

Water Notes

On Women and Science

by Meg Walker

Dans cet article, l'auteure utilise son expérience personnelle pour enquêter sur les implications des femmes en sciences et argumente que le savoir féministe/connexe est une vraie science parce que c'est un savoir qui se traduit par une recherche de contacts et une compréhension holistique.

You don't really think about it when you're under water.

Not when snorkelling is all exciting and new. Being in the ocean and mimicking being of the ocean was so full of fresh sensory data for my brain circuits that I didn't consciously genderize the experience while I was doing it.



Kass Elan Morgain, "Horizons," collage, 15 1/2" x 12 1/2", 1992. Photo: Robert Hawkins

In fact, if I'd been swimming alone for the two weeks at Ningaloo Reef (Western Australia) without others to compare "water notes" with, it might have been a longer time before I contextualized snorkelling with thoughts on gender and science. However, during evening conversations over beer and chips at the town's single pub, I soon began to wonder if the curiosity and lateral thinking I experienced while under water might be connected to the basic nature of scientific inquiry. If so, maybe those of us women who have been intimidated by the monolithic presentation of science as a stronghold of linear thinking could be encouraged to engage in amateur science simply on the basis of our inherent curiosity. It became a two-fold question: did I experience

the medium of water in a specifically female way, and if so, was there a seed of a lateral approach to science involved in that experience?

Before I continue, let me state clearly that I know there are many women in the sciences already, and that women are equally capable of doing the mathematical, chemical, biological, and physical research that men do. It's not a question of capability that I wish to address, but a question of prioritization and of thought patterns. If there are women whose curiosity about the organic and inorganic has been discouraged because their ideas appear to be non-linear and/or "not scientific enough"—i.e. preceding instead of proceeding from statistics and tabulations—then those are the women whose thoughts I would like to encourage. I'm certainly one woman who uses visual (paintings), conversational (talks with scientists themselves, not just with books and data), and poetic (prose poetry and lyrical poetry) paths to

investigate the scientific world, and I believe these ways can produce legitimate additions to the flow of scientific knowledge.

The first part of the question, then, was: did I somehow experience the ocean and its multitudinous fauna in a specifically female way? At first, I would have said no. I didn't feel mythical connections between the ocean's powers to procreate and my body's biological ability to do the same; and while I wished to paint and draw many of the fishes I observed, I felt that was a transgendered desire, because male friends were there taking underwater photographs as well.

As for my written observations, many of the notes I made in my journal at night headed naturally and without agenda into speculations about matters physical and biological. For example, wearing the mask and snorkel, I was continually aware of my own breathing. This made me wonder about human lung capacities; about the interactions between oxygen and water that happen in a fish's gills; about the processes of respiration, condensation, and precipitation that occur in the earth's atmosphere. One person who worked at the boat station mentioned that the ocean contains 70 per cent of the world's oxygen. Learning this, it was odd to consider that we were swimming in so much oxygen, and yet if immersed in it, we would suffocate.

I was also curious about the limitations that physics puts on the human body. On one page I wrote: "I dove underwater with the snorkel a few times yesterday and got the hang of spitting the water out, and unplugging my ears against the pressure while I was submerged—so today I was more comfortable and went under more often ('trying'—ha!—to chase fishes—not much of a try because you only have to watch for three minutes to see that they're so per-

fectly designed for the medium, and humans aren't—even with full diving apparatus, there's no way to match their speed and agility...." The page goes on (with digressions, of course!) to express mildly scientific questions about what differences in physics are involved when a human swims, compared to when a fish swims.

Was any of this specifically feminine? Well, back to those conversations over beer and chips, I began to

ELISAVIETTA RITCHIE

Search Parties

I am out with lanterns,
searching for myself.

—Emily Dickinson

For me, a candle should suffice,
Barring that—a match.
No lamp that burns too bright
Or lasts—

Self, no angel,
Disappoints, stuns—
Mirrors yield danger,
Leave us wrung.

Are more honest?
In mirrors a flame
Deceives, reflects,
Flickers blame.

Truth is no spice cake—
Love is crumbs—
In walls, mice wait
unseen, not dumb—

notice two distinct differences between the women's and the men's comments about their activities during the day. Firstly, men and women both went on the recreational fishing charters, but it was the men who detailed the killings of the fish. It was also only the men who mourned the fact that no spear-fishing ("primal hunting," as one man put it) is allowed in the area, since most of Ningaloo Reef is classified as a protected marine park.

Secondly, men and women were both attentive to the colours and markings of various fishes and corals, usually for identifying them, but the people rhapsodizing about the blues! the electric turquoise of that clam's mouth! that unusual section of bright purple brain coral! were women. It was the women who seemed most comfortable with experiencing the ocean as something that owes no responsibility to humanity.

It's not that the women weren't interested in fishing. I tried my turn at hand-line fishing, and it was the woman in a yellow bikini, just a few metres down the beach, who outdid the rest of us that sunset by catching three large fish. And it's not that the men didn't appreciate the colours: two of my male friends wrote poetic and detailed postcards about what they had seen underwater.

I gradually concluded that the female-male distinction I detected was about prioritization of observations. Generally, the men's first desire was to expose and hunt creatures they saw in the ocean; so enjoying the colours, or the sense of water as an unusual and non-human medium, was a secondary benefit. For the women, on the other hand, the main goal was to receive the variety of colours, to learn how the ocean and reef interact in and of themselves, and to append the human use of the ocean and its fauna as a secondary benefit.

I would like to emphasize this distinction because it is the second attitude, whether expressed by women or men, which births ecologically wise scientific exploration and application. It's an attitude which is *looking for*

interactions, for relationships, for processes and events that make up the patterns of how the ocean (for example) functions. It's about seeing things in connection, rather than in isolation. It's very far from the Victorian-hangover science that still asks students to segregate, catch, and kill "specimens" for laboratory exercises, ignoring the fact that living objects associate with their environments. And, ideally, it should be the attitude which teaches the human observer that s/he is part of a complex universe which in itself doesn't always acknowledge the human as the pinnacle of importance.

In my mind, the preceding paragraph is the basis of what feminism is about: developing understandings of both the societal and natural worlds as complex webs of events and relationships. I could be content, then, to answer the first part of my introductory question by calling my oceanic experience a feminist one, rather than a female one, as the desire for connective science is expressed by people of both genders.

The answer to the second part would therefore be that a feminist approach to science is by definition one which grows from lateral thinking, and that women who wish to ask nonlinear questions of the sciences should feel legitimate and comfortable to follow those questions.

To finish with a note of humour: we lateral-thinking women shouldn't be intimidated by linear thinking anyways, because we can always expand the picture and point out that any line on the globe is spiralling in a double circle, once on the earth's axis and once on our elliptical orbit, around the also-circling sun, in the spherically-motivated galaxy (in a continually spiralling universe).

Meg Walker is a Vancouver-based writer who enjoys eating and painting many fishes.

Elisavietta Ritchie's poetry appears earlier in this volume.