So Many Numbers and So Much about Measurement: Quantity in Wu Ming-Yi's *So Much Water So Close to Home*

Julian Chih-Wei Yang

ABSTRACT

In this article, I will address the roles played by quantity in Wu Ming-Yi's consideration of nature in *Jia li shuibian name jin* (*So Much Water So Close to Home*). I will first examine how he brings the qualitative properties of nature to life by reference to nature's quantitative properties while equally accentuating the importance of the latter. Then, I will investigate a special quantitative term—"one," which can be understood as "one-system"—and discuss how it structures Wu's depiction of nature both according to and beyond James Lovelock's Gaia hypothesis and Bruce Clarke's revision of Lovelock. Finally, I will explore how *So Much Water* anticipates Timothy Morton's notion of hyperobjects, namely objects with very large but finite magnitude in time and/or space, and how the book treats Benoit B. Mandelbrot's concept of fractal as a different, if not better, way of dealing with these hyper-sized objects. In the conclusion, I will touch briefly upon the ambiguous quantity "x," which summarizes the above-mentioned senses of quantity.

KEYWORDS Wu Ming-Yi, *So Much Water So Close to Home*, quantity, Gaia hypothesis, hyperobjects, fractal

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Julian Chih-Wei YANG, Assistant Professor, Center of General Education, National Taitung University, Taiwan

In this article, I will examine the roles played by quantity in Wu Ming-Yi's consideration of how humans should approach nature in his third nonfiction book of nature writing, *Jia li shuibian name jin* (*So Much Water So Close to Home*).[1] In the book, Wu explores the culture, history, and ecology related to water, particularly the rivers in Hualien County, the Pacific Ocean, and the "Hidden Lake" at National Dong Hwa University (NDHU).[2] Although he maintains that this work is meant to be less about "recording" than about "thinking and imagination" (9), a specific form of recording—quantification, especially numbering and measuring—prevails in the text. For example, recounting his experiences of trekking the rivers in Hualien and strolling the seashore of the Pacific Ocean, Wu not only portrays the natural and cultural landscapes of these aquatic entities but also takes the trouble to note down their measurements, such as lengths, slopes, drainage areas, etc. (39, 73, 187). In the part on the Hidden Lake, he employs as chapter titles the number of the steps it takes him to circuit the lake the first time and that of the photos he takes of the clouds above the lake (190, 197).

There are many more instances of Wu's reference to quantity in *So Much Water*, and they mark one and the same thing: the quantitative aspect pertains much to his thinking and imagination of nature in the text. If in the first volume of his essay collection, *Yi shuxie jiefang ziran* (*Liberating Nature by Writing*), he has argued that "literary nature writing" highlights "values that are *buke jiliang*" (unquantifiable) in nature (68, 66), in *So Much Water* he reintroduces quantity, mainly for the purpose of delineating nature and seeking a way of knowing or accessing it.[3] And Wu does so for a good reason: in the third volume of *Liberat-*

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[1] The Chinese title of *So Much Water So Close to Home* literally denotes "home is so close to water" with the phrase "so close" reflecting both the nearness and importance of water to living beings, human or nonhuman. The English title is Wu's own, which, as he admits, is borrowed from the eponymous short story of Raymond Carver, with the two texts thematically having little in common (*So Much Water* 5).

[2] Besides the preface and the postscript, *So Much Water* consists of three main parts: "Jia li xibian name jin" ("So Much River Water So Close to Home"), "Jia li haibian name jin" ("So Much Ocean Water So Close to Home"), and "Jia li hubian name jin" ("So Much Lake Water So Close to Home"). Here these titles are translated according to Wu's English book title to better foreground the parallelism among them as devised by him. It should also be noted that in *So Much Water* Wu neither employs terms like "part" and "chapter" nor marks their sequence. Yet, to avoid confusion, I will still adopt these conventional markers in my discussion.

[3] By "literary nature writing" Wu designates nature writing that features "literariness" or belongs to "the category of literature" (*Liberating Nature* 1: 33, 62). Remarkably, as he maintains, there has been no consensus as to how to determine whether a piece of nature writing is literary, which is usually "decided by professional literary scholars" or, in rare cases, "expressed by the authors themselves" (31-32). *So Much Water* illustrates the latter: as Wu clarifies, it is the fruit of his "approach[ing] ecology with a literary ges-

ing Nature, he criticizes the "literature centrism"—the ignorance of the importance of "scientific data or issues"—common in Taiwanese studies of nature writing (180); his attention to quantity in *So Much Water* constitutes his attempt to tackle, if not solve, this problem.

Indeed, the quantitative dimension of the text has been noticed by several researchers. Guang-Huei Shieh regards Wu's reference to the measurements of the Hualien River and the Pacific Ocean in the book as demonstrating "a scientific spirit" (235). Yu-lin Lee identifies the pairs of "the measurable/the unmeasurable" and "the infinite/the finite" as two of the several "antitheses" found in *So Much Water* and construes its articulation of "unmeasurable fractal coastline" as an example of the play between finitude and infinity (85-86). Following this observation, Yue Lu contends that Wu's meticulous depiction of the size of the oceanic sounds reflects "the infinity of nature in magnitude" (61) and that the imprecision characterizing his lake measuring and cloud photographing indexes the "immeasurability" of nature and, by extension, its "unrepresentability" or "uncertainty" (66, 68).

It seems that these readings have not exhausted the meanings and types of quantity presented in *So Much Water*. Issues worth further consideration include the following: how Wu brings the qualitative properties of nature to life by reference to nature's quantitative properties while still highlighting the latter's significance; how the understanding of the quantitative term "one" as "one-system" structures his description of nature both according to and beyond James Lovelock's Gaia hypothesis and Bruce Clarke's revision of Lovelock; how Wu's articulation of nature anticipates Timothy Morton's notion of hyperobjects (objects with very large but finite magnitude in time and/or space) and how his reference to Benoit B. Mandelbrot's concept of fractal suggests a different, if not better, way of approaching these hyper-sized objects; and how the ambiguous quantity "x" summarizes the above-mentioned senses of quantity. In what follows, I will explore these "hows" one by one.

Quantity and Quality

Wu's readers might have a point in stressing the unquantifiability of nature in *So Much Water*. After all, in its preface Wu states that "there are neither page numbers nor chapters or sections for rivers, oceans, and lakes" (7); in the second segment of "So Much River Water," he also maintains that "rivers are much

ture" (9). Unless otherwise noted, all the translations of Wu's works quoted in this article are mine.

longer, deeper, more tortuous, and more mysterious than we can measure" (18). Nevertheless, this does not offset the fact that the quantitative properties of nature appear every few pages in the book. More instances can be offered: right after mentioning the incalculability and indivisibility of nature, Wu talks about the possibility of writing a pithy article of merely "three hundred words," about the times ("more than forty") he has frequented the Hidden Lake in the past "four years," and about the number of rivers—five out of the twelve in Hualien—he recounts in the text (8-9). His account of the immensurability of nature ends with the statement: "the water flow of Niagara Falls is perhaps the fastest; its splashing speed can reach one hundred and eight kilometers per hour" (19).[4] There are so many numbers and measurements with regard to nature given in *So Much Water* that, against claims made by critics such as Yue Lu and even by Wu himself, quantity should be seen as a key constitutive element of the book.

What immediately exemplifies this is this: on the first two pages of the first chapter, Wu observes that "fish, amphibians, aquatic animals, and plants rely upon freshwater for living"; likewise, to stay alive, "we" (human beings) "need freshwater" from streams and rivers (16-17). His support of these statements is a quantitative one: "on average a woman" living in Africa "has to spend seventy-four minutes a day and twenty-seven thousand and ten minutes a year fetching [fresh]water" (16). "Of all the water on Earth, freshwater makes up only 0.008%, just like one drop of water in a full glass; it is this drop that allows the survival of 12% of living creatures and 40% of fish known in the world" (16). Factual (and trivial) as they may look, these numbers and measurements—be it the listed figures or the metaphor of "one drop"—spotlight the significance of freshwater to human and nonhuman living beings alike: without the former, neither of the latter can survive. Also illuminated by these quantitative data is one of the many senses carried by the titles of *So Much Water* and its first part: "home is so close to water and river" insofar as the survival and sustainability of life depend upon them.

However, it should be noted that in the text Wu does not simply try to gather the quantitative properties of nature and accentuate their factualness. Responding to Lorenz Konrad's belief that "the truth" of nature "is in itself fascinating" (qtd. in Wu, *Liberating Nature* 3: 194), Wu questions how nature writing along with its facts "can lead a lay reader to 'accurately know and understand nature'

[4] In *So Much Water*, Wu renders numbers in two different systems, the Chinese and the Arabic ones. Since he refers to the same number differently—for instance, he writes the year 2003 first in Chinese numerals (190) and then in Arabic ones (197), I will reflect this difference in my translation by turning the former into English and keeping the original form of the latter.

and 'to be deeply and permanently touched by its fascinating truth'" (195). For him, besides the presentation of the quantitative facts of nature, this double task pivots upon their "subjectivization" by the writer (195), that is, on the author's attention to the qualitative meanings of the quantitative properties of nature, so as to make its facts attractive to readers. Wu's *So Much Water* fulfills this vision, I argue, by tapping the intricacies of nature's two properties: the quantitative and the qualitative. This reflects his perception and understanding of nature and contributes to the appeal of the work.

Evidence of this abounds in *So Much Water*. An instance is Wu's elucidation of the nourishing power of water and rivers through quantity-related information. As he explains, "ancient Egyptians would mark with stones . . . the heights of the flooding [of the Nile] the previous year," with these heights indicating the fertility brought by the river to surrounding farmlands (19). In addition, Wu mentions that the Amazon River is home to "at least two thousand kinds of freshwater fish" thanks to its magnitude, as exemplified by its drainage area, which is "twice the size of India,"or its discharge volume, which equals "ninety-five thousand cubic meters of water outflowing to the [Atlantic] ocean per second" (54). Interestingly, although he claims that "it is difficult to imagine *by statistics* the actual looks" of nature, he soon adds that "let me explain it this way: *the discharge of the Amazon River takes up twenty percent* of all the rivers in the world" (54; emphasis added). It seems that Wu cannot express the qualitative properties of nature without resorting to its quantitative ones. Despite his apparent discounting of the accuracy of quantitative information in depicting nature, quantity still functions as his best means of specifying the qualitative features of nature.

Quantity is also applied by Wu to exhibit the vitality of nature. As mentioned above, he counts the numbers of the steps it takes him to circuit the Hidden Lake. According to the chapter "Nine Hundred and Seventy-Four," he has done this at least three times, with the results varying each time: it reads nine hundred and seventy-four steps (which accounts for the title of the chapter) for the first tour in 2003, eight hundred and eighty-nine in 2005, and one thousand and twenty-three in 2006 (192). Whether these measurements are accurate is beside the point; Wu admits that his "strides" are "uneven" (192) and, because of various factors, the size of the lake changes all the time (195). It is impossible to either know how big the Hidden Lake actually is or reduce to a minimum the margin of error in measuring, since there is never a constant circumference ascribable to this aquatic being. Yet, this does not mean, as Lu contends, that Wu intends mainly to show the unrepresentability or uncertainty of nature. As Wu explicates, with his "inexact" measuring, he "just wants to take the temperature

of *a living lake* on campus" (195; emphasis added). What stands out in the fluctuating sizes of the Hidden Lake and results of measurement is the existence of nature as a living, vigorous entity. This explains why he also observes that "although there is less rain and the lake becomes a bit smaller, its vitality and ambition grow stronger" (215). A little decrease in the amount of water is no problem; the variation of its magnitude rather indicates its life force.

At other times, quantity is employed to reflect the vulnerability of nature to human exploitation. Narrating the history of the human use of the Mugua River in Hualien, Wu reveals that its flow network has been almost exhausted, with its previous "complexity and copiousness" reduced to "meagerness and feebleness" (82). To better visualize the image, he adopts a quantitative metaphor: "the amount of fish fed by a four-gallon fish tank is no comparison to that by a twelve-gallon one" (82), with the decreased capacity of the fish tank symbolizing the debilitation of nature caused by human exploitation.[5] Quantity, on the other hand, displays the revengefulness of nature. Describing the resounding Ga-nang-nang River (which denotes "burning like wildfire" in Amis and is also known as "Jianong River" in Mandarin Chinese) (90, 94), Wu notes "a precipitation about five hundred millimeters" brought by Typhoon Toraji overnight (90). Consequently, "the embankments on the banks collapsed; the river, often little more than a trickle, surged," "swallowing [part of] Provincial Highway No. Nine" and causing "the death of twenty-six people and the disappearance of fifteen people" (90-91). With the two figures, the quantity of precipitation and the number of casualties, Wu conveys the "anger and force" of nature (91), which is ready to strike back any time as the Ga-nang-nang River did (90).

Remarkably, these examples are not given to suggest that compared with quality, quantity takes only a secondary place in *So Much Water*. If the latter counted little, Wu would not need to give one piece of quantitative information after another in the book. While showing the qualitative properties of nature and making its facts inviting to readers, Wu also treats the quantitative features as an end in itself. This is best illustrated by what he appendixes at the end of each chapter of "So Much River Water" and each part of the book: a short passage specifying noteworthy quantitative information of the addressed aquatic entities, with little or no subjective opinions provided. This means that for Wu, the quantitative dimension of nature has to be taken seriously as such; otherwise, the fal-

[5] The Chinese originals for the sizes of the fish tanks read "one [Taiwanese] foot" and "three [Taiwanese] feet" which, while being common designators of fish tanks in Taiwan, are in fact length units. To avoid confusion, my translation turns them into the volume units approximate to the size of the fish tanks referred to by Wu.

lacy of literature centrism he repudiates will reemerge. In this regard, the double focus upon the quantities of nature and the qualities they vividly express helps realize his vision in *Liberating Nature*: literature and science (by analogy, the quantitative and qualitative properties of nature) need to collaborate to make literary nature writing not only factual but also appealing.

One as One-System

In *So Much Water*, a specific quantitative marker merits special attention: one. Throughout the book, not only does Wu speak of this numeral many times (already eight times in the first two paragraphs of the preface, excluding the ordinals), *one* is also employed to describe the aquatic entities—for instance, the Hualien River is depicted as "one small line of water mark" on Earth (56). Moreover, this quantity constitutes the title of one chapter in "So Much Lake Water," suggesting an imaginary some*one* (an individual "you") who is invited to "spend *one* night by *one*self with the lake" and expected to eventually become "one" with the lake (228, 237; emphasis added). The last case implies that in Wu's rendition "one" bears discrete meanings—like the singular someone and the lake as a whole—that connect with one another and together point to the sense of "one-system." His conception of "one" as one-system in *So Much Water* is what I will examine in this section.

In the book, what grounds Wu's understanding of one as one-system is apparently James Lovelock's Gaia hypothesis, which is much endorsed and referred to in the text (64, 122-23, 253-54). In *Gaia: A New Look at Life on Earth*, Lovelock argues that Gaia designates "the largest living creature on Earth," a "superorganism" with humans and "all other living beings" constituting its "parts and partners." This "vast being . . . in her entirety has the power to maintain our planet as a fit and comfortable habitat for life" (1, 143). Lovelock's reference to Gaia's "entirety" and concomitant "power" demonstrates that as a system it, as he later observes in *The Ages of Gaia: The Biography of our Living Earth*, "has properties that are not necessarily discernible by knowing individual species or populations living together" (19). That is to say, Gaia has features emerging from the interaction among its constituent parts, but these features are not reducible to those of any single part. One example is its homeostatic quality originating from the loop between the biota and abiota (the living and nonliving beings) on Earth, making it a "cybernetic system" capable of self-maintenance (*Gaia* 123).

Lovelock's hypothesis has sparked many responses; one line of debate con-

cerns the relationship between Gaia and its parts. In *Humankind: Solidarity with Nonhuman People*, Timothy Morton criticizes Gaia as a strong holism, which perceives the emergent whole as more than—"more real" and thus more important than—the sum of its parts, and sees any of these parts (e.g., any species) as replaceable without creating much difference to Gaia as a whole (107-08). Morton's denunciation somewhat makes sense. In *Gaia*, Lovelock does claim that "cybernetic systems" like Gaia "are always more than the mere assembly of constituent parts" (48). "Whenever natural disasters occur, . . . there is turmoil among the species. Eventually a new ecosystem comfortable with the new environment emerges and is populated by new species of organisms" (102). Whereas these claims make Lovelock guilty as charged by Morton, Lovelock also accepts Lynn Margulis's revision in underscoring the contribution of "all species" to "the Gaian process of regulation": Gaia now stands for "the sum total of all these individual modifications" by these species on the environment and the connection of all species (120; see also Margulis 118-21). Lovelock is perhaps much less holistic than Morton believes.

Meanwhile, Bruce Clarke tries to approach Gaia with a different framework, shifting the lens of analysis from the perspective of mereology to that of system-environment. Inspired by Margulis's autopoietic theory (and Nikolas Luhmann's systems theory), Clarke argues that "[a]ll systems," such as Gaia or any living organism, are autopoietic if they are "bounded" and "autonomous in operation" while staying "open to . . . environments that entirely exceed them," with the "possibility of . . . yielding a coherent response to environmental provocations" indicating their "bounded autonomy" (54-55). This shows that, as Hannes Bergthaller notes, systems "are what they are only because they are able to distinguish between self and other" (50). Gaia should no longer be perceived as more than or merely the sum of its parts; it—like every system—instead names "the active production of an operational boundary separating 'its inside and its outside'" (Clarke 61). In addition, Clarke accentuates the role of subsystems in his revision of Lovelock: with them, Gaia "produces and maintains the planetary environment," with the term now designating an "intricate and composite systemic assemblage" of "numberless differentiations [i.e., individual subsystems]" and each subsystem recognized as capable of maintaining its own operational closure or distinction from the environment (70, 81, 96). This way, Clarke helps Lovelock strike back against Morton: calling attention to "the locally organized" subsystems (79), in particular how each living organism produces its individuality or bounded autonomy from the surroundings and hence earns its irreplaceability in the system, Clarke offers a version of Gaia—which he names "neocy-

bernetic"—irreducible to Morton's.

Remarkably, Lovelock is not that naïve as Clarke appears to suppose. Anticipating the latter's reinvention, the former had actually argued in *The Ages of Gaia* that life is "an open system": "But like one of those Russian dolls which enclose a series of smaller and smaller dolls, life exists within a set of boundaries" (39). While not adopting the language of system-environment, Lovelock exhibits an awareness of Gaia as a system containing individual organisms/subsystems—the "series of smaller and smaller dolls" that produce their bounded autonomies, that is, their "boundaries"—from the environment. Moreover, he proposes something unaddressed by Clarke: "classification" within Gaia, which specifies the arrangement of subsystems into higher orders—something worth the name "kind"—though not yet tantamount to Gaia as such (40). To this extent, the word *Gaia* should now be regarded as representing a triad of system-kind-individual organism/subsystem. It is this conflated sense that Wu sketches in his articulation of "one" as "one-system" in *So Much Water*.

In general, the book follows Lovelock's hypothesis that Gaia denotes a living organism emerging from the interplay of the living and nonliving entities. As Wu explains, the term designates "a living environment that all living and nonliving creatures 'collaboratively' maintain to make it suitable for their own survivals," and this "enormous entirety bears the ability to sustain the Earth and render it a habitable place for life" (64, 254). This perception of Gaia as a system with emergent properties—specifically the ability to maintain itself—also applies to the natural entities he depicts, especially the aquatic ones recounted in the work. For instance, Wu writes that "one river . . . is always one unique ecosystem" (5), with its "velocity . . . co-determined by its upstream water supply, bedrock, riverbanks, and everything in [it]" (18). In "So Much Ocean Water," he envisions that "the sound of an ocean is so large"—so numerous and loud—because of "the complexity of the souls composing it," including "one hundred million fiddler crabs scuttling down the borderline between the ocean and the land," "the Liwu River from the mountains and the Kuroshio Current returning from the Equator exchanging their salinities and temperatures," etc., while the soul-sound composite "resembles one well-written work of fiction" (161, 159-60).[6] Here Wu refers to a river as "one unique ecosystem," whose "unique-

[6] For a better clarification of the animals and plants referred to in *So Much Water*, in my translation I will mention first their common names and then their scientific names in parentheses the first time they are mentioned; otherwise, I will use the one that is available. This way, I wish to better specify the kinds of animals and plants Wu refers to, whose identification he deems essential and whose confusion he criticizes

ness" or "velocity" is codetermined by "everything in [it]," and the ocean as "one well-written fiction," with its numerousness and loudness contingent upon the huge number and variety of sounds contained therein. These examples illustrate his point that natural entities, like these bodies of water, are Gaian one-systems consisting of living and nonliving beings and carrying traits of their own. The "one" in *So Much Water* is hence basically Lovelockian.

Wu's depiction of one-system also reads Clarkean. As mentioned above, in Clarke's version, the language of system-environment is substituted for that of part-whole, and the "numberless differentiations" (individual organisms/subsystems) of a system are emphasized. The correspondence of *So Much Water* to these thoughts is best shown by its delineation of the Hidden Lake: while Wu portrays the lake as a one-system with characteristics such as its nervousness and its own life irreducible to any of its constituent parts (224, 226), he also accents the individual living beings in the lake. What demonstrates this is the employment of the term "one" in the chapter "Twelve": as Wu observes, in the ecosystem of the Hidden Lake there are "one common grass yellow (*Eurema hecabe*)" "one Asian pintail (*Acisoma panorpoides*)," "one little grebe (*Tachybaptus ruficollis*)," etc. (208, 213). The Chinese originals for these "ones" equally read *yizhi*, made up of *yi*, the Chinese for "one," and *zhi*, a Chinese measure word with no equivalent in English. Here the *yis* can be removed or replaced without the meanings of the phrases much changed: both "*nashi zhi*" and "*nashi yizhi*" "common grass yellow" signify "*that is one* common grass yellow"; "*youzhi* little grebe" still denotes "*there is one* little grebe" as "*yizhi*" does. That said, these *yis* are nowhere redundant. They rather illuminate Wu's attention to the individual living beings in the lake system: it is after all "*one* common grass yellow" or "*one* little grebe" that appears. In other words, these "ones" mark the individuality and irreplaceability of the living organisms in the lake system.

In addition, subsystems sustain themselves by remaking the environment. A case in point: as Wu describes, "[t]he next spring, parasol leaf trees (*Macaranga tanarius*) and white leadtrees (*Leucaena leucocephala*) grew with amazing speed, attracting rufous-backed shrikes (*Lanius schach*), which preferred to stand on high ground" (207). Also, "just as you expect the Asian pintail to stretch its wings and start another phase of life—being able to fly—it disappears suddenly": "There is one little grebe devouring it" and "robbing one Asian pintail of its possibility to take to the sky" (213). Both instances manifest how living organisms produce their own bounded autonomies by modifying what is around: they ei-

(*Liberating Nature* 1: 182, 310).

ther attract or consume another living organism. In this sense, the one-system delineated by Wu is equally Clarkean: the living organisms produce their autonomy by responding to or even changing the environment.

Wu also captures what Clarke ignores in Lovelock—the idea of classification—as exhibited by the accent upon kind or species in *So Much Water*. An immediate example is again the aforesaid "ones": after all, to be "*one* common grass yellow" is simultaneously to be "one *common grass yellow*." The indication of the appearance of one living being therefore does more than just index its individuality and distinction; it also suggests the presence and survival of the species it belongs to. Meanwhile, the existence of one species implicates that of others. As Wu writes, "one kind of living thing is always the food of another kind" (208)—the emergence of one species always implies that of another, which then implicates that of a third, and so on. In this regard, from the aforementioned enumeration of the "ones" can be inferred the coexistence of different species in the Hidden Lake. This co-presence further contributes to the formation of the lake as an independent system: the biodiversity constituted by the various biological kinds reflects its own emergent vivacity, making it, as Wu puts it, "a more complicated ecology" (209).

Paradoxically, the reference to the coexistence of the different species via these "ones" makes Wu more Clarkean. Spotlighting the different kinds of organisms in the lake system, he displays not only their connection but also their openness to the environment: the food chain they form suggests their distinction from one another—they are to devour or to be devoured by other species. Either way, they will recreate the environment since the survival or extinction of one species will affect that of a second, a third, etc.; eventually, they will reshape the environment or system they constitute. This also means that the one-system portrayed in *So Much Water* is not as holistic as Morton supposes. Drawing equal attention to the individuality of living organisms and their species, Wu foregrounds their significance and irreplaceability in the lake system: each individual living entity and biological kind counts insofar as each maintains and distinguishes itself from what is around, as suggested by the above-quoted "ones." Even when these organisms fail to do so—when they fall prey to other living beings—this does not cancel out their irreducibility. The event of their death is still noteworthy because it will bring about a chain reaction in the system (205-06). That is to say, alive or dead, these individual organisms and kinds similarly exhibit their singularity and ability to revamp the environment.

Notably, Wu's delineation of one-system in *So Much Water* shows another special design: the book presents a supra-kind—not yet a super-sized system like

Gaia but more than a biological kind—comprising various aquatic kinds and individual entities. As he writes in the preface of the book: "rivers, oceans, lakes, and water underground and in ocean trenches, the wet but disappointed eyes of fish, the vascular bundles of felled trees, the clouds formed in the sky out of the fronts from the north of north, the tears we shed in sadness and the blood that oozes when we are hurt . . . the sum of water contained there may not differ much from the sum on Earth billions of years ago" (5). The passage will be better comprehended when read alongside what Wu says in "So Much Lake Water": at its birth, "the Earth was shrouded in clouds . . . ; then, it rained endlessly, and eventually the Earth became one ocean. Clouds result from the condensation of water vapor, and the water molecules formulating the ocean" on Earth billions of years ago "are now likely to be gathering and forming clouds somewhere" (197-98). Owing to the recurrent, perennial circulation of the same water molecules between clouds and oceans, the little difference in the quantity of water of now and before symbolizes the non-difference intrinsic to various types of entities and individual beings: that is, water is their shared essence.

Further driving home this point is another remark in the preface: whereas structurally *So Much Water* "seems to be composed of three long accounts that are made up of many short ones, the book can be said to consist of only one account and in a sense resembles the nature of water" (8). The convertibility of the "three long accounts" and their "many short" segments into "one account" represents the continuum between water, its types, and the individual beings. It is in the same logic that he compares *So Much Water* to "one drop of water": the work is like an aquatic entity condensed from his experiences of trekking and traveling (9), with the measure and metaphor of "one drop" illuminating his perception of the collection of his thoughts and writings on water as a supra-kind entity, one encompassing many sub-kinds and constituent parts composed of the same material—i.e., water. Put differently, the different kinds of water and individual entities, as well as the distinct parts and segments of writings about water, formulate a "one" precisely because they consist of one and the same thing. There is "so much water" in *So Much Water* because no matter what (kind of) entity is of interest, it is always water that is addressed.

Certainly, this does not mean that kind and individuality are inconsequential for Wu. What attests to this point are his remarks on clouds: while he confesses his inability to identify the types of clouds above the Hidden Lake because "each kind of cloud has its own variants" and they "will transform into other kinds," he still takes pains to guess at their kinds and juxtapose most of the individual photos he takes of the clouds on one page (198-99). Another piece of evidence is the

formal and thematic arrangement of the book. As Wu points out in the preface, he was in charge of deciding most of the typographical details of the book (10); therefore, the division of the text into parts, chapters, and segments should be considered his design. Whereas each part of the text addresses one type of water, it should be noted that each part is composed of distinct chapters and each chapter of disparate segments, with one chapter focusing loosely upon one theme and its segments sharing, also loosely, the same subject matter. If circulation and convertibility stand for the identity of water and its kinds, discontinuity in form and loose linkage in theme function as tropes of the irreducibility of these kinds and individual entities to either the supra-kind or one another. For Wu, there may not be page number or chapter/section division for water, rivers, oceans, or lakes, but there is still division and differentiation between, among, and within them.[7]

More importantly, this notion of supra-kind as presented in *So Much Water* redefines what it means to be open as a one-system. As mentioned above, for Lovelock and Clarke, a living being is open to its outside environment, especially when it responds to extrinsic stimuli and thereby preserves its own autonomy. However, when Wu suggests that the lake system is "an open space" (201), the phrase indicates an openness perhaps more open than what Lovelock or Clarke has envisioned. As Wu elucidates, what composes the Hidden Lake includes at least "wastewater from the university swimming pool and rainwater," the shadows cast upon it by the clouds above, "living things appearing beyond expectation," and both native and foreign species (200-01, 219), suggesting that the lake is constituted both by what counts and by what counts not so much as its constituents. This does not mean that the Hidden Lake stops being a Gaian one-system; it persists after the ravaging of the typhoon and "bears its own thought" as one lake system (226-27), with both descriptions marking its bounded autonomy. Nevertheless, it exists as an open system also because it welcomes outsiders—the clouds in the sky, the foreign species, or the imaginary someone invited to stay overnight. In this way, Wu recasts the signification of "one" as one-system. The oneness of the Hidden Lake is now formed paradoxically: it is a one(-system) insomuch as it comprises both what it is (the lake water or the native species) and what it is not (the clouds, the foreign species, and

[7] I owe my attention to the typography of *So Much Water* to Yue Lu's reading, though my interpretation differs somewhat from his: for Lu, Wu's work features a "divergent" but "nondiscontinuous" style of writing, with the "commonness" of the different things indexing a culture shared by human and nature (56, 58). My approach, au contraire, stresses more the formal and thematic continuity and discontinuity in Wu's articulation of nature.

the invited someone). If the oneness of a system can be expressed via the formula "1 = (a, b, c, . . . , n)" in which the quantity "one" equals the combination of *n* entities or *n* kinds of entities, the lake then reflects a "1 = (1+n)"—it is an open system simultaneously made up of its self and non-self. This (non-)self is the unique form of being a one-system portrayed by Wu and assigned to the lake and, by extension, the nature depicted in *So Much Water*.

Hyperobjects, or Objects of Very Large Magnitude

The issue of Gaia as a superorganism brings to mind another quantity that prevails in *So Much Water*: the very large magnitude, which in turn recalls Morton's notion of hyperobject. In *The Ecological Thought*, Morton coins the word to indicate man-made things, such as "polystyrene objects" and "plutonium," that "are more solid" or more long-lasting than what has ever existed (130). Later, in *Hyperobjects: Philosophy and Ecology after the End of the World*, he further defines hyperobjects as objects "that are massively distributed in time and space relative to human" and which are characterized by "very large finitude" instead of "infinity" (1, 60), with his examples now including both artificial and natural entities. "A Styrofoam cup," Morton remarks, "will outlive us by over four hundred years," whereas the biosphere and global warming exist or occur at the global rather than local level (60, 1). Because of their super-scale in spatiotemporality, these objects cannot be experienced as such; humans "can only see pieces of [them] at a time," with these pieces amounting to their "local manifestation[s]," even though these objects are finite and calculable and can "be thought and computed" (60, 1-3). However, it is impossible to stay away or keep a safe distance from them; hyperobjects are instead always "near," and humans are "always inside" and exposed to them (28, 32). In brief, these hyperdimensional objects bear the following traits: they are viscous, nonlocal (though manifesting themselves locally), transdimensional in time and space, and interobjective (1-2, 70).[8] For Morton, it is the last feature that explains why hyperobjects matter: they "give us the most vivid glimpse of interobjectivity"—after all, humans are entangled in a world of objects, with each object, including each human being, being split between its self and its appearance (85, 18). At the end of *Hyperobjects*, Morton even claims that "every object is a hyperobject" (201), suggesting that all entities,

[8] In fact, the phrases Morton uses in describing the spatiotemporal magnitude of hyperobjects are "Gaussian temporality" and "high-dimensional phase space" (*Hyperobjects* 1, 70). Here I do not intend to go deeper into these fancy terms since they are adopted by Morton chiefly to justify his conception of hyperobjects *and* all objects: each of them produces its own time and space (61).

insomuch as they are implicated in the mesh of interobjectivity, are always translating and affected by one another, thus echoing what occurs between humans and hyperobjects.

With the above-mentioned features, hyperobjects can be said to best exemplify what Morton calls "dark ecology" in his early work on ecology, *Ecology without Nature: Rethinking Environmental Aesthetics*. As Morton expounds, objects make one feel dark or trigger a sense of monstrosity when one finds it impossible to grasp them as a proper object—namely, as a thing set in a safe, "aesthetic distance" and perceived in an organized form by a human subject (195, 180). The mood of facing hyperobjects is similar; encountering objects that can be neither experienced per se nor escaped at all, one feels anxious or perceives uncanniness in a given object (*Hyperobjects* 56, 94). However, in *Dark Ecology: For a Logic of Future Coexistence*, besides negative feelings like melancholy or horror provoked by hyperobjects, Morton starts seeking affirmative emotions in accessing these hyperdimensional objects, like "longing and joy," which depend upon one's experience of the negative moods and then recognition of one's own finitude (135-36, 152-53). Later, in *Humankind*, he argues that hyperobjects are wholes "less than" or "out-scaled" by their parts (101, 105). This apparently reflects his revision of the concept of hyperobject. In *Hyperobjects*, he asserts that he "can't count up to" or imagine these overwhelming objects (60). Yet, now, he treats them as "fragile" and "*easy* to subvert" for a quantitative reason: because "[a] whole is one, its members are more than one, so the whole is always less than the sum of its parts"; hyperobjects are thus "physically huge" but "ontologically tiny" (106, 102). A strategy of resisting their monstrosity is thereby proffered.

Now, I will return to *So Much Water* and delve into Wu's and Morton's conceptions of objects of very large magnitude and their respective methods of accessing them. In a sense, in *So Much Water* Wu anticipates Morton's invention of the concept *hyperobject* in that, there, he already takes note of entities with a super-scale in time and/or space. For example, in the final segment of the last chapter, Wu complains that some students visiting the Hidden Lake left "a Styrofoam raft" and "two blue pieces of ground cloth" there (247). What disturbs him is that, being non-biodegradable, these objects will outlive human beings for a very long time, recalling the supra-temporality assigned by Morton to hyperobjects.

Greater attention is drawn by Wu to natural hyperobjects. Writing of the Hualien River, he mentions not only that it is, as said, "one small line of water mark," but also that "only she knows sufficiently the messages sent by the mountains for the past millions of years"; in contrast, "mankind has appeared

beside rivers and in mountains only very recently and for a very short time" (71). The temporal gap between the history of man and—to adopt the title of Martin J. S. Rudwick's book—the "deep history" of nature is similarly conveyed in Wu's observation of oceans: they are measured by "epochs, periods, eras, and eons" rather than human units such as "seconds, minutes, hours" (*So Much Water* 148). Meanwhile, the gigantic size of natural entities is underscored. As he observes, Francisco de Orellana and his men spent "eight months" and "navigated and walked for four thousand seven hundred and fifty kilometers" just to travel the entire length of the Amazon River (53).

Similarly, again anticipating Morton, Wu accentuates the elusiveness of natural hyperobjects: the Amazon River is described as "dark and mysterious," furnished with "a wildness that not even God could believe" (55-56), and only "a small part" of the "dark" Pacific Ocean can be "sensed" by any being encountering it (166). With descriptions like "wildness" and "darkness," Wu also brings into relief the incomprehensibility of these long-lasting and super-sized objects, with "a small part" of the ocean "sensed" by an entity amounting to its local manifestation and translation from this being.

At the same time, however, Wu differs from Morton in that they employ very different ways of dealing with these high-dimensional objects. To better explain this, I will turn to Benoit B. Mandelbrot's fractal geometry, which in *So Much Water* functions as a key approach to natural entities of very large magnitude. In *Fractals: Form, Chance, and Dimension*, Mandelbrot proposes fractal geometry as a means of measuring the actual—"irregular or fragmented"—shapes of nature, as opposed to the ideal forms assigned to it in Euclidean geometry (1). A case in point is the length of a coastline. As Mandelbrot puts out, the length of a "rugged coastline" was once considered "equal to the distance along a straight line between the beginning and the end of . . . the curve" (27). Modern, more exact methods are now available: for instance, the coastline can be divided into a number of segments according to a yardstick of length η and then measured segment by segment. The result of each measurement will, however small the yardstick is, be merely a length approximate to that of the measured segment; the sum of these steps is hence an "approximate length" of the coastline though it is much more accurate than the traditional method (28). More importantly, the sum varies with the length of the yardstick; if it "is made smaller and smaller, every one of the approximate lengths tends to become larger and larger without bound," with the length of each segment and that of the coastline likewise "tend[ing] toward infinity" (29). Mandelbrot's fractal measurement thus implies a paradox: a finite entity—e.g., the coastline—has an infinite length. It also fea-

tures arbitrariness or subjectiveness: since the length of the measured coastline depends upon that of the measuring yardstick, which changes from device to device and from observer to observer, the result will differ accordingly (30).

Mandelbrot's geometry gains both Morton's and Wu's attention, though they understand and use it in very different manners. Morton regards a fractal—such as a Cantor set, a line that is infinitely excavated so that it contains both "infinity points and infinity non-points"—as a mathematical example of hyperobjects since it constitutes a finite entity of infinite parts. This further justifies his observation that each (hyper)object "is bigger on the inside than it is on the outside" and is thus always split between its being and appearance (*Hyperobjects* 79). Put differently, an object, be it contained inside or exposed to another one, always constitutes or experiences only part of the latter, unable to encounter or comprehend it as such. Collecting more information of hyperobjects does not help. As Morton points out, "[t]he more data we have about" them, "the more we realize we can never truly know" them (56). As mentioned above, in *Humankind* Morton tries to deconstruct ontologically the impact of these hyperdimensional objects by asserting how fragile they are; now the concept of fractal with its "potential infinity of iterations" (104) becomes a tool to support his argument, which now makes the holism concerning hyperobjects a "weak" version (103). In this sense, Mandelbrot's geometry is appropriated by Morton for an ontological-political purpose: it is adopted to either delineate what a (hyper)object is or reflect how to temper its monstrosity based upon its objective nature.

Like Morton, Wu also notices the interplay of finiteness and infiniteness in Mandelbrot's fractal geometry, reiterating the point that "[f]ractals are both finite and infinite" (107). Yet, in contrast to Morton, he attempts to *actually* enact the fractal measurement in a double manner, encountering natural hyperobjects in person first through imagination and then via walking. For one thing, as Wu puts it, "if we can shrink ourselves by imagination, we will be surprised like Mandelbrot with the finding that when the scale of observation or measurement gets smaller and smaller, details that have not been exposed will appear one after another" (106). In fact, "the more details there are, the longer [the coastline] is" (106): the length of a coastline is thus decided by the number of details observed in imagination. This perception applies also to river shorelines and lake strandlines: as Wu puts it, "a river shoreline is a fractal, a lake strandline is a fractal, and a coastline is a fractal as well" (107). In imagination, they are equally infinite in detail and, as a result, in length.

For another, Wu laments that "the age of fiction has ended" (142). The function of fantasies, stories, and legends as accesses to oceans and, by extension,

natural hyperobjects, has been eclipsed by that of natural sciences (137). In view of this, he employs walking as an alternative and claims that "his age of realism" has thus "start[ed]" (143). To Wu, walking is no purposeless "ambling" (143). Instead, as he quotes Edward Abbey, "it stretches time and prolongs life. Life is already too short to waste on speed" (qtd. in 143). Wu interprets this passage as suggesting that walking "increases the possibility of meeting people or various kinds of living things and enables one to wait patiently for an *Euthalia thibetana* to alight. To review those impressions is to extend and stretch time" (143-44).

In *So Much Water*, this thesis is illustrated again by the chapter "Twelve." Here Wu begins with what occurs before and shortly after the appearance of the Hidden Lake and then moves on to the plants and animals showing up there, already identifying Pacific Island silvergreen (*Miscanthus floridulus*), swollen fingergrass (*Chloris barbata*), Cusara Pea (*Crotalaria zanzibarica*), metallic cerulean (*Jamides alecto*) on the first two pages of the chapter (205-06). Also, he spends much time and space narrating the features (the looks, interactions, numbers, and measurements) of the lake and its flora and fauna: "the Pacific Island silvergreen and swollen fingergrass grew quickly and overshadowed the garden plants" grown by NDHU; "yellow, butterfly-shaped flowers bloomed" out of "the Cusara Pea," with "a kind of small, blue-purple colored butterfly shuttling through them" (205). "In the afternoon, a thunderstorm stroke, causing the lake to rise in height by zero point five millimeters" (207). These details are no trivial facts. They paint the picture of Wu's walking slowly through, observing closely, and attending intently to the Hidden Lake and its living organisms. That is, these details stretch his narration, thereby expanding the variety of the living beings met around the lake and extending his time of encountering with them. This is how the life of the lake is, in tune with Abbey and Wu, prolonged.

It is thus no accident that in *So Much Water* Wu walks most of the time and makes an effort to note down meticulously what he comes across in these walks. Reflecting upon his records of the Hidden Lake, he writes, "[E]very time I walk into the lake, my notes lengthen, so much so that since my first visit to the lake, they have grown from one to four pages. The lake ranging only a few hectares is like a library; it grows and expands by itself, bearing a life of its own" (195). The co-extension of the life of the lake with his notes implies that the parts, chapters, segments, or passages of the book are also products and records of his double walking—the physical, step-by-step strolling along or even into the rivers in Hualien, the Pacific Ocean, and the Hidden Lake, *and* the verbal, word-by-word recounting of his experience of these hyperobjects and their constituents (the kinds and individuals dwelling in these one-systems). Put differently, walking,

understood in this double sense, constitutes a second, realist method of accessing hyperobjects. Unlike imagination, this alternative is not executed by shrinking oneself and obtaining infinite and finer details from the perceived objects. It is rather performed through extending the subjective time of living through and reviewing these massively distributed objects, chiefly through the accounts that name one by one the encountered beings and retain Wu's memories about them.

What deserves further attention is the one-by-one pattern shared by Wu's step-by-step and word-by-word experience of natural hyperobjects. His enumeration of the kinds of living beings appearing in the Hidden Lake already serves as an important example. Another example is his counting of the number of the bats residing in the trees of Tafalong Elementary School: as he puts it, he sees "the second, the third, the tenth, the one hundredth . . ." of the "spectral" animals flying out, with the three points of eclipsis given by him representing the impossibility of "clearly counting [their] number" (98). What can be inferred from this is how Wu approaches something almost uncountable rather differently from Morton. Whereas the latter adopts the numerical undecidability as the foundation of his ontological-political stratagem without bothering to do the counting himself (as suggested by the above-quoted statement that he "can't count up to" the very large finitude), Wu takes pains to measure natural hyperobjects unit by unit. This marks a key difference in their application of Mandelbrot's fractal geometry: Morton perceives it as a theoretical framework that grounds his conception of hyperobjects as either intimidating or fragile; Wu, in contrast, takes it as a subjective practice that enables him to know the super-sized objects better and get closer to them, even though he is never able to see them all or as such.

Echoing this difference is the gap in their treatment of objects of very large magnitude. Unlike Morton's dark ecology or proposal of subverting hyperobjects, Wu provides a neither-so-dark-nor-so-subversive ecology in *So Much Water*. True, natural hyperobjects are viscous and ungraspable to him. His frequent trekking of the rivers in Hualien or the Pacific Ocean displays not only his addiction to but also his enmeshment in them. The various numbers of steps it takes him to circuit the Hidden Lake likewise reflect its variability and ungraspability in size, rendering it an elusive hyperobject to him. However, neither the stickiness of these natural hyperobjects nor the impossibility of exactly measuring them keeps Wu from returning to and continuously visiting, recounting, and measuring them. Unlike Morton, in the face of these natural hyperobjects, Wu does not underscore the impossibility of understanding them as such, nor does he intend to address their fragility or the possibility of escaping their entanglement. Rather, he is willing to get near, write about, and record their numbers and

measurements as much as possible, even though there is always something "unidentifiable" (as in the minute sounds of the Pacific Ocean) or unstable (as in the size of the Hidden Lake) about them (160, 195). Incomprehensible or elusive, natural hyperobjects are never as overwhelming to Wu as they seem to be to Morton. Nor does the former have to first undergo negative emotions before approaching them in an affirmative mood. As he notes, the Hidden Lake shows wildness, openness, and unexpectedness, which already contribute to his "longing" for it and his "humble pleasure in life" (201), reflecting that the lake already arouses the positive feelings Morton looks for. What is more, as mentioned above, the variation of the number of the steps it takes Wu to walk around the Hidden Lake actually displays its existence as a "living lake," with the fluctuation of its size marking its stronger "vitality" rather than merely incomprehensibility. The vigor carried by the lake shows that in *So Much Water* natural hyperobjects are furnished with more aliveness than darkness.

Indeed, if Morton would have a chance to read *So Much Water*, he might argue that Wu's articulation of nature in the book reproduces the safe aesthetic distance between subject and object, as manifested by the nature writings of Aldo Leopald (Morton, *Ecology* 194), whose ideas Wu supports in his *Liberating Nature*.[9] Nevertheless, even though his emphasis upon the wildness of natural hyperobjects risks aestheticizing nature, nowhere does Wu try to keep off the objects out-scaling him or exceeding his total comprehension. Instead, both his walking and writing show that he goes into them again and again, not to mention the fact that he even invites students and guests to do so as well (*So Much Water* 201). This is not to say that he plans to master nature, which Morton's dark ecology also denounces. As seen in the chapter "Twelve," Wu at times refers to himself as an anonymous someone intervening in the lake (223), not because he can stay aside or appreciate nature as he wishes, but because he, echoing the imaginary someone invited to stay there one night, has become part of the lake system and turned into an individual organism of this hyperobject.

This exhibits the fundamental difference between Morton and Wu in their understanding of hyperobjects. As mentioned above, Morton denounces the strong holism implied by Lovelocks' Gaiaism, with his deconstruction of hyperobjects suggesting a weak holism in which the whole is less than the sum of its many parts. Yet, referring to mereology in his ontology, Morton somewhat misses the dynamic interplay of the parts and the whole, that is, the relationship

[9] I am thankful for one anonymous reviewer's reminder that Wu's nature writing matches what Morton intends to denounce in *Ecology without Nature*. But here I will try to show that Wu is perhaps not that naïve as Morton might find him.

between the subsystem and the environment. In contrast, as my previous analysis shows, while agreeing with Lovelock's Gaia hypothesis, Wu also stresses the individual organisms in the system. By this logic, his treatment of hyperobjects resonates with that of one-system: his attention to the one-by-one, unit-by-unit pattern in his fractal measurement of hyperobjects not only corresponds to his attention to the individual subsystems but also indexes a way of experiencing the over-sized things without being overwhelmed by their very large magnitude. Wu may not be able to encounter these objects as such or comprehend them fully, but this leaves no negative impact upon him. Perhaps for this reason, he invites others to approach natural hyperobjects instead of trying to subvert them as Morton does. For Wu, out-scaling or elusive as natural hyperobjects may be, they are always affirmative.[10]

X

What also nurtures Wu's more positive attitude toward nature includes another quantity: the ambiguous "x," which expresses both quantitative certainty and uncertainty in *So Much Water*. This symbol constitutes the title of the last chapter—written as "X"—of "So Much Lake Water." At the first glance, it may be interpreted as the Roman numeral "ten," and this makes sense since all the chapter titles preceding this one in "So Much Lake Water" are numbers of a definite quantity, with each addressing one aspect associated with the Hidden Lake: "Nine Hundred Seventy-Nine" indicates the number of steps it takes Wu to circuit the lake the first time; "Seventy-One" that of the photos he takes of the clouds above; "Twelve" the number of years for which the Hidden Lake has existed; and "One" the individual someone invited to stay by the lake one night and become one with it. It is not until the end of the penultimate segment of "X" that the meaning of this symbol is disclosed: as Wu remarks, "Give us another ten or twenty years, so that students of this land will co-watch and co-care about the life and death of one lake and so that we will comprehend what this land takes, creates, kills, and achieves. Maybe we will end up with one documentary, one hundred poems, ten legends, and *x* students, tourists, and guest speakers touched by" the lake (247; emphasis added). It is now clear that by "x" Wu

[10] Another reviewer's question is worth discussion as well: Does my reading of Wu's rendition of hyperobjects reduce them to a synonym of nature? I will say "yes" insomuch as how to approach the former suggests a way of accessing the latter. Echoing Morton's observation that every object is a hyperobject, I will argue that for Wu every natural object is a hyperobject if it is experienced, in an imaginary or realist way, as much in detail as possible, and unit by unit. This is demonstrated by his counting of the bats in the trees, which somewhat turns bats into a natural hyperobject.

means the number of people that may be moved and become more concerned with the ecosystem of the Hidden Lake.

Contrasting meanings can be attributed to this "x" as well. To Yu-lin Lee's list of the "antitheses" presented in S*o Much Water*, the pair of definiteness and indefiniteness can be added via the symbol. For instance, as a numerical variable, the sign expresses an uncertainty that conveys a possibility or a sense of hope: an indefinite number of people will, as Wu observes, "gently walk along the lake" and "be genuinely educated" (249), though it is uncertain as to how many. In addition, this uncertainty has nothing to do with infinity and, by analogy, absolute unknowability in either amount or detail, as attributed by Lu and sometimes by Wu himself to nature. Corresponding to its preceding quantifiers—"one," "one hundred," and "ten"—this indefinite/uncertain "x" paradoxically represents finitude or definiteness: a certain number of people will visit, get affected by, and come to care about the lake and the beings living there. In fact, the opposite meanings—quantitative certainty and uncertainty—embedded in the sign allows it to carry the senses that have been addressed hitherto: associated with hope and finitude, "x" serves simultaneously as a qualitative and a quantitative marker; serving as the title of the chapter, it bears significance of its own. Meanwhile, its indefiniteness suggests that any individual may be inspired by the Hidden Lake or any individual organism/species may settle down in the ecosystem, whereas its contrary senses also reflect the fact that the lake-system is both a closed and an open one, sustaining itself with its own characteristics while remaining open to what may come outside. The indefinite but finite number of people who will "co-watch and co-care about" the lake can be even classified as humans of "a special kind."[11] It will be difficult for visitors to the Hidden Lake to formulate a group of very large magnitude; yet, echoing how Wu arranges the chapter "X"—he writes of one guest speaker or student after another walking around the lake and attending to the living beings there—one person after another will come and care. Implied by the symbol "x" is therefore the structure of Wu's double walking—his method of handling hyperobjects unit by unit—with many people expected to live through the wildness of the Hidden Lake and become one with it.

For sure, as Wu's complaint about the trash left around the lake demonstrates, the "x" also involves risk: there will be tourists who do not care (enough) about the Hidden Lake and who pose a threat to its ecology. What Wu does in

[11] The phrase "a special kind" is borrowed from Kexiang Liu's description of Wu's first nonfiction nature writing work, *Midiezhi* (*The Book of Lost Butterflies*): "A special kind in Taiwan: a new dimension of nature writing" (24).

response is to increase the number of people concerned about the lake, mainly by his literary nature writing. In the postscript to *So Much Water*—titled "Chamunda," after a goddess in Hinduism and a symbol of the nourishing but sapped nature—he writes that "there are . . . those who are willing to see the world in the perspective of other living beings, those who find out why [Chamunda] suffers so much and seek to suckle from Chamunda without adding to her pain. Apparently, the number of this kind of people is increasing, but it is still not enough" (259). To augment people of this special kind, Wu ponders whether "literature, soft as its style is, may be a more effective way" (259).[12] While accentuating the literariness of nature writing, here he also stresses the importance of the number of people nourished by Chamunda and trying not to hurt her so much. This spotlights another meaning carried by this "x": quantity is an "X-factor" in Wu's literary nature writing. After all, it clarifies what nature is and suggests a better way for human beings to approach it. There are so many numbers and there is so much about measurement in *So Much Water* because these quantities measure how close to—or far away from—home (namely, nature) humans are.

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[12] The Chinese subtitle of the postscript given by Wu originally reads "*chadamu*," which is obviously a mis-transliteration of the name "Chamunda." This mistake is corrected here.

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