produce collaborative explorations. This is why there is really a history of science fiction, a history of the way in which, through SF authors, the capacity of a collective of authors and readers to test and explore other ways for worlds to consist has come about.

This opens up to interesting consequences regarding the thorny question of the democratization of the sciences. The absence of a culture of amateurship in the domain of sciences is symptomatic of a catastrophic social and political rarefaction of scientists’ imaginative landscape. Scientists, opposing science and so-called subjective opinion, cultivate a determined distrust against those who “do not understand science,” and the correlative besieged mentality they develop is what throws them in the arms of those powers that can protect them, industry and the state. Both protagonists are quite agreeable to the idea that the public does not meddle with what it should accept. And the public is again and again reminded that it should trust those who distrust it for very good reasons.

Q: If the openings made possible by the culture of amateurship in SF relates to the marginalization of the genre within literature, do you see a resonance with the activism made possible by neo-pagan witches who also act from outside the mainstream?

IS: Science Fiction, understood as exploring an epoch's capacity to test other ways for worlds to consist, may be understood as an art of questioning the mainstream view *par excellence*. And I include as mainstream many denunciations which relate what they denounce to "big causes" that lead to characterizing the current state of affairs as "normal." For instance, you can denounce patriarchy or other forms of domination but explain it in such a powerful way that they are positioned as impervious to what would challenge them.

This is how I understand the hostility of mainstream feminist theorists against activist neo-pagan witches who explore resources enabling them to reclaim a power-from-within and narrate the story of the way women (and men) were separated from this power. For those theorists, they are dreamers, even escapists, looking for imaginary resources instead of keeping to the facts—facts which give us all the reasons we need to understand our world—but also to despair. Contemporary US witches are descendants of the seventies surge of collective imagination and experimentation, which also produced the science fiction which interests me, while theorists have inherited the return to normalcy and the need to be "serious" in order to be recognized in the academic environment.

What strikes me is that the witches' Reclaiming<sup>10</sup> movement has endured and expanded and is now in deep participative connection with other activist movements that also experiment with paths of reclaiming. To reclaim means to struggle but also to heal and become able to confront what you struggle against without becoming like it. To win, then, would not mean that you have proved stronger than the other, by using the same kind of

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<sup>10</sup> The Reclaiming collective, which combines Neo-Paganism with feminist, political and environmental activism, was founded in 1978 by Starhawk and Diane Baker.

force. It would mean that you have connected with other forces, or cultivated the resurgence of forces we were separated from.

Resurgence is a very interesting word, which connects a past marked by eradication and the event of the return of what should have been destroyed—not as the identical same but as gifted with the capacity to challenge the state of affairs that took for granted its disappearance. Monique Wittig, who inspired many feminists in the seventies wrote, in *Les Guérillères* (1969, English translation in 1971) that “There was a time when you were not a slave, remember that... You say you have no recollection of it, remember... You say that there are no words to describe it, you say it does not exist. But remember. Make an effort to remember. Or, failing that, invent.”<sup>11</sup> The resurgence of witches may invent what witches “really were,” and SF is undoubtedly invention all the way down, but, also all the way down, it is not merely invention. SF, as it was revitalized in the seventies, is a re-membering, articulating, answer to the interstitial insistence of what might be possible against the mainstream claim that the current world has the power to define what we should take into account and think with.

Starhawk who launched the Reclaiming collective with three other women has written science fiction novels—*The Fifth Sacred Thing* (1993) and *City of Refuge* (2015)—which take place in some not so distant future, in a devastated, desperate, violent California, where only San Francisco is thriving. These books are figuring the possible, non-utopian art of life that

Starhawk envisages, but under the threat of powerful, hostile, pitiless enemies. Will they be able to survive, and eventually conquer the conqueror? When you read these novels, you feel that they are indeed not mere inventions, the product of a free imagination, but rather continuations of the struggle by other means.

The feminist SF novels of the seventies played a vital role in re-imagining worlds with women free, or freeing themselves, from their subservient role, and discovering their own

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<sup>11</sup> Monique Wittig. 1971. *Les Guérillères*. Boston, MA: Beacon Press, pp. 54-55.

power and desires. And in fact, it seems to me that our time, when we all more or less feel the disarray of impotence regarding the future, or the absence of future, is a time for another flourishing of SF. It is rather clear that what the current world proposes to take into account and to think with is obscenely disconnected from what is in the process of happening. Everybody feels the lie, the sedating fiction surrounding climate change, even those who have chosen to turn their back and deny the threat, and who are liable to jump suddenly from “we lack proofs” to “anyway it is too late.” But denunciation only gives the very cold comfort of being right. As Kim Stanley Robinson<sup>12</sup> wrote in his preface to *Green Earth*, “These days we live in a big science fiction novel we are all writing together. If you want to write a novel about our world now, you’d better write science fiction.”<sup>13</sup>

Q: Your characterization of SF and neo-pagan witches in terms of both confronting what they oppose without becoming similar to it, resonates with Donna Haraway’s insistence that one should ‘stay with the trouble.’ And the way you link the two, evokes her notion of building ‘string figures’ or doing ‘cat’s cradling.’ Could you tell us something about how you see these relations?

IS: Donna Haraway is certainly one very important example; a renowned academic author, classified as a critical theorist, even a post-human one, due to her famous “Cyborg Manifesto” (1985), whose path over the last years has been potently inflected by the question imposed on us by the earth. As such, the Manifesto was already a call to “stay with the trouble,” not to identify the figure of the Cyborg, even though it is today unquestionably associated with military and productivist powers, with the figure of the enemy. Many have (mis)appropriated the last sentence of her paper, stating that she would prefer to be a Cyborg than a Goddess, as taking a side against ecofeminist spirituality. To me, the whole paper was rather trying to stay with the trouble, not to essentialize the Enemy as a self-defining block. This was crucial to her efforts to get feminists interested in science and technology.

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<sup>12</sup> See also Asli Kemiksiz and Casper Bruun Jensen’s interview with Kim Stanley Robinson for the present issue.

<sup>13</sup> Kim Stanley Robinson. 2015. *Green Earth*. New York: Random House, p. xii.

But her latest book is inhabited by the need to resist being engulfed by abstract futuristic hope or despair, by the need to craft tales about, and ways of paying attention to, what is happening, or going on, now or in the future—but an earthly future—which will not bring the truth that saves us from the trouble, whether by our “well-deserved” destruction or by some technological miracle.

Earthly does not mean confining oneself to the level of matters of fact. One needs a lot of recalcitrant imagination to escape unearthly ideals. And Haraway is perhaps a striking example of humanities reclaiming an imagination which had been left to science fiction writers. The “Camille Stories” is an SF essay; not really a novel but rather a motif inviting others to participate, to world this proposition, to cat cradling-ly contribute to its ongoing imagination. “My stories are suggestive string figures at best, they long for a fuller weave that still keeps the patterns open, with ramifying attachment sites for storytellers yet to come.”<sup>14</sup> In other words it is a thought-experiment about a future which is *ours*, in the sense that numerous notes refer to contemporary authors, including Starhawk, who helped Haraway to imagine it—authors who might be part of the memory of this future.

For Haraway, science fiction novels have long been a source of nourishment but she has now exploded SF into multiple versions: speculative feminism, speculative fabulation, science fiction, string figures, scientific fact, so far... This constellation is deeply inspiring. Each version has an aspect of what our thinking, imaginative life demands to keep glittering.

Take for instance “so far”—it means defiance against continuities claiming the power to warrant their own continuation. The past has no power on the present, whether to legitimate what has worked “so far” or to disqualify alternatives. “So far” is the cry that things did not need to be what they are, but also the cry of an adventurous empiricism that reclaims facts as freed from their charge of authority—vibrant facts conveying an irreducible message of “it could have been otherwise.” Scientific facts are part of this constellation, all the more so as they always come with a naturalcultural storied world and

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<sup>14</sup> Donna Haraway. 2016. “The Camille Stories,” in *Staying with the Trouble. Making Kin in the Chthulucene*. Durham, NC: Duke University Press, p. 144.

should never be isolated from what they require and what they may generate. Speculative fabulation may transform stupefying moral dilemma into the strange story of *Omela*. As for speculative feminism, it gives its destabilizing power to the mostly proximate sense we may have of the possibility for things to be otherwise, what we may feel in the interstices of what presents itself as reality, and this has provided science fiction with its most vivid source of imagination.

But string figures, it seems to me, are the most transversal proposition for the ongoingness we need to cultivate, from the inventive stories of the growing web of interdependencies we call life to the web of knowledges we caricaturise with images of conquest, of dwarfs perched on the shoulders of giants, or of knowing subjects progressively clarifying the meaning and conditions of their obsessive questions.

Haraway insists that playing with string figures was a very serious and sophisticated practice in many cultures. But the succession of gestures is what speaks to me. At least two pairs of hands (or appendices, Haraway once corrected me) are needed, and in each successive step, one is “passive,” offering the result of its previous operation, a string entanglement, for the other, to operate, only to become active again at the next step, when the other presents the new entanglement. Each time the “passive” pair is the one that holds, and is held by the entanglement, only to “let it go” when the other one takes the relay. One could say that the figure that the first has obtained becomes for the other a “motif” for relaying. The proposed figure may be metamorphosed into something else entirely, but the question of faithfulness or betrayal is not at the forefront. If there is an ethical point it would be to recognize being indebted even if you relay in order to criticize or to fictionalize. In other words, it would mean taking care of the strings, not cutting them, not presenting yourself as having the last word. Another version of “staying with the trouble.”

**Q:** What we have been talking about could then be described as an experimental and collective-imaginative labour of weaving string-figures with particular kinds of SF, speculative philosophy, ecofeminism, and others. It seems fitting to end by asking whether and how such transversal weaving is (part of) what you have in mind when you speak of cosmopolitics?

IS: If science fiction has been deeply transformed by feminist authors, it may be because it offered not an escape but an exploration ground for working what they deeply, vitally felt: that things did not need to be, do not need to be, the way they are. They have taught me and many others to introduce everywhere the Harawayan “so far” that thwarts the temptation to give in to despair. Cosmopolitics is to be put under the sign of such a “so far.” It is trying to open the imagination against the identification of modern practices with servants of the capitalist destructive redefinition of our worlds. They were indeed, but only “so far.”

Cosmopolitics, as I first conceived it, is a kind of “string figure,” which emerged from another motif, that of an “ecology of practices,” turning it into a matter of speculative concern. Ecology of practices as such is not a speculative concept. Practices are interdependent, each needs others in order to exist and expand. The name is meant to accentuate positive divergence: practices actively diverge, producing their own particularity in the way each engages what it addresses. Divergence opposes any ordering, any derivation of the “each” from its place in the ensemble, just as contemporary ecology opposes the idea of an order of nature. Opposing subsuming generalities, the ecology of practices proposed that each practice presents itself with what I called its “demands,” what it requires and depends upon from its natureculture environment, but also with the “obligations” to which the practice commits its practitioners; that which they should not betray. Demands correspond to the entrepreneurial character of modern practices, their opportunistic, fearless capacity to turn whatever they encounter into resources. But obligations introduce an existential risk, the risk entailed by their particular “ecology of trust.” Practices may be destroyed if practitioners are not able to respect their obligations, to sustain their divergence by discriminating between what their practice defines as worthy or not. For instance, when scientists complain about the course of ‘innovation at any price’ forced upon them by the knowledge economy, they describe being forced to betray what I call their obligations and do “bad” work.

As such, the ecology of practices was related to the idea that practitioners who are able to situate themselves in terms of demands and obligations, rather than in terms of general, authoritative claims, would accept the diverging plurality of the ways a situation may be

a matter of concern for other different practices. That is, that they would accept the need for different practitioners to weave relations around issues of common interest instead of dismembering these issues with their diverging demands.

But here the motif called for a hesitation. In order to weave such relations, that is, to give to this issue the power to gather them, and to make them think together, practitioners have to be actively interested in this issue, to actively participate. And this is also to accept that, as in string figures, they are not the masters of what they propose. Instead, it is the issue which must oblige them. But what about those who are concerned by what is woven, yet are not able to participate, for instance because they are not free to do so, their obligations being directly at stake in the weaving? I understood that practitioners as I had characterized them may be “civilized” entrepreneurs, but entrepreneurs nevertheless: the urge to co-construct an issue might well make them deaf to the protests of those who have nothing to propose but cry “if you do that, you will destroy us.”

Cosmopolitics speculates that the presence of the possible victims, who, for one reason or another, will not actively “contribute,” is a required ingredient in the way the answer to an issue is woven. It is speculative because it bets on the efficacy of a kind of arrest, of suspense—what are we all in the process of doing? Worlds, which we did not imagine, may be at stake in our weaving. This would not necessarily block them—I was not looking for the “and all ended well” of fairy tales—but it would at least activate what Haraway calls “response-ability,” making it possible to taste the price, which their solution demands that others pay, and to keep an explicit memory of it; that is, to accept being haunted by our victims.

Cosmopolitics is a proposition born from a European imagination, but its motif has been grasped by others. If I recall it now, it is not in order to defend its original “truth.” On the contrary, I have learned along with its mutations. It must be said that the cry “if you do that, you will destroy us” is now resonating everywhere on the earth, from nurses whose practice is attacked by the analytic “objectification” of their tasks to traditional peoples whose sacred places and common lands are expropriated or polluted. Even the earth is crying through climate modelling. And the very possibility of an ecology of practices is

unravelling as practitioners are led to betray their obligations, which sustained their imagination and resistance, by the pressure to conform to imperatives spelled out by those they depend upon. When practitioners become desperate, opportunist and cynical, giving an issue the power to gather them becomes an empty utopia, and the possibility that they learn to listen to the cries of what they are commanded to remain deaf to becomes even more utopic. Cosmopolitics is the bet that accepting to be affected by these cries does not endanger practitioners' obligations, as they have been trained to believe. It is about reclaiming the adventure generated by these obligations against an inculcated anxiety that makes them demand protection and respect. Cosmopolitics, then, is a matter of reclaiming trust, not blind trust, but educated trust.

Cosmopolitics is now part of SF concepts which, to me, are all transversal concepts connecting what has been split into opposed categories with devastating effects. Those concepts do not communicate with a new vision of the world but with what activists call “reclaiming,” both struggling against what is unravelling and destroying, and healing, recovering ways of living, feeling and imagining together, weaving worlds with others, thanks to others, at the risk of others. This is why I take cosmopolitics in the original sense I gave it as related to the affirmation that we do not know what our modern entrepreneurial practitioners might become capable of.

This “we do not know” is not a matter of ignorance but rather situates us as the inheritors of a devastating enrolment in a general mobilization, which has justified that crying, protesting voices do not affect the heroic resolution to “advance.” “So far”, here, calls for the resurgence of the many arts of decision-making which knew how to convoke those voices—from the next seven generations of the Iroquois, to the earthly beings, human and other-than human—in the presence of which decisions should be taken, thus demanding “response-ability” not as an individual virtue but as a collectively cultivated one. It is the speculative affirmation that things might be otherwise but will be otherwise only if we learn to cultivate the art of being affected by what we learn to listen to, and of thinking with—not about—what affects us.