

**MNEMONIC AGENCY OF WATER IN THE ANTHROPOCENE:
MATERIAL AND DISCURSIVE ENTANGLEMENTS IN EMMI
ITÄRANTA'S DYSTOPIAN CLI-FI NOVEL
MEMORY OF WATER**

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ABSTRACT

*Under the contemporary ecological threats and human-induced environmental transformations observed in the Anthropocene, water has turned into an irreplaceable natural resource and a valuable asset for human survival. More alarmingly, scarcity of water has been expected to be more severe in the near future, and cause global scale water wars over the possession of it involving many countries. Within a New Materialist theoretical framework, this study, which is based on the ecocritical analysis of Emmi Itäranta's Cli-Fi novel *Memory of Water* (2014), treats water as an agential nonhuman element with the capacity to change the morphology of its surroundings as well as having a consciousness enabling water to store "in its memory everything that's ever happened in this world" (Itäranta 90), both literally and metaphorically. Literally, absorbing the toxic chemicals released by various human activities nearby, water gets contaminated by humans. Its unnaturally changed colour reveals the responsibility of the humans in this contamination. In a similar way, metaphorically, water remembers what has been "done" to it by humans. In this respect, this study argues that water has a mnemonic narrative agency combining human memory and environmental memory. Although water is a vital natural resource for human beings, it is also an independent environmental force that will never yield to man-made chains, as Emmi Itäranta highlights in *Memory of Water* (2014). Water can never be possessed by humans; it belongs to everyone and to no one.*

*In *Memory of Water* (2014), Itäranta envisions a dystopic future –The Twilight Century- challenged by global warming, melting ice-caps, shortage of fresh water, and dominated by water criminals, strict water quotas, illegal water pipes, water guards, black markets, toxic plastic graves, water-related illnesses, and military and political power holders trying to monopolise the remaining fresh water reserves through fear and violence. Although it is not customary for the tea masters to accept women as apprentices, the seventeen-year-old female protagonist of the novel, Noria, is unconventionally trained by her father Master Kaitio to be a tea master; the watcher of water as well as*

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its servant. In such an apocalyptic future, when scarcity of water reconfigures all prevailing discursive formations, Noria tries to survive, to make crucial decisions, and most importantly, to tell herstory as a female voice raised against the history written by the suppressive patriarchal forces. At that point, the memory of water as a versatile, unyielding nonhuman element, and the human memory of a tea master, the watcher of water, are entangled.

Keywords: water, the Anthropocene, memory, agency, dystopia, eco-fiction, Cli-Fi

**ANTROPOSEN ÇAĞINDA BİR HAFIZA EYLEYİCİSİ OLARAK SU:
EMMI İTÄRANTA’NIN DİSTOPİK İKLİM-KURGU ROMANI SU
UNUTMAZ’DAKİ MADDESEL VE SÖYLEMSEL BAĞLANTILAR
ÖZ**

“Antroposen Çağında Bir Hafıza Eyleyicisi Olarak Su: Emmi İtäranta’nın Distopik İklim-Kurgu Romanı Su Unutmaz’daki Maddesel ve Söylemsel Bağlantılar:”

Antroposen Çağı’nda gözlemlenen güncel ekolojik tehditler ve insan kaynaklı çevresel dönüşümler altında, su yeri doldurulamaz bir doğal kaynağa, insanın hayatta kalması için gerekli değerli bir varlığa dönüşmüştür. Daha endişe verici olan ise, su kıtlığının yakın gelecekte daha da şiddetlenmesinin ve suya sahip olma meselesinin pek çok ülkeyi de içine alacak şekilde küresel boyutlarda su savaşlarına sebep olabileceği beklenmesidir. Yeni Maddecilik teorik çerçevesi içinde, Emmi İtäranta’nın iklim-kurgu romanı Su Unutmaz’ın [Memory of Water] (2014) ekoeleştirel analizi üzerine kurulu bu çalışma, suyu çevresinin morfolojik yapısını değiştirme kapasitesine, aynı zamanda da, gerçek ve mecazi anlamda, “bu dünyada gerçekleşmiş herşeyi hafızasında depolayabilen” (İtäranta 90) bir bilince sahip insan olmayan eyleyici bir öge olarak ele alır. Gerçek anlamda bakıldığında, yakınında gerçekleşen çeşitli insan eylemleri sonucunda çevreye yayılan toksik kimyasalları emerek, su insanlar tarafından kirletilir. Doğal olmayan bu yollarla değişen rengi, insanların bu kirlenmedeki sorumluluğunu da ele verir. Benze şekilde, mecazi anlamda da, su, insanlar tarafından kendine “yapılan” herşeyi hatırlar. Bu bağlamda, bu çalışma, suyun insan hafızasını ve çevresel hafızayı bir araya getiren bir anlatı aracı olarak hafızaya dayalı bir eyleyici olduğunu iddia eder. Emmi İtäranta’nın Su Unutmaz [Memory of Water]’da vurguladığı gibi, su, insanlar için hayati bir doğal kaynak olmasına rağmen, aynı zamanda da insan yapımı zincirlere asla boyun eğmeyecek, bağımsız

bir çevresel güçtür. Su asla insanlar tarafından sahiplenilemez; su herkese ve hiçkimseye aittir.

Su Unutmaz [Memory of Water]'da Itäranta, küresel ısınma, eriyen buzullar, su kıtlığı gibi sorunların meydan okuması altında olan, ve su suçluları, sıkı su kotaları, kanundışı su boru hatları, su muhafızları, su karaborsası, toksik plastic mezarlıkları, suya bağlı hastalıklar ve korku ve şiddet yoluyla dünyada arta kalan içme suyu kaynaklarını tekel altına almaya çalışan askeri ve siyasi güç odakları tarafından domine edildiği -Milenyum Yüzyılı olarak adlandırılan- distopik bir gelecek canlandırır. Her ne kadar, çay üstadları tarafından kadınların çırak alınması geleneksel bir uygulama olmasa da, romanın on yedi yaşındaki ana karakteri Noria, geleneklere aykırıolarak babası Master Kaitio tarafından bir çay üstadı olmak üzere eğitilir, ki çay üstadı aynı zamanda suyun hizmetkari ve de koruyucusu olmak anlamına gelmektedir. Su kıtlığının mevcut tüm söylemsel oluşumları yeniden şekillendirdiği böyle kıyametvari bir gelecekte, Noria hayatta kalmaya, hayati kararlar almaya ve en önemlisi de baskıcı ataerkil güçler tarafından yazılmakta olan tarih içinde kendi dışı sesini yükselterek, kendi hikayesini anlatmaya çalışmaktadır. Bu noktada, değişken, zapt altına alınamayan insan olmayan bir öge olarak suyun hafızası ve suyun koruyucusu görevini üstlenmiş bir çay üstadının beşeri hafızası birbiri içine girer.

Anahtar Kelimeler: *su, Antroposen, hafıza, eyleycilik, distopya, eko-kurgu, iklim-kurgu*

In *Memory of Water* (2014), Emmi Itäranta presents a dystopian portrayal of a climatically challenged and environmentally transformed future. Among many ecological threats, the major problem of Itäranta's futuristic fictional world is the scarcity of natural resources, especially of fresh water. Due to the over exploitation of natural resources, available supplies cannot meet the demands of the increased human population, and nature is too damaged to renew itself and provide further resources for humans. Among many other natural resources under the threat of exploitive human activities, water is the main focus in the novel, and it is treated as an agential nonhuman element with the capacity to change the morphology of its surroundings as well as having a consciousness enabling water to store "in its memory everything that's ever happened in this world" (Itäranta 90), both literally and metaphorically. Literally, absorbing the toxic chemicals released by various human activities nearby, water gets contaminated by

humans. Its unnaturally changed colour reveals the responsibility of the humans in this contamination. In a similar way, metaphorically, water remembers what has been “done” to it by humans. In this respect, this paper argues that water has a mnemonic narrative agency combining human memory and environmental memory. Being an example of eco-fiction written in the Anthropocene, Itäranta’s Cli-Fi novel *Memory of Water*, poses a fictional platform, in which the stories of human and nonhuman entities merge.

In the novel, illustrated through the portrayals of scarcity of natural resources, decline in the planetary ecosystems’ resilience, and anthropogenic climate change, the Anthropocene provides both a physical setting, and a conceptual framework within which humans’ confront with the consequences of their exploitive actions. About 12.000 years ago, with the start of the *Holocene*², humans have begun to be influential regulatory forces on the functioning of ecosystems. Starting with the colonial rush towards the regions, which are rich in raw materials and natural resources, and accelerating with the heavy industrialisation and the increased use of coal in the late eighteenth and early nineteenth centuries, human interference into natural cycles reached to a climactic point especially in the second half of the twentieth century, with the emission of radioactivity into ecosystems. Especially in the last 100 years, global footprints of humans on nature are more clearly visible. Thus, many Earth scientists and the environmental humanities scholars agree on announcing the end of the current Holocene epoch, and naming the current geological age after humans as the *Anthropocene*³.

The “Anthropocene” is the proposed name by the Earth scientists Eugene Stoermer and Paul Crutzen for this new geologic epoch, in which humans have become the major force by interfering the natural course of the planetary ecosystems, and endangering the sustainability of life on Earth and the habitability of our planet as well as the well-being of the living beings. Considering the global-scale, irreversible, cumulative effects of various human-induced

² The name derives from the Greek words meaning “whole” or “entirely” plus “new” or “recent” suggesting that this is the time that’s the whole, most recent piece of Earth history (Peters 265).

³ Etymologically, the Anthropocene is derived from the combination of Greek word “anthropos” [man] and the suffix “-cene” [recent], hence it means “the recent age of man” (Peters 265).

ecological threats, such a hubristic, and for some, even narcissistic announcement of the entrance into the so-called "Age of Human," according to many Anthropocene pessimists, is unfortunately a foreshadowing for a kind of apocalypse, and for not a better but a bitter future at the gate. Yet, the Anthropocene, in which humans confront with the consequences of their actions dominated by excessive exploitations of natural resources, and interventions into the inner workings of planetary ecosystems, such as the irreversible anthropogenic damages in the structure of the atmosphere, hydrosphere and geosphere, can also open a constructive critical window to revise the current exploitative ideological approaches, and to recognize the inevitably connected future of human and nonhuman entities; of the abuser and the abused respectively. At this point, material ecocriticism underlines the possible and endless "entanglements of more-than-human forces and substances, merge with the life of our bodies" (Iovino and Oppermann 3) and natural environments. So, from such a New Materialist perspective, the Anthropocene is an opportunity to realise the entanglements of human and nonhuman forces and their agentic powers. These human-nonhuman entanglements or "network of agencies" observable in the Anthropocene narratives (Iovino and Oppermann 1) can be read and interpreted as, or "stories" as Iovino and Oppermann suggest. In this regard, being a material entity, which is essential for human survival, and a nonhuman element embodying the entanglement of human and nonhuman agents in the Anthropocene, water stands out as the most proper storyteller. As the readers hear the story of water as a scarce natural resource, they also witness how the scarcity of a natural resource is intertwined with traditional gender roles, cultural practices, and environmental justice issues dealing with the equal distribution of the remaining natural resources. So, in many ways, water stands at the core of Itäranta's novel. Indeed, water has always been at the heart of life.

Today, scientists still don't know how exactly life on Earth began, but they are pretty sure about where it all started: in water. As ecologists Novo and Bouzas explain the evolution process, "life access to continents was mediated through aquatic forms. [...] The expansion of living organisms from aquatic to aerial environments allowed for the colonisation of continents and was followed by a large increase in biomass and species diversity" (236). All known life forms are composed of organic arrangements containing water. In other words,

“life appeared in water environments and has evolved for most of its span as aquatic organisms. [So,] life performs in water” (Novo and Bouzas 236). Water is not only where life began but also it is essential for the continuation of all organic life forms -human, animal, and plant. Thus, scarcity and total absence of water would probably cause the production of a totally different version of the story of life on Earth.

In Itäranta’s version of the story of life on Earth, the survival of the living beings on Earth and the continuation of life are under the immediate threat of the scarcity of water. To emphasise the essentialness of water for life, Emmy Itäranta opens one of the chapters of *Memory of Water* with a quote from the Chinese Buddhist tea master Wei Wulong’s “The Path of Tea” written in the 7th Century of Old Quian Time. The quote is a prophetic warning addressed to the future generations: “Not one grain of sand stirs without a shift in the shape of the universe: change one thing, and you will change everything” (Itäranta 111). Taking this Buddhist mantra as her starting point, in *Memory of Water*, Itäranta attempts to highlight humans’ overconsumption habits, and the global consequences of it. Thus, the narrative of the novel is formed around the material and discursive changes after humans try to change, exploit and control water on Earth. In this respect, the tea master figures in the novel, the father and the daughter, has a symbolic significance emphasizing the importance of showing respect to water. The female protagonist of *Memory of Water*, Noria, is given an explanation by her father, a tea master, at the very beginning of the novel. The tea master believes that

[w]ater has a consciousness, that it carries in its memory everything that’s ever happened in this world, from the time before humans until this moment, which draws itself in its memory even as it passes. Water understands the movements of the world, it knows when it is sought and where it is needed. Sometimes a spring or a well dries for no reason, without explanation. It’s as if the water escapes of its own will, withdrawing into the cover of the earth to look for another channel. Tea masters

believe that there are times when water doesn't wish to be found because it knows it will be chained in ways that are against its nature. Therefore the drying of a spring may have its own purpose that must not be fought. Not everything in this world belongs to people. Tea and water do not belong to tea masters, but tea masters belong to tea and water. We are the watchers of water, but first and foremost we are its servants. (91)

As seen in this quotation, attributing a "consciousness," a "memory," hence an independent identity detached from any human-made chains connote a New Materialist perspective, and gives, again in New Materialist terms, an "agency" to water. In line with New Materialist ideas, describing water as an independent material entity, which is free from any human constraints, challenges the anthropocentric treatment of water as a passive material entity, which is primarily at the service of human consumption. Bringing a new perspective to the material world surrounding humans, New Materialist ecocritics Serenella Iovino and Serpil Oppermann, in their co-authored "Introduction" of *Material Ecocriticism*, define material world as "a world that includes inanimate matter as well as all nonhuman forms of living" (2), and criticize the general tendency of human beings that "the material world has always been considered passive, inert, unable to convey any independent expression of meaning" (2). In other words, human agency is active, penetrative, and exploitive, and thus superior to the agentic power of the nonhuman entities like water. On the other hand, explored through a material ecocritical lens, this assumption needs to be deconstructed, especially under the current environmental and discursive transformations observed in the Anthropocene. Instead of accepting the superiority of one agency, regardless of being human or nonhuman, over the other, the concept of Anthropocene and the discursive patterns born out of the Anthropocene discussions provide us a "landscape of swarming agencies" (Iovino and Oppermann 5), both human and nonhuman. So, material ecocriticism, in this broad framework, can be described as the study of the way material forms –bodies, things, elements, toxic substances, chemicals, organic and inorganic matter, landscapes, and biological entities–intra-act with each other and with the human dimension, producing

configurations of meanings and discourses that we can interpret as stories” (Iovino and Oppermann 7). In other words, it can be argued that agency can assume many forms, and therefore, agency is not “to be necessarily and exclusively associated with human beings and with human intentionality, but “an intertwined flux of material and discursive forces, rather than as complex of hierarchically organized individual players” (Iovino and Oppermann 3). Thus, the idea of accepting water as an active agent is one of the most striking arguments of *Memory of Water*, and it releases a nonhuman entity from its human-made constraints.

But what happens if the already existing constraints of human agents over nonhuman natural resources are insistently preserved, and humans continue to pursue their exploitive and suppressive consumption habits? In the long term, changing one material entity composing planetary systems may also reflect into human sphere too, and cause unprecedented negative outcomes, both in discursive and physical realms. As environmental scholar Astrida Neimanis similarly argues that

[w]ater, as we know, is a shape-shifter – moving from solid to liquid and gas, and taking up residence in and as bodies of all kinds. Water is undoubtedly related to the fluid, but as the materialization of an abstract property, it allows us to think the mattering of this matter in more specific and situated ways – in terms of the bodies it animates, the operations it makes possible, and the limits it encounters. (80)

Thus, humans’ treatment of water can also be interpreted as the materialization of human discourses. In other words, human beings’ treatment and materialization of the concept of water, either as a passive entity or as an active agent, will also change the materialisation of human discourses about water as well as about the other nonhuman elements, which are in touch with human life. In addition to the humans’ interpretations of water, water has its own expressive and narrative ability:

As a part of our lifeworld, water must take up an expression in some body, and human embodiment is one of these particular expressions. Water is thus also specifically what *we* make it, in the sense that it is not simply something 'out there' —environment, resource, commodity, backdrop— but also the stuff of human bodies, and never separate from our own incontestable materiality. (Neimanis 21)

However, in the novel, only the tea masters, Noria and his father, seem to have the capacity, or maybe privilege, to recognize this narrative ability of water, and interpret it. The tyrannical political regime in the novel and its military arm, on the other hand, seem to ignore any other capacities, but material advantages of water.

Indeed, considering the huge terrestrial space occupied by the waters of the Earth, the voice of water is hardly to be unheard. The water mass of the Earth has been “estimated to be 1600 million km³ and 97% of it belongs to the oceans including water and ice” (Ward 32). Considering such a huge amount of water around us, as humans, we tend to believe water being an infinite natural resource. Yet, available freshwater reserves amount to “less than one one-half of one percent of all the water on earth, [and] the rest is sea water, frozen in the polar ice, or water stored in the ground that is inaccessible to us” (Barlow and Clarke 5). Despite this alarming situation, humans continue wasting, over-consuming, and polluting the finite fresh water supply of the planet recklessly, endangering not only themselves but also other species.

In the novel, the reason behind the extreme scarcity of water along with the scarcity of other natural resources, which are also vital for the survival of human, animal, and plant life on Earth, is the anthropogenic climate change. The details in the morphological descriptions of the globally warmed world where the female protagonist Noria and her father inhabit reveal the seriousness of this ecological threat. In the fictional setting of *Memory of Water*, “The Twilight Century,” the seasonal differences are no longer felt, and people have already forgotten their memories of winter, or cold. As Noria narrates, “once, when there were still winters in the world,

cold winters, white winters, winters you could wrap yourself in and slip on and come in to warm from, you could have walked on crystallized water that was called ice” (5). But now, in the Twilight Century, snow can only be seen in the encyclopaedia:

Imagining the coldness, [...] was hard. I was used to wearing more layers of clothing during the dark season and carrying a peat from the drained swamp for the fireplaces and braziers once the solar power ran out, usually soon after the Midwinter celebrations. But even then the temperature outside rarely dropped below ten degrees, and on warm days I walked in sandals, just like in summer. When I'd been six years old, I had read in a in a past -world book about snow and ice, and asked my mother what they were. She had picked one of her thick and serious looking volumes from a shelf that was too tall for me at the time, shown me the pictures -white shimmering, round and sharp shapes in strange landscapes, luminous like crystallised light- and told me that they were water that had taken a different form in low temperatures, in circumstances that could only be artificially produced in our world but that had once been a natural part of seasons and people's lives. (39)

Noria asks her father what happened to snow and ice, wondering why they don't have snow and ice any more, and the mother's answer acknowledges humans' role in the changed climate and in the dominance of global warming on Earth:

“The world changed,” she [my mother] had said. “Most believe that it changed on its own, simply claimed its due. But a lot of knowledge was lost during the Twilight Century, and there are those who think that people changed the world, unintentionally or

on purpose." [...] I [Noria] longed for the past-world I had never known. I pictured fishfires flashing on the sky above radiant snow, and sometimes in my dreams lost winters shone brighter than summer. (39-40)

Seasonal changes and the disappearance of any cold weather events are not the only environmental changes observed in the Twilight Century. The new, altered environment is quite different from the old one. Thus, referring to the newly emerged landscape with the previous names does not make any sense. These invalid landscape names need to be changed, and adapted to the altered environment. Noria explains how environmental transformations brought along the necessity to re-name the landscape in their neighbourhood:

The Dead Forest had once been called *Mosswood*, a name that recalled deep-green leaves moving in the wind and verdancy so lush and moist that you could feel it on your skin. Even longer ago, when words for such greenness were not needed yet, because it was a given in these lands, the forest had not had a name at all, so my father had told me. Now its bare trunks and branches twisted towards the sky sand-dry and colourless like a cobweb woven across the landscape, or the empty husks of insects caught in it. Life no longer circulated in them their veins were brittle and broken, their skins frozen into letters of a forgotten language, near incomprehensible marks of what had once been. Some trunks had wrung themselves on the ground, where they lay speechless, still. (203)

In parallel with the global warming, striking environmental transformations become observable on the map of the Earth, too. The younger generations in the novel can hardly recognize the difference between "the Old World" and the environmentally reshaped "New World." But, one day, going through the junk remained from her

mother, who once worked as the field researcher of military technologies at the University of New Piterburg, Noria finds two large world maps: one showing the past world; “the world of cold winters and skyscraping cities” (64), the other showing the present world:

I stared at the outlines of the continents and oceans, changed, barely recognizable. So much lost to salt and water. I looked at the places nearest to me. [...] The lakes and rivers in the Scandinavian Union had emerged into wider waters, and the coastlines were long gone. That was not all. Drowned islands, coastal plains, river deltas turned salt-bitten; and large cities, now silent ghosts of lives past in their shroud of sea everywhere, everywhere. On the old map North and South Poles were shown in white, I knew this stood for the ice that had sometimes been called eternal ice, until it became clear that it wasn't eternal after all.
(64)

Near the end of the past world era, the Earth starts warming and seas rise faster than anyone could have anticipated. Tempests tear the continents and people flee their homes towards the zones where there is still space and dry land. During the final oil wars, a large accident contaminates most of the fresh-water reserves of former Norway and Sweden, leaving the areas uninhabitable. The following century is known as the Twilight Century, during which the world, or what remained of it, runs out of oil. With this a major part of the past-world technology is gradually lost, and “staying alive becomes the most important thing” (65).

As Noria continues to describe her neighbourhood, the picture gets more and more Anthropocenic, but this time with larger implications reaching beyond its scientific origins. Though being proposed initially by natural scientists as a geological term, the popular view shared by many environmental humanities scholars is the fact that the Anthropocene is a multi-layered concept capable of leaking into socio-political, economic, psychological, and cultural spheres. In other words, as the material conditions on Earth change, it also

entails discursive reconfigurations. In the fictional world of *Memory of Water*, the cities are surrounded by high walls, and the streets are divided by checkpoints, ever-present soldiers and curfews (46). All these create a sense of entrapment on the residents, in Noria's words, an "exhaustion" (46) "that had settled on" her (46). Noria describes this feeling as "the pressing need to get away from the crowds, the longing for space and silence and emptiness" (47), which can only found in nature. Yet, unfortunately, "the forests were guarded and closed from the civilians, just like food plantations and a few remaining lakes. Even the roads that led to them were watched, and travellers were being arrested just for walking too close to them" (79). Solar panels, plastic graves, and water desalination plants dominate the landscape. But the most urgent need is fresh-water. Noria narrates the daily routine of the people who try to fill waterskins and buckets from the shallow, murky watered brook that run near the edge of a plastic grave. Yet, she also remembers her parents' advise never to drink water from this brook because its water is contaminated by the toxins of the plastic waste dumping area and the water would make her sick. Under these circumstances, the state puts restrictions on the use of water through imposing a strict water quota policy over the residents. Weekly water patrols are compulsory for everyone and the punishment for water crimes are getting harsher day by day. Soldiers sometimes in their uniforms, sometimes disguised as civilians investigate the amount of the water use and, in case of exceeding the quota, they would draw a *blue circle* on the door of that house as the mark of the water crime on the door. The residents, who violate their state determined water quota, are immediately labelled as the water criminals. Interestingly, the water criminals are not taken away to be put in a prison, instead, they are held inside for months of house arrest; guarded by soldiers day and night and was given just enough water for them to stay alive. Despite these preventive measures and military and political power holders' efforts to monopolise the remaining fresh water reserves through fear and violence, desperate people do not hesitate to resort to illegal water pipes, and black markets.

In *Memory of Water*, scarcity of fresh water leads to the rise of tyrannical political regimes and global and local power holder claiming monopolies on the already scarce natural resources, like water. Just like the other natural resources, water is also under the threat of colonization. But actually, Itäranta's dystopic description in

the novel do not fall too far from the assumptions about the Earth's the near future. Considering the worsening environmental conditions in the Anthropocene and the increasing scarcity of the finite natural resources of our planet in the twenty-first century, to expect the task of controlling and sharing the existing freshwater sources on Earth turn to a sensitive and controversial issue in the near future would not be a dystopic assumption. Under these circumstances, water turns into an increasingly valuable asset in the Anthropocene and "control of water is inevitably control of life and livelihood" (Ward 32).

As the anthropogenic climate change and the ecological threats it triggers get increasingly severe, the importance of water for the sustainability of life is felt more clearly. Humans try harder and use more extreme ways to control water for their own benefit. Yet, throughout the novel, Itäranta repeatedly reminds the fact that although water is a vital natural resource for the survival of human beings, hence one of the most important natural product of human consumption, it is also an independent environmental force that will never yield to man-made chains as expressed admittedly by Noria:

I can't see beyond this garden. Don't know if cities have crumbled down, and I don't know who calls the land their own today. I don't know who is trying to confine the water and sky without realizing that they belong to everyone and no one at all. There are no man-made chains that will hold them. (259)

As Noria spends time in the hidden spring observing and interacting with water personally, she realizes more about its autonomous and agentic nature. She even starts speaking with water:

I lifted the final waterskin from the floor. Its small weight sloshed quietly. I placed the mouth of the skin against the metal of the tap. I spoke to it in pretty words and ugly words, and I may have screamed and wept, but water doesn't care for human sorrows. It flows without slowing and quickening its

pace in the darkness of the earth, where only stones will hear. (256)

Eventually, she admits the power of water as an active natural material entity: "Water is the most versatile of all elements. [...] Water walks with the moon and embraces the earth, and it isn't afraid to die in fire or live in air. When you step into it, it will be as close as your own skin, but if you hit it too hard, it will shatter you. (5) Though it looks still and inactive, water is alive. One day, as Noria and her father walk in the forest towards the hidden spring, Noria has a strange personal experience with water:

Water rushed from inside the rock in strings and threads and strands of shimmer, in enormous sheers that shattered the surface of the pond at the bottom of the cave when they hit it. It twisted around the rocks and curled in spirals and whirls around itself, and churned and danced and unraveled again. The surface trembled under the force of the movement. A narrow stream flowed from the pond towards the shelf of stone that the doorway we had come through was on, then disappeared into the ground under it. (12)

Away from the human gaze and intervention, water has been pursuing an independent life and existing autonomously within a system. Upon her father's directives, Noria approaches the pond, touches the water collected in it, and shares her experience with the reader surprisedly: "I dipped my fingers in the water and felt its strength. It moved against my hand like breathing, like an animal, like another person's skin" (12). Here, as environmental scholar Lowell Duckert puts it, "water touches and is touched" (56). By this way, as Noria spends time in the spring, human and nonhuman agents exchange their entangled stories.

Accepting the narrative potential of nonhuman entities is the prerequisite of listening to and interpreting water as a nonhuman storyteller. As Serpil Oppermann states in "Ecological Postmodernism to Material Ecocriticism," "with its creative energy"

(29), matter “emerges in meaningfully articulate forms of becoming that can be interpreted as storied matter” (29). Attributing such an agential power to nonhuman material forms, like water, may sound quite anthropomorphic, as Oppermann also acknowledges. Yet, the primary aim of New Materialism is “to highlight matter’s expressive potentials” (Oppermann 29). Similarly, in *Memory of Water* Itäranta aims to give voice to water, to deconstruct the anthropocentric assumption that treats water as a passive product at the service of humans. By this way, Itäranta lets water tell its story which is already entangled with the human stories. This resonates with what Duckert also argues. He contends that recognizing the narrative agency of water brings a new, enlightening perspective to human experience of nature: “Water constantly moves and shapes the environment. Just as river floors accumulate and shed material layers, watery knowledge, once discovered, is already on the move” (58), and “water writes, and through that inscription we glimpse water’s rights” (30).

This new bio-centric perspective embracing both human and nonhuman elements on equal terms will also change human beings’ other stereotypical mind-sets. Although it is not customary for the tea masters to accept women as apprentices, the seventeen-year-old female protagonist of the novel, Noria, is unconventionally trained by her father Master Kaitio to be a tea master; the watcher of water as well as its servant. Engendering water-related occupations is one of the interesting aspects of the novel. Actually, carrying water for domestic use was conventionally a female responsibility till the advances in technology dominate social life in Europe. After “the invention of pump water, although it doubtless spared water carriers much hard work, seems to have been largely initiated and constructed by men” (Strang 24). According to Strang, this also underlines “an important stage towards more commercial interaction with environmental processes and resources. In effect, it materialises a Western ideal in which enclosure enables the primacy of patriarchal control or Culture over (female) Nature [...] a narrowing of female roles, women’s exclusion from many new economic activities, and their greater confinement to the domestic sphere” (24). Yet, in the novel, Noria challenges these gender norms, and is trained to be a tea master. As Noria’s father emphasizes, there is a special bond between a tea master and water: “‘A tea master has a special bond with water and death,’ my father said to me as he examined one of the skins for cracks” (6). Then, the father assuredly

adds, "tea isn't tea without water, and without tea a tea master is no tea master" (7). Challenging the conventional gender norms, Noria inherits the wisdom of tea masters from his father and takes over the generations-long family business after the death of his father. Yet, as the novel progresses, she will find herself in a dilemma soon.

As the scarcity of water reconfigures all prevailing discursive formations making the atmosphere of the novel even darker and gloomier, Noria finds herself in a dilemma. As Noria tries to survive individually, she also tries to perform traditional tea master cultural practises in a world where scarcity of water is one of the primary social concerns. Moreover, she finds herself in an impossible situation: she has to decide on the future well-being of her community by revealing the whereabouts of a secret spring hidden in the depths of the forest nearby: a secret, which have been kept for many generations of her family, a secret that she promised her father at his death-bed. The whereabouts of this source of fresh water is like a family secret passing from one generation of tea master to the other. Noria remembers her father's words uttered on the day he shared this secret with his daughter Noria:

"You're seventeen, and of age now, and therefore old enough to understand what I'm going to tell you," my father said. "This place doesn't exist. This spring dried a long time ago. So the stories tell, and so believe even those who know other stories, tales of a spring in the fell that once provided water for the whole village. Remember. This spring does not exist." (12)

So, should Noria respect the privacy of water and protect it from the abusive, colonizing gaze of the suppressive human forces as her father asked from her, or should she share this secret information with the rest of the townspeople and help them survive? In other words, to whom water belongs? For the answer to this ethical question, the comments of some environmental scholars can be resorted. Environmental economist Donald Hanemann believes that the essentialness of water for humans need to be clarified first in order to categorize it either as a public property or private property.

He emphasizes the economic value of water based on its “essentialness”:

In economics, there is a concept of also called *essentialness*, that formalizes this notion. The concept can be applied either to something that is an input to production or to something that is directly enjoyed by people as a consumption commodity. In the case of an input, if an item has the property that no production is possible when this input is lacking, the item is said to be an essential input. In the case of a final good, if it has the property that no amount of any other final good can compensate for having a zero level of consumption of this commodity, then it is said to be an essential commodity. (78)

In other words, in order to call something “essential,” it either needs to hold a crucial position in the production process and be absolutely necessary for the production, or needs to be a product, which is highly desired, or demanded, by the consumers, hence irreplaceable by any other alternative product. According to Hanemann, water “obviously fits the definition of an essential final good” (78) since

human life is not possible without access to 5 or 10 L/d of water per person. Water also fits the definition of an essential input in agriculture and in several manufacturing industries (e.g. food and beverages, petroleum refining, lumber and wood products, paper, chemicals, and electronic equipment, which are the largest water-using industries in the USA in terms of freshwater intake) that cannot function without some input of water. (78)

So, water is a material having a diverse scale of usage. Thus, monopolisation of water means any power holder will put the same monopoly on multiple activities and needs. Yet, as thousands of years

ago Plato stated the ironic status of water, in *Euthydemus*, “only what is rare is valuable, and water, which is the best of all things [...] is also the cheapest” (qtd. in Hanemann 62). Similarly, Adam Smith in *Wealth of Nations* underlines the huge gap between water's exchange value and use value:

The things which have the greatest *value in use* have frequently little or no *value in exchange*. The things which have the greatest value in use have frequently little or no value in exchange, and on the contrary those which have the greatest value in exchange have frequently little or no value in use. Nothing is more useful than *water*; but it will purchase scarce any things; scarce anything can be had in exchange for it. A *diamond*, on the contrary, has scarce any value in use; but a very great quantity of other goods may frequently be had in exchange for it. (Book I, Chapter IV)

By referring to the Dublin Principles, adopted at the 1992 *International Conference on Water and Environment* in Dublin, which claim water “[h]as an economic value in all its competing uses” (Hanemann 70), and thus, water should be recognized as an “economic good” (Hanemann 70), environmental economist W.M. Hanemann underlines the high economic value of water despite its low price in the markets. According to Hanemann, “even for something that is not sold in a market with high prices, it is possible to conceptualize the economic value of measure this product/item depending on the scale of its being needed and demanded (70). Especially in the age of the Anthropocene, in which water scarcity and the management of the Earth's limited freshwater reserves become increasingly urgent global problems, fresh water is more and more “needed” and “demanded” in Hanemann's words.

Opposing to the treatment of water as an asset with high economic value for individual and collective use, Maude Barlow and Tony Clarke, in *Blue Gold*, treat water as a “universal and indivisible” truth, and argue that “the Earth's freshwater belongs to the Earth and all species, and therefore must not be treated as a private commodity to

be bought, sold, and traded for profit. [...] The global freshwater supply is a shared legacy, a public trust, and a fundamental human right, and therefore, a collective responsibility” (xvii). According to Indian scholar and environmental activist Vandana Shiva, behind the contemporary notion of controlling and monopolising water, there lies the clash of two cultural perspectives. In *Water Wars*, Shiva underlines this clash between two different cultural perspectives today as “a culture that sees water as sacred and treats its provision as a duty for the preservation of life, and another that sees water as a commodity, and its ownership and trade as fundamental corporate rights” (qtd. in Hanemann 70). With the heavy industrialisation and mass production to meet the demands of growing world population occupying newly established urban areas, the need for water rapidly increased. In time, water has been transformed from a raw or natural substance into a product, a process entailing crucial shifts in perceptions, ownership, and control of water. As environmental scholar Donald Worster states as humans’ respect to nature eroded through capitalist greed, the nonmaterial value of water is also degraded:

Water in the capitalist state has no intrinsic value, no integrity that must be respected. Water is no longer valued as a divinely appointed means for survival, for producing and reproducing human life, as it was in local subsistence communities. Nor is water an awe-inspiring animistic ally as it was in the agrarian states. It has now become a commodity that is bought and sold. [...] In an age ruled by instrumentalism, nature ceases to have any value in itself. It is no longer seen as the handiwork of God [...] technological domination is an unlimited ambition. (55)

Within this comprehensive framework, water is different from other commodities in economic terms. Water is both a private good and a public good. So, Noria is right to keep the spring away from the monopolising gaze of the tyrannical state, and also she is wrong to keep it away from the collective use of the townspeople. In this

respect, Noria's dilemma opens the issues of the scarcity of water, and the equal distribution of the scarce natural resources especially during the times of ecological crisis to the discussions of environmental justice. Yet, at the end of the novel, which does not provide any glimpse of environmental justice, the governmental authorities finds Noria's situation suspicious, through water spies, they spot her, take her under house arrest, and force her to share everything she knows. Noria rejects yielding to suppressive forces just like "the unyielding" water does. Instead she decides to tell *herstory* as a female voice raised against the *history* written by the suppressive patriarchal forces. As she is writing her story Noria aims to leave her mark on Earth:

I was holding it in my hands: not the whole truth, because the whole truth never survives, but something that was not entirely lost. [...] I could stay put and wait until dust defeated water. I could let someone else tell my tale, if it would be told at all: someone who would twist it and make it unrecognizable and perhaps harness it to their own purposes. If I left my story to those who had drawn the blue circle on my door, it would no longer be mine. I would no longer be in it. I would no longer be anywhere. I could let that happen. Or I could try to leave my mark on the world, give it my own shape. (254)

Noria realises that "history has no beginning and no end, there are just events that people give the shape of stories in order to understand them better [...] And in order to tell a story one must choose what not to tell" (194).

Trying to decide on what to tell as her story, she realises one more thing: the entanglement of the story of her townspeople and the story of water in the town. Without mentioning water and the spring in the depths of the forest, her story would be incomplete. At that point, the memory of water as a versatile, unyielding nonhuman element, and the human memory of a tea master, the watcher of water, are entangled.

It was an account of ruin and devastation, of oceans reaching towards the centres of the continents, swallowing land and fresh water. Millions fleeing their homes, wars fought over fuel resources revealed under the melting ice, until the veins of the earth ran dry. People wounding their world until they lost it. Then it turned into a tale of truths forged lies told and history changed for ever: a story of books crumbling into shreds of paper mist at the bottom of the sea and replaced with the easily modifiable pod-books, until any event could be erased with a few pushes of button from the memory of the world, until responsibility for wars or accidents or lost winners no longer belonged to anyone. (253-54)

The final tea ceremony that Noria performs for herself with the last drops of water at home as she is under house arrest, metaphorically refers to the increasing scarcity, and the running out of the fresh water sources of the Earth in the end: “The ceremony is over when there is no more water” (259). This metaphorical expression suggests that life on Earth will be over when the finite water resources of our planet run out.

So, literature assumes increasingly significant roles in the Anthropocene context, as the Earth is approaching to the end of its finite resources. Literature in an environmentally challenged world of material and immaterial entanglements plays more than an aesthetic part, it presents a more complex system of signification. As climatic facts gradually dominate a crucial part of our lives nowadays, the environmental problems caused by climate change increasingly shape our dreams about the future, and create a distinct form of environmental imagination that manifests in many ecologically conscious novels. Thus, many contemporary novelists, like Emmi Itäranta, choose to focus explicitly on the current and/or future environmental problems by aiming to create heightened ecological awareness, and to provide cautionary tales for the future

generations as well as their contemporary readers who already experience the symptoms of climate change. Thus, it is no coincidence that a new literary genre has emerged particularly in the Anthropocene and begun to derive from science fiction, and acquired the label "climate change fiction, or "Cli-Fi." As a new literary term coined by Dan Bloom, an American freelance news reporter based in Taiwan, in 2000, Cli-Fi gained worldwide popularity in short time. As environmental scholars Adam Trexler and Adeline Johns-Putra underline in "Climate Change in Literature and Literary Criticism," climate change now "occupies a primary position not just on political and scientific agendas but in the wider cultural imagination," the most popular product of which being literature (185). So, within this enriched context, it has become increasingly popular to use climatic themes in literature. Despite their fictional distance, the other worlds in these novels present strong probabilities in real life. Thus, Cli-Fi provides a secure playground in which human beings can express their innermost anxieties and fears about the future of humanity, and it also gives them a chance to confront with their fears, such as the fear of death caused by running out of the infinite resources of the Earth, as observed in Itäranta's novel. Providing a setting for such novels, the Anthropocene is regarded as a ground for cultural transformations since it refers to a collective transformation of nature and culture with its political and economic organisations as well as the individuals who have been transformed by their struggle with a natural phenomena; climate change. According to Trexler to engage with the Anthropocene, is a complex and large-scale duty for literature and environmental criticism. Positioning Cli-Fi in the Anthropocene context, Trexler argues that "interpreting such texts can be understood a way of describing the patterning of enormous cultural transformations, such as the Anthropocene" (5).

In conclusion, under these circumstances, the thematic framework of climate change fictions becomes more important. Thus, literature and literary criticism must also deal more closely with the material practices in the Anthropocene. For Trexler, fiction is particularly suitable for such productive engagements between material practices and their literary representations since it can develop "productive relationships not only with the ecological but also with the economic and political systems of the Anthropocene" (237). Thus, Cli-Fi is the most suitable genre to discuss the emergent material and discursive entanglements of the Anthropocene. Moreover, fictional accounts,

like Itäranta's *Memory of Water*, are perfect platforms to claim that nonhuman elements, like water, have anthropomorphic and agentic qualities such as remembering, resisting to human control, changing the lives they touch in their surrounding, and narrating the stories of human exploitation of nature. As the title of this paper attributing of a mnemonic agency to water suggests, and as the environmental scholar Astrida Neimanis states, "the waters that we comprise are never neutral; their flows are directed by intensities of power and empowerment (14). Water remembers all human activities which metaphorically touched it, and as Neimanis further states "currents of water are also currents of toxicity, queerness, coloniality, sexual difference, global capitalism, imagination, desire, and multispecies community. Water's transits are neither necessarily benevolent, nor are they necessarily dangerous. They are rather material maps of our multivalent forms of marginality and belonging" (14-15). Thus, mnemonic agency of water helps humans confront with their actions. Reading a Cli-Fi novel, the *human* readers' imagination is released from its logical strains and be more open-minded and ready to be persuaded and reminded even by a nonhuman agent like water. In this respect, Rachel Carson in *Silent Spring*, published in 1962, includes a warning to all humankind: "We stand now where two roads diverge. But unlike the roads in Robert Frost's familiar poem, they are not equally fair. The road we have long been travelling is deceptively easy, a smooth superhighway on which we progress with great speed, but at its end lies disaster. The other fork of the road – the one *less travelled by* -offers our last. Our only chance to reach a destination that assures the preservation of our Earth. The choice, after all, is ours to make" (Chapter 17). By giving voice to nonhuman entities that we share our planet, and telling their stories as well as humans', especially in such environmentally critical periods like the Anthropocene, *literature* has the ability and capacity to direct us towards the right path leading to a destination where the well-being of the Earth with all its human and nonhuman inhabitants.

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