

# Circular Art Economies, Relational Aesthetics and Circular Relationalities: Wang Ruobing’s Plastic Art Practice in Singapore

Tan Qian Hui <sup>1\*</sup>

Received: 7. June 2025 / Accepted: 16. October 2025 / Published: 17. November 2025

© The Author(s) 2025

## Abstract

This paper seeks to foreground the role that artists can play in Singapore’s transition towards a circular economy. Taking Bourriaud’s concept of relational aesthetics as a point of departure, it contends that art projects that recuperate waste can help to close circularity loops by fostering relationships across stakeholders. While an ever-expanding range of R-behaviours has come under the purview of scholars working on circular economies, they have often overlooked the most fundamental ‘R’ undergirding circular practices—that of relationalities. The paper attempts to address this gap by bringing the relational into a productive conversation with circularity. It does so by mobilising Wang Ruobing’s artworks and art practice as a case study to show how socially and environmentally engaged relational art can extend circular economic frameworks beyond its current mold, thereby gesturing towards a circular-relational ethics.

**Keywords** Relational aesthetics · Relational Art · Circular Art Economy · Circular Relationalities · Plastic Waste

## Introduction: Relational Aesthetics and Circular Art Economies

Taking Wang Ruobing’s plastic artworks as a point of departure, this paper demonstrates how art and artists can play a key role in valorising waste by offering a socio-political commentary on environmental issues and actively contributing to Singapore’s circular transition. It does so by combining Bourriaud’s (1998) framing of relational aesthetics with key ideas on circular economies and circular R-behaviours (e.g. reuse, repurposing). Correspondingly, I contend that thoughtfully designed art projects can help to close circularity loops not just by reclaiming discarded/unwanted material but also by fostering meaningful relationships, among other relational strategies. Circularity loops are closed when waste (outputs) are reimagined/reused as resources (inputs). While circularity loops have been conceived in terms of material and energy resources, they have rarely been understood as outcomes of social relations. Relatedly, even as an ever-expanding range of R-behaviours has come under the purview of scholars interested in circular economies, they have glossed over the most fundamental ‘R’ undergirding circular practices—that of relationalities.

I seek to address this gap by bringing conceptualisations of the relational (especially relational aesthetics) into a productive conversation with emerging scholarship on circular art economies. More specifically, I illustrate how Dr. Wang Ruobing’s art practice exemplifies what I call *circular relationalities*—modalities of material recovery inseparable from the cultivation of social, ecological, and creative relationships that sustain circular R-behaviours.

---

<sup>1</sup> Asia Research Institute, National University of Singapore, 10 Kent Ridge Crescent, #07-01, Singapore 119260

\* Corresponding author: tqh@nus.edu.sg

## From Plastic Waste to Plastic Circular Art: Medium, Materiality and Meaning

A circular economic framework has increasingly been adopted beyond industrial and policy domains. This framework has expanded into the creative industries as a means of reconfiguring linear material life cycles (i.e. take-make-dispose), typically by incorporating circular R-behaviours such as reuse and repurposing into art making (Strehovec, 2023; Ratalewska, 2024; Donkor et al., 2021; 2024). Artists, designers and creatives have long experimented with waste materials, but the alignment of such practices with concerns about minimising waste production and maximising resource efficiency situates them within a circular economic agenda. Strehovec (2023) notes that discarded materials and art trash (i.e. materials or objects from a prior artistic production) can be reworked into new cultural artefacts, vis-à-vis techniques such as pastiche, remix or collage. Kayode (2006) calls this process of converting waste into a new work 'regenerative art'. The regenerative aspects of these artworks lie in their material enhancement and also their added value (e.g. in upcycling), which embodies the circular tenets of augmenting resource efficiency and product life extension.

Despite burgeoning artistic interest in circularity, the scholarship on circular economy has not systematically investigated the roles that art and artists can play in closing material circularity loops, advancing zero-waste objectives, raising environmental consciousness, and fostering civic participation (for exceptions, see Donkor et al., 2024). Academics are starting to acknowledge the labour-intensive and extensive nature of circular R-behaviours, including how the creative mobilisation of discarded or unwanted materials can endow them with new life (Tan and Yeoh, 2024). However, scant attention has been paid to how creative labour can contribute to circular economic outcomes, whereby creative reuse is tethered not just to material recirculation but also to positive shifts in value and meaning. Such an oversight reflects a wider tendency in the circular economic literature that privileges the technical and economic dimensions of circular transitions while understating the social processes that drive circular R-behaviours.

Within the context of circular art economies, the repurposing of plastic waste into artistic works has gained significant traction. Artists have dealt with found (marine) plastic debris to formulate art installations that simultaneously criticise and aestheticise environmental degradation (Wagner-Lawlor, 2018; Boetzkes, 2019; Eshun and Donkor, 2022; Asamoah et al., 2022). Plastic's unique materiality invites both critique and creative engagement. Its material properties—lightness, malleability, chromatic range, and durability—render it a versatile medium for sculptural and installation work (Khumalo and Ndlovu, 2025). Plastic also embodies a tension between utility and harm, permanence and disposability. Its troublesome materialities (e.g. non-biodegradability) allows it to serve as a metonym for crisis in the Anthropocene (Gabrys, 2013)—a visual reminder of human excess and its prevailing throwaway, consumerist culture.

The nascent academic literature on plastic waste art is fragmented, with studies that tend to revolve around Western and African geographical and cultural contexts (e.g. Asamoah et al., 2022; 2024; Eshun and Donkor, 2022; Khumalo and Ndlovu, 2025). Installations and sculptural forms crafted by Ghanaian artists from post-consumer plastic waste that reflect on colonial legacies and ecological loss have been documented. However, little has been written about ecologically oriented artistic practices in Singapore and Southeast Asia more broadly (for exceptions, see Guy et al., 2015 on Singapore, and Abidin et al., 2024).

Plastic waste art usually aspires to heighten environmental awareness and spur transformative change in consumerist norms. The potential for contemporary art to be deployed as a tool for activism and civil society engagement is increasingly being recognised by many stakeholders (Strehovec, 2023). Despite this, critical scholars are beginning to interrogate supposedly environmentalist art projects that may invariably be complicit in greenwashing and obscuring the realities of extractive/exploitative systems (Chertkovskaya et al., 2020). Meanwhile, there are instances whereby plastic waste art can achieve more than just symbolic impact. Socially engaged, participatory projects—such as community mural-making with recycled plastics—can support place-based environmental action. The ambivalence around art composed of plastic waste mirrors broader critiques of the circular economy as a depoliticised framework that shores up the status quo (Corvellec et al., 2022). The disjoints between aesthetic appreciation and environmental critique becomes relevant in appraising how an approach informed by relational aesthetics can attend to such a disjuncture.

## Conceptual Framework: Relational Aesthetics and Circularity

Bourriaud (2020: 103) conceives of relational art as a practice that takes “the [public] realm of human interaction” as its “theoretical horizon”. His notion of a relational aesthetics shifts artistic value from art objects to the intersubjective encounters that relational art catalyses (Bourriaud, 2020). In this view, the manifestation of a social space for dialogue and co-presence is part of the artwork which subverts the privatised, commodified nature of mainstream art production. Even though relational aesthetics has often been deployed to analyse socially and environmentally engaged art projects (Helguera, 2011), it has yet to be systematically applied to circular plastic art economies (for exceptions see Wagner-Lawlor 2018).

Relational aesthetics’ emphasis on the interstitial spaces of exchange (i.e. an ‘aesthetic of encounters’, Bourriaud, 1998) is particularly relevant to understanding circular art endeavours that are site-specific, interactive and collaborative. Additionally, relational aesthetics has rarely been brought into a constructive conversation with circular R-behaviours (e.g. reuse, repurpose), in spite of their shared concern with materialities, material practice and flows. Giving weight to the ‘relational’ in relational aesthetics presents an important entry point for recentering relational networks in closing circularity loops. It also points to creative repurposing as relational practices that are premised on care, connection, and reciprocity. Besides social relations among the potential reusers of a resource, plastic waste art often points towards the ecological relations or entanglements between (over-)consumption and ecological degradation. Accordingly, a relational aesthetics may cultivate an ethics of living with (non)humans. Taken together, Bourriaud’s (1998) relational aesthetics provides a crucial foundation for the development of what I call *circular relationalities*, which frames the circular recuperation of waste as a relational endeavour.

## Wang Ruobing’s Art Practice: Circular Relationalities in Motion

Dr. Wang Ruobing’s oeuvre offers a compelling case study that attends to intersections across plastic materialities, (relational) aesthetics, and circular art economies. Her artworks, such as *Over the Horizon*, *Rainforest of the Sea* and *Beneath Tide*, *Running Water*, homed in on marine and coastal ecosystems as fields of enquiry and are largely composed of repurposed (marine) plastic waste. These works serve to open up interstitial spaces for relational encounters and exchanges. Besides relational aesthetics, Wang shares that she also mobilises an “intentional formal aesthetics in both [her] artistic and curatorial practices” (personal communication).



**Fig. 1** *Over the Horizon* (2016). Source: <https://www.facebook.com/EsplanadeSG/photos/over-the-horizonby-wang-ruobing-singaporeesplanade-concourse4-feb3-apr-2016over-/744995875638002/>

Wang's *Over the Horizon* (2016) exemplifies how discarded PET bottles from Singapore's coastlines can be reanimated not just as raw material for artistic production but as a relational medium that reconfigures the viewer's encounter with waste. As a satirical wave of waste that simulated the rhythmic motion of its natural counterpart, the kinetic installation revealed an irony: the romanticisation of pristine coastlines and seascapes in tandem with a culture of disposability that produced their contamination. Additionally, the installation pointed to the relational on two main fronts. First, it foregrounded the relationship between humans and their physical environment by signalling the circulation of post-consumer plastic bottles within marine ecosystems. Far from being inert pollutants, the movement of the PET bottles implied how they might be understood as vibrant matter (Bennett, 2010) implicated in ongoing ecological processes. Second, *Over the Horizon* attempted to foster a relationship between the PET bottles and the viewer, who might be led to confront their roles in perpetuating a culture of disposability and in turn, coastal pollution.

Assembled from cleaned marine plastic detritus, *Rainforest of the Sea* (2018) employed chromatic and eco-aesthetic compositional strategies to evoke the precarity of marine ecologies. Brittle, degraded pieces of marine plastic were meticulously sorted by their colour and arranged into a dense, coral-like structure bearing the shape of Singapore's coastline. Viewers were therefore invited to ruminate on plastic's dual capacities to imitate and imperil fragile coral reefs overrun by synthetic matter. Correspondingly, Wang foregrounded an aesthetic contradiction which could be interpreted in two ways. First, the very qualities that render plastic (visually) appealing—its bright colours, malleability, and durability—are implicated in threatening coral reefs (e.g. damaging coral tissue, blocking the coral's digestive tracts). Second, *Rainforest of the Sea* underscored plastic's ability to look aesthetically pleasing while concealing how marine plastic pollution contributes to ecological crises.



**Fig. 2** Rainforest of the Sea (2018). Source: <https://ruobingwang.com/rainforest-of-the-sea/>

More recently, an immersive site-specific installation titled *Beneath Tide, Running Water* (2025) was featured at the Singapore International Festival of Arts Pavilion<sup>2</sup>, (2025). Functioning as a stage for public

<sup>2</sup> <https://sifa.sg/sifa-2025/sifa-pavilion>

outdoor performances, *Beneath Tide, Running Water*'s tiered platforms were inspired by coral reefs and incorporated empty PET bottles activated by mechanical systems. In this case, the installation became a lived infrastructural form rather than just a static or decorative art object. Notably, Wang expanded the relational field of this artwork by drawing performers and members of the public to walk into, move through and develop a more intimate relationship with it. In other words, the installation instantiated a shared corporeal proximity with plastic waste.

The moving PET bottles signified the logics of extractive petro-capitalism that continue to imperil the marine ecologies they signify. Wang commented that the installation, alongside the accompanying dance performances was “beautiful but ironic”<sup>3</sup>, perhaps because it is reminiscent of a sublime landscape. Boetzkes (2010) posits that contemporary artists are increasingly representing overwhelming volumes of waste in ways that resonate with the notion of the romantic sublime in landscape art. She argues that waste has turned into a “prosthetic reconstruction” of nature (Boetzkes, 2010: 26), with visual vocabularies that simultaneously symbolise and displace natural environments, as well as invoke both fascination and repulsion. Likewise, Peebles (2011) conceives of a toxic sublime as an aesthetic tension that arises when a place is read as severely contaminated but remains captivating because it is visually dramatic. For instance, the bopping PET bottles in *Beneath Tide, Running Water* produced a magnificent semblance of marine vitality while subtly calling attention to the artificiality of its material substrate and ecological degradation. In this case, I suggest that a relational aesthetics may be able to convert a sense of aesthetic tension into ethical tension, prompting viewers to feel uneasy about their complicity in reproducing environmental harm.



**Fig. 3** *Beneath Tide, Running Water* (2025). Source: Author's own; See also <https://sifa.sg/sifa-2025/2025-programmes/programme-details/new-urban-realities/beneath-tide-running-water>

## Wang Ruobing's Collaborative Practice: Expanding Relational Networks

In these three aforementioned works, I argue that circularity exceeds the technical process of recovering plastic waste into art resources, it also involves reframing art made from plastic waste as a medium that

<sup>3</sup> <https://pluralartmag.com/weaving-the-neighbourhood-the-sifa-2025-pavilion/>

“tightens the space of relations” (Bourriaud, 2020: 104)—to ourselves, to waste, to places, and to each other. Accordingly, I posit that relational loops are set in motion when material circularity loops are closed in Wang’s artworks. Instead of being supplementary to plastic material recovery, social relationships form the basis through which circular R-behaviours are initiated and sustained. Such relational loops are initiated when art made out of plastic waste shapes ecological consciousness by alluding to the scale, persistence, and ramifications of plastic pollution in marine ecologies (Boetzkes, 2019). Additionally, Wang’s guided public art workshops create relational aesthetic experiences for encouraging dialogues on environmental sustainability and resource stewardship. They also typically involve the promotion of circular R-behaviours such as the reuse and repurposing of plastic waste. Held at Bedok Town Square during the Singapore International Festival of Arts (2025), and presented in conjunction with *Beneath Tide, Running Water, A Future Untold* comprised a series of workshops where participants sketched the contours of Bedok’s dynamic coastlines using found marine plastic debris. In line with her other ‘collage paintings’ (see Figure 2: *Rainforest of the Sea*), the process of “assembling these materials constitutes a time-specific survey of the city’s evolving landscape”<sup>4</sup>. Overall, Wang seeks to flesh out the slippages between “ecological idealism and urban materiality”, while critiquing how natural environments have been commodified (ibid.).

**Fig. 4** ‘Raw materials’ for *A Future Untold* (2025), which referenced the artistic approach underpinning *Rainforest of the Sea*. Source: A repost featured on Wang Ruo Bing’s Instagram page.



Wang’s approach to art making has always been interdisciplinary, participatory and collaborative. Her approach is aligned to the key tenets of a relational aesthetics, such as an emphasis on the social context that the art is situated in and the blurred the boundaries between art and life (Bourriaud, 1998). In her residency with Nanyang Technological University Centre for Contemporary Art (NTU CCA) where she devised a work-in-progress tentatively titled *Living with the Trouble* (e.g. of marine plastic pollution, the excessive consumption of single-use plastics, 2023), which referenced Donna Haraway’s (2016) *Staying with the Trouble*. In this case, Wang’s art practice goes beyond imitation (i.e. mimesis) and veers toward re-creation (i.e. poiesis, Strehovec, 2023). Correspondingly, Wang drew on Haraway’s (2016) notion of

<sup>4</sup> Cited from Wang’s Instagram post on ‘Greenscape’ (2014, wang\_ruobing).

sympoiesis, or ‘making-with’ by working with collaborators ranging from scientists, volunteer deep sea-divers to environmental NGOs.

During the residency, Wang demonstrated how science and art could transcend their disciplinary boundaries by working with Assistant Professor Kyle Morgan from NTU’s Earth Observatory of Singapore. Kyle Morgan collected suspended mud sediments from Singapore’s waters in order to investigate how sedimentation affects coral reefs. Wang integrated the mud sediments and marine plastic retrieved from the sea by volunteer divers into her paintings and interactive installations. Her collaborative efforts illuminated a more-than-material circuit of circular relationalities, whereby knowledge and ideas circulate across disciplinary fields of practice.

Wang’s oeuvre raises questions about the extent to which circular artistic practices can effect tangible socio-environmental changes. While symbolically powerful, the transformation of plastic waste into art may risk aestheticising environmental issues. The limits of such symbolic interventions are mitigated through Wang’s cultivation of (long-term) relationships with various stakeholders. Like her guided workshops, these engagements operate as invaluable platforms for enacting an aesthetics of encounter (Bourriaud, 1998). For instance, *Rainforest of the Sea* was accomplished in partnership with divers from Our Singapore Reefs (an NGO championing the conservation of coral reefs) and students from Nanyang Girls’ High School<sup>5</sup>. As such, Wang’s collaborative partnerships extend the impact of her artwork in environmental pedagogy and advocacy beyond the confines of the gallery.

## Conclusion: Towards Circular Relationalities

Beyond extending the afterlives of plastic waste and the circular recuperation of plastic waste into art, Wang demonstrates that the artistic value of her works also lies in cultivating reciprocal relationships—among materials, makers, viewers, and broader ecologies. By reimagining plastic waste as an encounter rather than an endpoint, her art practice promotes a relational ethics that foregrounds the co-production of art (e.g. through collaborations, participatory workshops) and novel ways of co-habiting with plastic objects. Taken together, this departs from dominant strategies that are focused on market-oriented and technical systems of resource recovery in circular transitions.

In summary, Wang Ruobing’s artistic practice embodies what I call an aesthetics of circular relationalities, whereby closing material loops is linked to the cultivation of relational capacities (e.g. care, collaboration) and relationships (e.g. between human and nonhuman actors, across disciplines, and within communities). Lastly, there is considerable scope for future research to explore how artistic interventions can better support broader circular economic agendas in Singapore beyond performative and perfunctory gestures, such as through participatory pedagogies.

**Acknowledgements** The author is grateful to Dr. Wang Ruobing for her encouragement and assistance. The journal thanks Desislava Bekyarova for their administrative assistance throughout the publication process.

**Author contribution** Not applicable.

**Funding** This research has been supported by the Ministry of Education Academic Research Fund Tier 2 (MOE-T2EP40121-0005).

---

<sup>5</sup> <https://ruobingwang.com/rainforest-of-the-sea/>

## Declarations

**Competing interests** The author declares no competing interests.

**Open Access** This article is licensed under a Creative Commons Attribution 4.0 International License, which permits use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons licence, and indicate if changes were made. The images or other third party material in this article are included in the article's Creative Commons licence, unless indicated otherwise in a credit line to the material. If material is not included in the article's Creative Commons licence and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder. To view a copy of this licence, visit <http://creativecommons.org/licenses/by/4.0/>.

## References

- Abidin, M. Z., Sabri, N. S., Daud, W. S. A. W. M., & Wulandari, W. S. (2024). Waste Materials as a Sustainable Medium in Contemporary Art: An analysis of Malaysian artists' creative practices. *Environment-Behaviour Proceedings Journal*, 9(28), 91-97.
- Asamoah, S. P., Adom, D., Kquofi, S., & Nyadu-Addo, R. (2022). Recycled art from plastic waste for environmental sustainability and aesthetics in Ghana. *Research Journal in Advanced Humanities*, 3(3), 29-58.
- Asamoah, S. P., Adom, D., & Kquofi, S. (2024). Creative Upcycling of Plastic Waste Materials as An Innovative Artistic Technique for Environmental Sustainability, Environmental Aesthetics and Entrepreneurial Avenues in The Kokrobite and Bortianor Communities in Accra. *Journal of Science and Technology (Ghana)*, 1(2), 1-12.
- Bennett, J. (2020). *Vibrant Matter: A political ecology of things*. Duke University Press: Durham.
- Bourriaud, N. (1998). *Relational Aesthetics*, trans. S. Pleasance and F. Woods, Les Presses du Réel: Dijon.
- Bourriaud, N. (2020). Relational form. In P. Kupperts and G. Roberson (ed.) *The Community Performance Reader*. Routledge: London, pp. 101-109.
- Boetzkes, A. (2010). Waste and the sublime landscape. *RACAR: Revue d'art Canadienne*, 35(1), 22-31.
- Boetzkes, A. (2019). *Plastic Capitalism: Contemporary art and the drive to waste*. MIT Press: Cambridge.
- Chertkovskaya, E., Holmberg, K., Petersén, M., Stripple, J., & Ullström, S. (2020). Making visible, rendering obscure: reading the plastic crisis through contemporary artistic visual representations. *Global Sustainability*, 3, e14.
- Corvellec, H., Stowell, A. F., & Johansson, N. (2022). Critiques of the circular economy. *Journal of industrial ecology*, 26(2), 421-432.
- Eshun, J. F., & Donkor, E. K. (2022). "Garbage In, Garbage Out" Disposal of Waste: A Concept for Reviving Plastic Waste into Art Objects. *Bodrum Journal of Art and Design*, 1(2), 181-196.
- Donkor, E. K., Micah, V. K. B., & Akomea, D. (2021). Plastic waste and its artistic context. *Detritus (Journal for Waste Resources & Residues)*, 17, 71-88.
- Donkor, E. K., Boakye-Yiadom, F., Ankrah, O. A., & Micah, V. K. B. (2024). Sculpture, circular economy and ecological reflections: redefining waste through sustainable art in Ghana. *World Art*, 14(3), 279-303.
- Gabrys, J. (2013). Plastic and the work of the biodegradable. In A. Bennett and J. Joyce (Eds.) *Material Powers: Cultural Studies, History and the Material Turn*. Routledge: London. pp. 42-59.
- Guy, S., Henshaw, V., & Heidrich, O. (2015). Climate change, adaptation and eco-art in Singapore. *Journal of Environmental Planning and Management*, 58(1), 39-54.

- 
- Haraway, D. (2016). *Staying with the Trouble: Making Kin in the Chthulucene*. Duke University Press: Durham.
- Helguera, P. (2011). *Socially Engaged Art*. Jorge Pinto Book: New York.
- Kayode, F. (2006). From "Waste to Want": Regenerating art from discarded objects. *FUTY Journal of the Environment*, 1(1), 68-85.
- Khumalo, T., & Ndlovu, T. (2025). Recycled Plastic in South African Sculpture: Analyzing the Role of Waste Materials in Contemporary Art. *Studies in Art and Architecture*, 4(1), 39-47.
- Peeples, J. (2011). Toxic sublime: Imaging contaminated landscapes. *Environmental Communication: A Journal of Nature and Culture*, 5(4), 373-392.
- Ratalewska, M. (2024). Circular economy in creative industries on the example of craft and artisan makers. *European Research Studies Journal*, 27(3), 1356-1372.
- Strehovec, J. (2023). The Upcycling and Reappropriation—On Art-Specific Circular Economy in the Age of Climate Change. *Cultura*, 20(1), 27-41.
- Tan, Q. H., & Yeoh, B. S. (2024). The temporal dimensions of textile circularity loops: A community initiative at shortening loops and prolonging textile lives in Singapore. *Resources, Conservation and Recycling*, 206, 107601.
- Wagner-Lawlor, J. (2018). Poor theory and the art of plastic pollution in Nigeria: relational aesthetics, human ecology, and "good housekeeping". *Social Dynamics*, 44(2), 198-220.