PAINTING AS A TOOL FOR SIMULATING HUMANS' RELATIONSHIP WITH NATURE

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Today, landscape painting is often identified as a subject with which to draw attention to current environmental issues. This contrasts with the approach of seventeenth- and eighteenth-century artists, where landscape painting was used as a form of religious, mythological and historical documentation.[1] In recent years, people at many levels of society have raised concerns about the environmental issues affecting us today. Campaigns like Earth Day,[2] which aim to increase awareness of climate change, and Earth Sharing,[3] which encourage acting sustainably and reducing pollution, are two examples.

Figure 1. Siau-Jiun Lim, (be)longing - Hope is what I have left, 2016, acrylic on canvas.

Many artists have been contributing to these movements through ecologically themed art for decades. My work continues along this trajectory, with the intention of promoting awareness of environmental issues faced by the world. My focus is on art from a scientific perspective – taking a biological, social-geographical, botanical and psychological approach – aimed at encouraging a relationship between humans and plants. How do humans communicate with nature? Can plants respond to us? The aim is to promote our relationship with nature in an intimate way through my paintings.

Most of the time, we find the landscape in a forest, for example, to be chaotic and messy, while at other times we feel a sense of tranquility from the complexity around us. All its elements – trees, leaves, branches and canopy – are organised in a very complex yet repetitive pattern. Light also invades the spaces within the forest.

All these elements stimulate my mind, as if I've had an exciting conversation with nature. If we stop and are mindful enough, we can appreciate more than the complexity of the branches and leaves. There is a sense of peace, resilience, cooperation, friendship and aging; and, of course, there is also a sense of ruthlessness and competition to survive: a complete human society is reflected in an ordinary landscape.

We should strive to make the natural environment the focus of human social life. It not only benefits us through ecological processes and mitigation of climate change, but also in terms of economic growth. The Nature Institute (US) suggests a new way to see nature: "Only if we find ways of transforming our propensity to reduce the world to parts and mechanisms, will we be able to see, value, and protect the integrity of nature and the interconnectedness of all things."[4]

In the 1980s, the Japanese developed a technique for forming a social relationship with nature called *shinirin yoku*, which means "taking in the forest atmosphere" or "forest bathing." The process involves "being present" in the forest

Figure 2. Siau-Jiun Lim, (be)longing – Relationship, 2016, acrylic on canvas.

by walking and contemplating nature.[5] *Shinirin yoku* is promoted as offering health benefits and creating a robust physique. I see this activity as not only beneficial to humans, but to nature, too. It is a social-geographical and spatial activity that takes place between humans and nature.

From personal observation, I can discern a relationship between one plant and another, and with the direction of light where they all lean towards the light source – the energy source for photosynthesis. Some choose to keep a distance between them and their neighbour, while others decide to wrap around each other for mutual support, in order to gain height and a better position in relation to the light. Plants move with their stem and root tips, seeking out sources of water and light. In botany, this process is called tropism, the many types of which include those relying on gravity and plant hormones.[6] Science has shown that plants change their behaviour in order to negotiate their conditioned environment for survival; some need to strengthen themselves, or rely on other plants to survive.

Biologists have discovered that plants behave not only according to basic survival instincts, but that they also seek to communicate, despite not having a brain or nervous system. In 1880, Charles Darwin published an article drawing on evolutionary theory, "The Power of Movement in Plants." He conducted a series of experiments, marking reference points on glass and paper to track the plants' movement. He investigated how plants discriminate and favour one plant over another in terms of the direction of their movement.[7] In the 2016 National Geographic documentary *The Secret Language of Plants*,[8] the filmmakers showed that plants have the ability to perceive the environment. According to ecologist Richard Karban, "The mind-bending implication was that brainless trees could send, receive and interpret messages."[9]

Figure 3. Siau-Jiun Lim, (be)longing, 2016, 1.8 × 3m, acrylic on canvas.

Our human perception of the complexity of tree branches as chaotic and disorderly in reality disguises a plant communication map. And so I wonder, can humans communicate with plants at all – or are plants already communicating with us? Do we know how to listen?

Communication has many levels – sending and receiving information, sharing ideas and feelings, transporting or delivering goods. Communication does not necessary involve verbal or physical actions, but may involve behavioural change: reactions or responses from both subjects, which are trying to connect to each other.

Figure 4. Siau-Jiun Lim, (be)longing, exhibition installation view.

Researchers have shown that plants exchange information with each other through the air, by releasing odorous chemical compounds called volatile organic compounds (VOCs), and also through their roots in the soil[10] – in addition, some use ultrasonic sound to communicate with mammals.[11] Monica Gagliano has shown that plants respond to sound, and even make their own sounds.[12] The Smithsonian Channel film, *Do Plants Respond to Pain?,* shows how a plant emits an extreme electrical signal when it encounters heat from a fire.[12] Plants also grow better when listening to classical music than they do without any musical input.[13] Dan Johnson, who uses an acoustic sensor to record sound from plants, claims that "plant hydraulics will tell us what our future forests will look like in 50 years."[14]

We often feel a sense of *connection* when we are immersed in nature, and we might well feel that plants are talking to us. Jon Anderson has examined aspects of this phenomenon in an essay on "postnature." When we interact with nature through activating a range of senses and responses – walk, smell, study, touch and feel – our mind, understood in both its imaginative and intellectual capacities, merges our body with the environment; Anderson refers to this process as "transient convergence". Our ability to register such experiences emotionally is described by Anderson as "relational sensibility". Relational sensibility takes the form of continuing memories and feelings registered through transient convergence, which in turn has the ability to produce higher levels of understanding of life and nature itself.[15]

Another study has shown how the experience of looking at a painting activates our brain as it interprets colour, shape, line, implied motion and boundaries through our eyes, and increases our mental capacity for appreciation, analysis, creativity, curiosity and investigation.[16] Here I think of a number of artists whose work expresses energy: Jackson Pollock, Terry Winter, Franz Kline, Willem de Kooning, Joan Mitchell and Anselm Kiefer. Viewers often experience a feeling of being overwhelmed as they contemplate the scale and strength of individual elements in works by these artists.

I agree completely with Robert Marchessault's assertion that "Landscape painting is about looking, looking really hard. Landscape painting is an invitation to look at the view with intrigue, to reflect upon the scene that has been framed by the artist and presented deliberately by the artist."[17] As a visual artist, I'm fascinated by the task of

capturing nature's complexities and representing them in visual form. How can I build responsive lines, movement, texture and colour into my painting? How can I capture these complex expressions? And, most importantly, how does a painting present its aesthetic emotions and connect with audiences? My painting seeks to explore the ontology of relational sensibility with respect to nature through landscape painting, and to simulate its effects on the human mind.

Originally from Malaysia, **Siau-Jiun Lim** has been living in New Zealand for 11 years. She currently works as a graphic designer at Otago Polytechnic and studies part-time at the Dunedin School of Art. In order to reflect nature in her painting, she works with materials found in nature – feathers, leaves, sticks, recycled objects – alongside traditional brushes.

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