Junctures

The Journal for Thematic Dialogue

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23: inter-

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Cover Image:
Helen Guek Yee Mei

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FEDERICO FRESCHI AND SCOTT KLENNER

Editorial: 'inter-'

This issue of *Junctures* invited authors to explore questions and challenges around the theme of 'inter'. The theme encouraged an exploration of various issues, including questions like: what benefits can investigating the spaces between opposing ideas offer an often divided world? How can we envision alternatives by examining these in-between areas, whether in disciplines, philosophies, arts, politics, or cultures? What democratic and empowering forces might exist in the fluid gaps between established meanings?

The seven articles in the 2023 issue of *Junctures* present a range of ways of exploring these questions from different fields and through a variety of lenses. For some authors the theme invoked issues of social justice, for others the inspiration to create, design and construct both ourselves and representations through art and science. Perhaps what is common in much of the work here is the urge to think and see the world differently, in ways that blur the ontological lines that separate one from the other.

In the opening article: "Aligning the vibrations: resounding matters," Joe Citizen weaves discussions of te ao Māori ontologies and recent Western challenges to human-centrism. Citizen's article presents an innovative and speculative consideration of the influence of both the sound and structure of language and the diverse ways these linguistic moves call reality into shape. In turn, he calls into question the atomistic binaries implied in the concept of 'inter' as a space between two independent entities, instead suggesting a more relational ontology through concepts such as 'intra' and the vibrational energy within the Māori concept of oro. Furthermore, he contrasts Eurocentric notions of symbols and writing with the Māori perspective, where sound and relationality are central. The article also critiques the Eurocentric separation of the intangible from materiality, raising questions about its implications in Information Technologies and artificial intelligence. Ultimately, Citizen advocates for a more relational and eco-centric understanding, challenging the cultural specificity of human exceptionalism and positivist norms of prediction in knowledge production.

Staying with the theme of language, Tarunna Sebastian and Angela Giovanangeli's paper investigates the dynamics and challenges that arise when different knowledge systems intersect

in the revitalization of Aboriginal languages in New South Wales (NSW), Australia. They explore the concept of intersectionality as it relates to the shaping of experiences involving oppression, resistance and privilege and addresses systemic inequalities and discrimination. Focusing on the critical role of community elders and Traditional Custodians in the NSW school system, they emphasise the importance of preserving and revitalizing Indigenous languages, citing the historical context of over 250 distinct languages and government efforts to support language education, including the Aboriginal Languages Act in NSW. Sebastian and Giovanangeli's study explores the challenges and complexities of Aboriginal language revival and highlights the significance of local knowledge, cultural protocols, and community consultation in language teaching. They underline the need for a pedagogical approach that recognises the political and symbolic dimensions of language revival. Ultimately, they stress the vital role of educators and community initiatives in preserving Indigenous languages, and highlight how the intersection of Aboriginal language education becomes a site of tension where Aboriginal educators challenge the enduring impacts of colonisation.

Hinemoa Watene, Jeremy Hapeta and Anne-Marie Jackson examine the experiences of wāhine Māori (Māori women) in rugby using autoethnography to explore the intersections of ethnicity, culture, and gender, and advocating for more inclusive environments that respect their values and cultural perspectives. The authors use a Kaupapa Māori research methodology and an 'interface' approach that integrates Western and Māori worldviews. They conclude by emphasising the need for structural changes in rugby to support and recognize the cultural identities of wāhine Māori and create more inclusive environments within the sport. Ultimately, they call for greater representation and platforms for marginalized groups in the world of sports.

Moving to Malaysia, Helen Guek Yee Mei draws on micro-historical methods to investigate the multiplicity of identities experienced and constructed in being and becoming migrant Chinese in Malaysia. She considers how these identities intersect through fluid and overlapping belongings and connections, delving into language, education, culture and religion, all of which contribute to the rich diversity of Malaysian Chinese identities. She notes the changing dynamics of Malaysian Chinese identity, with a younger generation expressing a stronger national identity, often identifying as 'Malaysians first.' She introduces a series of artworks and explores the personal and familial narratives that emerge from them to make sense of the blurred identities of self that emphasize the intersection of diverse cultural elements that shape individual identities. In conclusion, Mei highlights the fluid and evolving nature of Malaysian Chinese identity, with a focus on the complex intersections of these identities within the context of 'Bangsa Malaysia.'

Staying in Malaysia, Giselle Su Hong Gick and Harold Thwaites' article introduces a research-creation project to develop a Virtual Reality (VR) educational tool addressing the intergenerational gap in Malaysia. The project adapts a role-playing simulation game, the "Aging Game," into a storytelling-based VR experience to help younger individuals understand the challenges older people face with technology. The aim is to bridge generational divides and raise awareness of intergenerational issues. The authors discuss the potential of VR as an "ultimate empathy machine" and detail the design progress of the prototype VR tool, which employs environmental storytelling to immerse users in the experiences of an elderly woman in a Malaysian fishing village. They conclude by highlighting the potential of VR environmental storytelling in fostering intergenerational understanding and bridging generational divides in communities.

Cecilia Novero's article explores the notion of inter-species communication focusing on human interactions with birds, specifically through the experiences of German author Monika Maron and artist Hara Walther. These collaborations, which Novero frames as instances of "zoöpoetics," reveal the transformative nature of interactions with animals, and emphasise the reciprocity and interjections involved. Maron's account, *Krähengekrächz* (crows cawing), initially intended for a novel, evolves as she forms a genuine connection with crows in Berlin, blurring the lines between species and challenging traditional symbolism. Walther's journey into falconry and art reflects a predestined path, where she merges her roles as an artist, falconer, and educator, fostering connections between children and falconry through art. Her artworks challenge conventional representations of falcons and incorporate physical traces from her collaboration with her falcon, Sicilia, highlighting the vulnerability and impermanence of life. Novero emphasises the dynamic and reciprocal nature of zoöpoetics, where human-animal interactions shape shared worlds and encourage new forms of communication and understanding. Ultimately, she argues that engagement and attentiveness lead to unique forms of connection that disrupt and blur the ontological boundaries between species and which are affective in shaping social identities and representation.

The final article by Sue Taylor delves into the impoverished and neglected inner-city neighbourhoods of Johannesburg, South Africa, particularly Cleveland, Denver, and Jeppestown and examines the enduring effects of social and economic inequality in South Africa. Utilizing an autoethnographic approach alongside Google Earth and Google Earth Street View, Taylor uncovers 'interstitial spaces' – the areas between developments inhabited by the urban poor that serve multiple functions but often go unnoticed. She shows that while the technology of Google Earth helps access unsafe or hidden locations, it raises ethical concerns about voyeurism and privacy when studying poverty and informal settlements. She exposes various survivalist economic activities and housing issues in these neighbourhoods, emphasising the dire living conditions and complexities faced by the urban poor in these "in-between places." Taylor concludes by noting the potential for these images to inspire artists and writers working in various genres, showcasing the dramatic backdrop of neglected urban landscapes with intricate historical, political, and socio-economic dimensions.

For these authors, the notion of 'inter' in effect became something of a critical juncture where the real becomes less defined by the independence of entities we can look between than by its relational integrity, in much the same way that the reality of each musical note is only meaningful in light of its relative intervals.

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JOE CITIZEN

ALIGNING THE VIBRATIONS: RESOUNDING MATTERS

Te Kore, to Te Pō, to Te Ao Marama

Te reo Māori (the Māori language) is an oral language, so these "Te Kore, to Te Pō, to Te Ao Marama" words are most commonly encountered as spoken. Unlike Western traditions, precontact Māori cultures did not impose Cartesian divisions between nature and culture on the world. Nor does te reo position entities in an oppositional manner, as for instance the Greek prefix 'in-' does on the words 'tangible' and 'intangible.' Similarly, the Greek prefix 'inter-' inscribes the possibility that within oppositional entities there is always an in-between. Sound vibrates, resonates and reverberates, sound is always inherent to material movement, both in its generation and propagation. Vibrations are one of the ways that the material world makes itself felt. If language is communication, then in this understanding it is not just a human prerogative.

As a non-Māori, I wonder if I will ever really understand these kupu (words/ utterances)? Te Kore is variously described as the realm of potential being or the void; Te Pō refers to the realm of darkness, night and death; and Te Ao Marama is the world of light, life, tangible materiality. The phrase immediately brings attention to potentiality, space and time, with each aspect consisting of many other sub-parts, so that the whole forms a cosmogonic whakapapa (genealogies/ layers) specific to different hapū (sub-tribes). This is a generalised and approximate summary, but I hope to provide some indication to those who are not familiar with te ao Māori (the Māori world) about what is at stake here – a cultural knowledge framework that understands the universe as operating in "continuous creation and recreation."[1]

Describing Te Kore as either 'potentiality' or 'void' does not sufficiently convey that "it is the primeval matter that comprised the seeds of the universe,"[2] which suggests that potentiality is grounded in the tangible, rather than in the absence of matter, as is the case with some Christianised conceptions of the void. Similarly, 'time' doesn't readily describe how in "Māori philosophy, there were only two dimensions to time – past and future [...] the individual is conceptualised as travelling backwards in time to the future, with the present unfolding in front as a continuum into the past."[3] Time cannot be singularly defined as either linear or dynamic, but rather it is a mixture of both, where the "temporal is subordinated under the cosmic process and denotes not time but sequences in processes and events which occur in the cosmic process."[4] To a Pākehā (non-Māori

New Zealander of European descent) like myself, this description bears some similarity to Karen Barad's description of quantum physics, where time and space are dynamically enfolded into one another and co-constitute continuously emerging phenomena.[5] However, Barad's Bohranian account of quantum mechanics is grounded in material realism, so this provides a point of access rather than asserting any claim of cultural correspondence.

The pre-eminent New Zealand statesman Sir Āpirana Ngata described words as "charged particles"[6], which suggests an agency to language which appears to be missing in action in English. Eurocentric cultural traditions have tended to ascribe agency to humans alone, informed by the medieval Christian hierarchical structure known as the Great Chain of Being. Deriving from Plato and other Greek philosophers, it placed God at the top of a graded structure with angels placed below him, followed by European humans (men, then women), then non-European peoples, who were considered to be closer to the less capable and lower-tiered categories of animals and plants, with minerals at the bottom.[7] It perhaps goes without saying that Māoricentric traditions were not grounded in this schema, and are far more at ease with acknowledging how nonhumans can "be understood as determining events, as exerting forces, as volitional, or as instructing people."[8] In summary, what language is and who or what employs it is foundationally informed by different cultural knowledge frameworks and their attendant metaphysics.

As a speculative researcher I do not seek to answer questions or address specific problems,[9] but instead seek to understand how different metaphysical frameworks help to determine what knowledge is. Within Western academia, speculative research has been most recently informed by post-humanist and new materialist critique, and has been described as an attempt to challenge "the dominance of representationalism, brought about by the impact of the linguistic turn."[10] As a Pākehā whose work is located at the intercultural hyphen space[11] in Aotearoa-New Zealand, attempting to understand the assumptions of what baseline underlying reality is, has importance, not least because of our shared but dissimilar cultural experiences of colonialism. The term 'culture' is not neutral, however, as it reinforces a European Enlightenment tendency to reduce complexities into singularities, so that they can be employed within a field of causal relations. This paper therefore uses the suffix '-centric' to help indicate the diverse and pluralistic nature of cultural trajectories, that nonetheless have distinct originary differences.

Metaphysical critique such as this are not limited to the discursive issues that beset settler–colonial societies. Contemporary global concerns about climate instabilities and technological disruptions such as Artificial Intelligence (AI) are increasingly coupled with a widening disenchantment with Western science's ability to provide solutions to these concerns. That Western science and its universalist claims to truth have also acted as a part of the legitimising apparatus of settler–colonialism means that when new materialist writers call for "the need to look beyond the human as a location of meaning, value and agency,"[12] then speculative research becomes, as Rosalyn Diprose puts it, both "ontological and political."[13]

If new materialism has been summarised as an attempt to "develop a new philosophy of science and a way to move away from Kant,"[14] then continuing to subscribe to Eurocentric language and sound traditions without being aware of their cultural power to shape or influence knowledge may be limiting. What science may or may not be is already politicised in Aotearoa-New Zealand, where colonial discourse has traditionally presumed the superiority of Western science based on "the discovery of empirical, universal truths."[15] Typically absent from these assertions is a lack

of knowledge about how such universalist claims are propped up by a culturally and historically contingent metaphysics. The great chain of being forms the basis for Descartes' famous humancentric assertions that rational human thought is superior to dumb materiality. This in turn informed Kant's "sensible intuitions" which assert that a priori universal truths already exist.[16] In other words, their underpinning logic is circular – universal truth exists because it has always-already existed.

In general terms, the similarity between mātauranga Māori (Māori science) and Western science is that they are both based on observation, but that "Māori science has over a thousand years of close attention to local environment indicators in Aotearoa … [That] it has learnt and communicated in different ways."[17] Simplifying in the extreme, Eurocentric philosophical trajectories have valued visual and representational modalities with emphasis on logic and its descendent epistemologies, whereas Māoricentric trajectories have valued relationality and performative modalities, with emphasis on whakapapa and their descendent ontologies. Informed as they are by atomistic and humancentric trajectories, Eurocentric traditions have typically positioned sound as passive, an innately deceptive component of our sensory apparatus, whereas Māoricentric traditions have not considered sound in such a passive manner, because it "is the relation, or connection, not the thing itself, that is ontologically privileged in indigenous and Māori thought."[18] For example, taonga pūoro – sometimes referred to as traditional Māori music – refers to 'taonga' (anything prized) and 'pūoro,' which is comprised of the kupu 'pū' (origin/foundation) and 'oro' (reverberations/vibrations), so that as "a kupu, 'pūoro' looks at vibrations and origins of sound."[19] This helps to explain why taonga pūoro does not sit easily within a Eurocentric understanding of music, but rather is typically understood as being located within rongoā Māori (Māori wellbeing practices). As the eminent taonga pūoro expert Horomona Horo puts it, "Taonga pūoro is rongoā." (Horo, pers. comm., 6 September 2023)

Some further explanation is needed here. The domains of 'music' and 'health' are typically distinct in Western taxonomies, with understandings of health arising from traditional differences between being well or unwell. Since Eurocentric ideologies have historically positioned indigenous Māori cultures as 'savage' or 'exotic,' mātauranga Māori has tended to be framed in terms of the mystical or esoteric. Understanding taonga pūoro as rongoā therefore requires a willingness to understand cultural knowledge as being in the everyday, as lived experience. As Horo puts it when describing the practice of playing a pūmotomoto into the fontanelle of a new-born:

> In terms of the child, it's used in process of one's growth. That's not really saying that the child is sick, that the child needs help. That's playing the instrument to the fontanelle, because the name of the instrument depicts – translates – as the fontanelle. It's not used as a healing mechanism, it's just an instrument that's used in the development of that child. It's just used to bring comfort – like any other type of music.

> (Horo, pers. comm., 6 September 2023)

Taonga pūoro can here be understood in a complementary or holistic manner, in relation to everything else also going on: "it's a combination of things, like a recipe." (Horo, pers. comm., 6 September 2023) What music and sound are, however, depends on the lens through which they are viewed. For instance, the late Pākehā taonga pūoro practitioner Richard Nunns identifies how, in Māori traditional healing practices, some tohunga rongoā (healing experts) would use stones sized to an "afflicted organ or joint, and tapped the stone with a rod also made of stone [making]

adjustments to the position of the stone according to the sound [...] When the stone was positioned to the tohunga's satisfaction, karakia began and the stone, chosen for its porous qualities, drew the infection from the identified site."[20]

Nunns goes on to suggest that such practices "may indicate an aspect of traditional healing knowledge that parallels bio-electric points and acupuncture meridians, and ultrasound treatment."[21] Ultrasound problematises terms like 'sound' and 'music' by bringing attention to sound being a type of wave energy, where waves are "disturbances in the medium, not materially discrete entities (particles)."[22] Taonga pūoro as rongoā is informed by cultural knowledge systems that understands sound as part of the language of movement, rather than one that classifies sound, music and language as belonging to different categories. As Horo rhetorically asks: "What is the difference between pūoro and waiata (songs)? In te reo Māori, they're one and the same." (Horo, pers. comm., 6 September 2023)

Language, then, prescribes the conditions of knowledge. It is not neutral or innocent of affect, as the vital materialist Jane Bennett (2010) identifies when she recognises the necessity and difficulty of attempting to rewrite "the default grammar of agency, a grammar that assigns agency to people and passivity to things."[23] Similarly, the quantum physicist Karen Barad is adamant: "Language matters."[24] There is no Cartesian rift between thinking and being – language itself is performative, in that it forms part of the "practices of engagement with, and part of, the world in which we have our being."[25] By this Barad is not just referring to the symbolic or representational power of language to affect change in the world, but to the material aspect of language itself. The word 'performative' for Barad does not refer to performance in the same representational sense that an actor performs, but instead draws attention to the way actions in the world enact meaning. Performativity in language "is not to *describe* my doing of what I should be said in so uttering to be doing or to state that I am doing it: it is to do it"[26] [italics in original]. For example, the bio-electrical functioning of our neurons when we think, the vibrations of our speech and the binary electrical power oscillations that Artificial Intelligence (AI) systems such as Chat GPT3 require to access its 175 billion parameters[27] all form part of the material substrate of language in its articulation. Understanding the performativity of language is to engage with its discursive aspects, not simply within the power relations of communication, but as "the material conditions for meaning-making."[28]

Barad's primary metaphysical concern lies with the Eurocentric claim that there is always an in-between or middle ground between entities, as suggested by the prefix 'inter-.' Coining the neologism 'intra-action' which *"signifies the mutual constitution of entangled agencies"*[29] [italics in original], she identifies that phenomena are always co-constituted, which is to say that *"agencies are only distinct in relation to their mutual entanglement; they don't exist as individual elements"*[30] [italics in original]. Her use of the prefix 'intra-' is an attempt to redeploy the English language in order to acknowledge that language itself has agency. She is trying to more clearly distinguish between the ontological implications of that which is within continuously emerging phenomena, on the one hand, and the epistemological implications inherent in a physics which asserts that there are different subject positions in-between discreet entities, on the other.

It is unsurprising that mātauranga Māori about sound and language is not more widely known beyond te ao Māori. There is a long history of Eurocentric ethnographic bias that presumes its own cultural superiority, with the influence of Latin grammar simply forming part of the Enlightenment

era's self-proclaimed trajectory of progress. For instance, the "logic of English grammar (object: passive; subject: active) reflects and reproduces a Western subject-object dualism"[31]. This hidden aspect of Eurocentric cultural syntax is still common, as the original call for this journal's issue demonstrates. Authors were invited to submit responses in relation to the Latin prefix *inter*– inadvertently reinforcing a Western cultural claim that not only is a middle ground between differentiated entities possible, but is universally achievable. The danger of not being alert to our own cultural syntax is that the very language we use reinforces materially discursive claims as to what reality is and how it operates: "The difference between Western and Indigenous languages is reflected in divergent worldviews or concepts about reality."[32]

This is not simply a translation problem. Eurocentric epistemological emphases that divide the tangible from the intangible, past from present, human from non-human, do not readily grasp Māoricentric ontological emphases that are premised on the dynamic relationality of all entities across a fluid understanding of space–time. The kupu whakapapa, for instance, is often erroneously translated as 'genealogy,' but is "made up of the causative prefix 'whaka-' and the stem word 'papa' with a literal meaning of ground or layer, and which calls to Papatūānuku (Earth Mother) at every utterance (Mika, 2017) – hence giving the meaning of 'to make layers' or something like 'generative' (Barlow, 1991)."[33] There is no separation between the tangible and the intangible or the material and the spiritual embedded within whakapapa, because whilst "one most evidently stands upon 'papa,' one also stands *within* and *due to* it. That is, it (she, Papatūānuku) organises us in her construction of us."[34]

Te ao Māori does not assume distinctions *between* entities, but rather acknowledges co-emergence and relationality *within* entities. Carl Mika makes this point when he talks about a shared theme of many indigenous writers, which he terms "worldedness." This "relates to the confluence of all things in the world, such that there is an underlying, driving move of all those things to be in conversation with each other."[35] Concerned as he is with the colonising influences of a Eurocentric metaphysics of presence, which he recognises as partly being reinforced through the "language medium,"[36] he identifies that from a Māori worlded understanding, "one is always contingent on things in the world (and things in the world are themselves language in a Māori worldedness, to the extent that they are both constituted by/ constitute language, and arrange themselves so that the self gives expression to the world in particular ways)."[37]

Barad's intra-activity, which recognises that "distinct agencies do not precede their interaction,"[38] may only partially provide access to what Mika is describing for, like many Western writers reconsidering Kantian metaphysics,[39] she remains grounded in a material realism that does not readily admit spirituality, woven[40] with materiality, or otherwise. This is a good illustration of how different cultural knowledge frameworks don't have one-to-one correspondences, for material realism usually assumes a Eurocentric bias that distinguishes between spirituality and materiality as distinct categories. As a result, European cultural anthropologists have traditionally misunderstood Māori Indigenous spirituality as animism. Absent from this appraisal is a lack of self-awareness about how material realism itself arose from the European Enlightenment's own struggles between scientific rationalism and idealism, as informed by a Plato-informed Christianity that identified the spiritual as lacking materiality. This, coupled with a further lack of knowledge about distinctions between mauri (regenerative life-force), hau (the breath of life) and wairua (spirit or soul), helped to inform an ongoing history of "lingering racism and evolutionism that motivate distinctions between the animate and the inanimate."[41]

That the tangible and intangible exist co-instantaneously in te reo Māori is not just a reflection of a cultural 'belief.' As the president of the Association of Tertiary Learning Advisors of Aotearoa New Zealand (ATLAANZ) Tania Oxenham puts it, the syntax of te reo Māori "derives from the reverberations heard and received physically and spiritually, and its transmission or interpreted translation into the spoken word." In other words, there is no separation between the physical and the metaphysical in te reo, because there is no Cartesian-informed separation between the words used and the ideas conveyed. Rather, each kupu, each spoken word, "has its own mahi (work/ performance)" to achieve. (Oxenham, pers. comm., 19 May 2023) What is important is how te reo as it is spoken addresses the whakapapa of each 'thing' under discussion. This aspect of te reo has been missed by those more accustomed to judging written literacy as superior, not least because "dominant (Euro-American) cultures have a strong ethnocentric bias that honours the written text over the oral form."[42]

Eurocentric conceptions of symbols, writing and images have been historically informed by the ancient Greek idea of *logo*, which is a graphical mark derived from the word *logos,* defined as logic or reason as articulated through human speech.[43] Within the European cultural imaginary that identifies the philosophies of ancient Greece as the birthplace of civilisation, further examination of logos reveals a humancentric bias that distinguishes between the intangibility of ideas and the tangibility of material forms. Aristotle for instance, makes the claim that "raw" material forms are different from their non-material essences.[44] Similarly, Plato holds that objects in themselves are fundamentally unknowable, but that their "pure forms" exist independently from them as Ideas.[45] The influence of this embedded cultural syntax cannot be understated – both Aristotle and Plato informed Christian conceptions of heaven with a God as a divine architect, where "God first created an intelligible world akin to the Platonic forms and thereafter the sensible world."[46] Further reverberations of these culturally informed metaphysical distinctions between ideas and materiality exist through Descartes and Kant, articulating themselves in the Shannon-Weaver model of communication,[47] semiotics, and cybernetic conceptions of data as existing independently to material form.[48]

Returning then, to the mahi of the kupu pū and oro, and their associations with origins and reverberations, requires an understanding that sound is not a passive sensory perception, but is at the beginning of things in a non-linear way because, as previously mentioned, time in te ao Māori is relational:

> In essence, the Māori world is viewed through a genealogical matrix of complementary but different counterpoints – generative dualisms (Tapsell 1995) – which is symbolically summarized by the spiral of creation or Takarangi. This complex double spiral embodies moments in time where two disparate streams intersect to generate a new consciousness. The intersectional moment represents the point of creation where the past continuously meets the future.[49]

The reverberations of oro are therefore not stuck within a codified and easily forgettable past, but within the co-created moments of now as it continuously unfolds. The cultural syntax of te reo is more like open-ended free-form poetry than the functional active subject/ passive object relationships found in English. Like the word pū, oro resounds at the core of things, as articulated by the kupu orokohanga, which is:

Sound emanating from the creation of life, the sound of the air, the sound of what we hear and don't hear, of the heard and the unheard, across creation. In the moments of the unfolding now. Oro is impartial to time. It's at the beginning, at the present, at the future. The activity of oro – the different manifestations of oro, not just the sound but every moment, is a captured sound. (Oxenham, pers. comm., 19 May 2023)

Oro exists in the material and the spiritual simultaneously because they are not separated, but rather "the material proceeds from the spiritual and the spiritual […] interpenetrates the material physical world of te ao Mārama."[50] Oro is therefore unburdened by the need to situate origins as belonging to past–present–future causalities. Its activity is vibrational because sound is at the origins of things – it refers to the energies themselves. Compare this to the meaning of the word whakapapa, which is not the same as genealogy in a linear, materially causal sense, but refers to the generative layers that bring relevant awareness of the material and situational aspects at hand. Being organised and constructed within Papatūānuku[51] means that whakapapa helps to identify the patterns of ongoing journeys, not the material forms themselves. As Horomona Horo puts it: "It's the patterns that are important not the materials – it's the patterns that create the connection, it's the patterns that bring those different things into accountability." (Horo, pers. comm., 26 May 2023).

Emphasis on identifying patterns does not also imply that materiality is unimportant, in the same way that Eurocentric traditions celebrate abstract knowledge but, rather, the presence of materiality is acknowledged because there are always relationships with the natural world as it unfolds: "Pū and oro relate to the material, we are always in the material" (Horo, pers. comm., 26 May 2023). Materiality is, as already stated, not atomistic but reverberates with different types of energies. Post-humanists and new materialists may even recognise these energies as material agencies, or describe them as agentic capacities, but these terms are freighted by a habituated syntax which has been normalised across its own enculturated milieu. Once more, here is the difficulty of attempting to reconcile concepts across different knowledge frameworks, for each has its own shaping of the knowable and the unknowable, and who or what has agency, along with how knowledge is engaged with.

In Eurocentric trajectories, the desire to escape human finitude and know the unknowable has been taken to be self-evident, because the pre-conditions of knowledge rest on human exceptionalism and the pre-eminence of humans within a strict vertical hierarchy of relations. Māori cosmogony does not subscribe to this schema – the unknown is always present because the positionality of humans in the orders of creation means that we are only the most recent arrivals after the rest of te ao Tūroa (the enduring/ natural world). We are latecomers in the order of creation and need to acknowledge that we only have a small part of the knowledge of those that came before. As the Waikato–Tainui kaumātua Tame Pokaia puts it: "Humans are the juniors, they are the seniors."[52] Since it is not just humans who are knowledge-holders, language is not the sole provenance of humans and the agency of language is not limited to human agency: "Indigenous belief […] thinks about language as a thing in its own right and tends to source language in what is not present as much as the visible world."[53] The vibration/reverberation of oro in language and sound makes itself felt, communicates, across persons human and nonhuman. Taonga pūoro can now be understood in a way that transcends instrumentalism:

> An instrument is just a material until a person gives a piece of their mauri [generative life-force], their ngākau [spiritual force] into it. The vibration, the energy, can break through. Persons are not always human. Persons can be classed as the species of life – can be, for example, rocks. Who's to say a rock or a tree doesn't breathe? It just doesn't breathe like humans. We know this by the way it changes. (Horo, pers. comm., 26 May 2023)

When this understanding of personhood is compared to the Latin prefix 'non-,' it becomes clear that distinctions between who or what has agency in the world are baked into language. The differences between human and non-human enables objectification as much as discrimination, which legitimises particular types of behaviour towards nonhumans. For instance, identifying animals as nonhuman means that "these categories *can* be deployed nominally and descriptively so that such violence can be deployed to this or that specific animal. 'Animal' in other words, is one of the ways we say 'Other.'"[54]

Such ontological violence through the unconscious replication of cultural syntax operating within language isn't just cause for environmental or cultural concern, but has ramifications for Informational Technologies (IT) such as AI. The apotheosis of the Cartesian and Kantian bifurcation between the intangibility of agentic human thought and the tangibility of dumb and inert matter is illustrated through the notion that data as information operates in an atomistic manner and is divorced from its originary contexts. Based on the semiotic theories of Saussure, Pierce and, later, Barthes,[55] the division between signifiers and what they signify underpinned much of Eurocentric understandings of 'classic' communications theory. Following the Second World War, the forerunners of early cybernetics turned to mathematical models as a means to theorise what was not yet technologically possible, concluding in the process that the "semantic aspects of communication are irrelevant to the engineering problem."[56]

In te ao Māori, whakapapa provides the relational context to data. The originary context(s) of data determines its relative importance: "Personal data, which relates to the individual, carries a high level of sensitivity and should therefore be considered a taonga. Utility also influences perception when contemplating whether data is a taonga."[57] Often translated as anything that is highly prized, taonga are not limited to material objects and, as Sir Hugh Kawharu describes, refer to "all dimensions of a tribal group's estate, material and non-material – heirlooms and wahi tapu, ancestral lore and whakapapa, etc."[58] All taonga therefore have whakapapa – they are intergenerationally connected through layers of relations, across time and space, across the tangible and intangible. "All data has a whakapapa (genealogy) and a mauri"[59] affirms the agency of taonga, so that data as taonga "do not necessarily need subjects to think them (but may themselves call forth or *produce* selves – and thought)."[60] In other words, data continues to have agency regardless of where it is in the world – there is no ontological separation between data and its originary contexts.

In the era of AI, the originary context of data is not always derived from human sources. Synthetic data, such as those produced through algorithms and the like, appears to problematise the determination of relative context. However, since whakapapa privileges the relationships between entities rather than the entities themselves, then any data that has *any* relationship to te ao Māori can be considered from a Māori perspective. As Karaitiana Taiuru puts it: "Any synthetic data that is created by an individual Māori person or collective, uses any amount of Māori Data, whether anonymised or not, is still considered to be Māori Data as it has a genealogical connection to Māori Data or a Māori person."[61]

Whilst the collective term "machine intelligence"[62] can be used to encompass AI, big data, ubiquitous computing, the Internet of Things and other internet-enabled computing practices, then what intelligence is needs some attention. IT as a domain has tended to consider intelligence as informed by neuroscience and its positivist/realist assertions of how the human brain functions. For instance, the term 'neural networks' is used to describe the Deep Learning of AI and refers to how multiple series of comparative 'loops' of information operate, in order to ascertain new knowledge experience against what is already known. Knowledge in this context is understood to be quantitative, performing logical operations on non-static numerical values in order to organise and predict. These "generalised back-propagation algorithm[s], with many hidden layers, for training neural networks"[63] take for granted that data stands in for things in the world. In other words, AI doesn't just subscribe to Cartesian and Kantian epistemological frameworks that assume a division between human rational thinking and materiality, it actively automates them. Following Barad, this automation of knowledge production is a materially discursive practice, because the agency of the apparatus itself must be acknowledged as co-constituting the phenomena that emerges. The back-propagation algorithms, culturally specific claims that data stands in for what it represents, binary operations, neuroscientific assertions about how the brain works, electrical and material substrates, practices of surveillance capitalism, etc., are all implicated and entangled with one another, through their relationships.

It is useful to consider how the internal debates of neuroscience have historically informed Deep Learning, particularly its essential dependency on mathematical operations. Long-running arguments that contributed to the development of AI centre on whether or not speech is the primary way that humans think, as informed by the same cultural–historical trajectories that computing itself emerges from. One of the goals of AI is language prediction – inclusive of sounds, images and text – with arguments about the relative efficacy of competing syntactical or probabilistic claims. Despite early support, syntactical approaches proved difficult to implement because the 'rules' of grammar proved to be notoriously inconsistent.[64] Consequently, probabilistic approaches are now the dominant methodology employed by machine learning. Whether rules-based or probability-based, both approaches take for granted Eurocentric realist claims that causality and logic are the only possible ways to gain objective truth. The key issue for AI that uses billions of parametric nodes is one of correlation versus causation, where probabilistic approaches cannot intrinsically understand the meanings of language in any causal contextual sense.[65]

When big tech owners such as Elon Musk and Bill Gates themselves start to question the safety of their own AI,[66] to what extent can the universalist claims that data operates independently from its relational contexts be understood as a new type of colonialism? Whilst adhering to these claims provides the logical prerequisites for the mathematical operations of digitality, they depend on rationalist assertions that objectivity is possible through recourse to a priori truths, which are themselves dependent on human exceptionalism to cognise them. When machine intelligence replaces human cognition, then thinking itself is jettisoned in favour of process. The underlying goals of this model therefore require closer examination and it is useful to consider the links between machine intelligence and the influence of the realist behavioural psychology of Planck, Meyer and Skinner. Machine intelligence's emphasis on probabilistic prediction now becomes evident, for these three believed that societal harmony could only be achieved through relinquishing the unpredictable through behavioural modification.[67]

These sentiments are echoed by the influential director of MIT's Human Dynamics Lab, Alex Pentland, when he identifies "the need for "new predicative theories of human decision making" as well as "incentive mechanism design," an idea that is comparable to Skinner's "schedules of reinforcement."[68] Shoshana Zuboff argues that the utopian discourse of AI is underscored by a belief that behavioural psychology is not geared towards human emancipation, but rather towards "corporate objectives."[69] In order to map, organise and make predictions about humans or others, it becomes necessary to use a "physics-based representation of human behaviour"[70] in order to perform the requisite differential calculus. All becomes instrumentalised data in order to enable "the transformation of business models from 'guaranteed levels of performance' to 'guaranteed outcomes.'"[71]

Whilst concerns about cultural bias in AI are usually met by those working in the field with the claim that AI can be trained to detect such biases,[72] there's little acknowledgement that the practices of feedback weightings of statistical probabilities are themselves culturally freighted. Prediction of events using mathematical operations is not the same as observing relationally informed phenomena as it unfolds. Notwithstanding Zuboff's claims of surveillance capitalism, the goal of prediction needs to be considered from its specific culturally discursive frameworks, rather than assuming a one-size-fits-all model. For instance, when Microsoft CEO Satya Nadella says the goal of machine intelligence in the form of cloud computing is to "anticipate and pre-empt variations from the norm before they happen,"[73] then whose norm is he referring to?

That the predicative goals of AI centred on speech and human thinking have difficulty with understanding context is perhaps indicative of a cultural framework that is used to the authority that its universal claims have traditionally provided it. And yet, different cultural syntactical patterns or organisational grammars by which meaning is co-constructed do not operate in the same way across cultures, but rather "diversity can be found at almost every level of linguistic organization."[74] That AI methodologies can produce the appearance of language does not also mean that it understands the substance of it. As Māori data sovereignty expert Sonny Ngatai puts it: "Te reo [is] not just about stringing words together like a chatbot."[75] Statistical and probabilistic approaches to machine learning are not, for instance, particularly adept at metaphor or poetic contexts. Given that much of te reo Māori relates meaning through poetic or metaphorical modes, it seems unlikely that AI will be able to produce much more than surface-level kōrero (conversation).

What this all calls into question, in terms of understanding sound and language as being foundational across cultural frameworks, is what could the word 'syntax' encompass beyond its Eurocentric linguistic origins? Can a more relational, eco-centric understanding of the world be fostered through abandoning syntax which re-inscribes a culturally specific ontological violence of human exceptionalism, bound to positivist norms of prediction? An example in English would be forsaking the prefix 'inter-' in favour of 'intra-,' which acknowledges nonhuman agencies whilst ditching atomistic binaries. Notwithstanding these questions, better awareness of cultural syntax and its role in shaping the preconditions of knowledge is likely to be of use to those post-humanists and new materialists attempting to depart from the linguistic turn. Perhaps a new definition of syntax could be informed by the vibrational energies of oro, which are interpenetrative, impartial to time, and where the patterns themselves create connections:

Oro is the shaper of syntactic meaning-making. Without oro, syntax is meaningless as it is the very reverberation of life, death and in-between carried through into conversations, into waiata, into the poetry of whaikōrero or the brevity of the pao. Oro in instruments reflect the winds, the oceans, the birds and tangi of each animate and inanimate object; a beat, a pulse, a whisper, a touch to the skin. (Oxenham, pers. comm., 30 May 2023)

Ngā mihi nui ki a tātou.

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TARUNNA SEBASTIAN AND ANGELA GIOVANANGELI

ABORIGINAL LANGUAGE REVIVAL: THE INTERSECTIONALITY OF LANGUAGE PRACTICES

ABORIGINAL LANGUAGE REVIVAL

Aboriginal language revival is a recent phenomenon in Australia.[1] Prior to British colonisation, Australia had over 250 distinct languages that could be subdivided into 600-700 dialects; clearly, Australia was composed of "multicultural and multilingual societies."[2] Today only 18 Indigenous languages are spoken by all generations of people within a given language group.[3]

In response to the urgent need to protect Indigenous languages, in August 2009 the Australian government launched a strategy titled *Indigenous Languages – A National Approach 2009* (*Social Justice Report 2009*). It highlighted the government's plan to preserve and revitalise Indigenous languages through targeted actions. In 2015, the Australian Curriculum, Assessment and Reporting Authority (ACARA) released the Australian Curriculum *Framework for Aboriginal Languages and Torres Strait Islander Languages*, providing a tool for Australian schools to support Indigenous language education.[4] Further to this, in 2016 the state of New South Wales (NSW) introduced Indigenous languages in the secondary school curriculum, with other states following. Australian universities are increasingly offering tertiary courses in Indigenous languages.

Subsequently, the *Aboriginal Languages Act 2017* was passed in New South Wales, with a five-year plan to reawaken and nurture Aboriginal languages. The Act specifically acknowledges that Aboriginal languages are part of the cultural heritage of NSW while recognising the significance of reawakening and nurturing these languages in order to reconnect Aboriginal peoples to their culture and heritage. Importantly, the Act acknowledges that "Aboriginal people are the custodians of Aboriginal languages and have the right to control their revival and nurturing."[5] In 2023, NSW is the only state in Australia to have an Aboriginal Languages Act. The introduction of this Act is a reversal of assimilationist policies in Australia that prohibited the use of Aboriginal languages throughout the mid-twentieth century.

Meanwhile, Aboriginal Elders play a key role in reclaiming language and their voice in the policy arena by contributing to radical pedagogies and healing through language revival programs. To this end, Aboriginal scholars in Australia see their work as drawing on generations of Elders, particularly in the context of Grandmother's Laws, and their contribution to resistance, the challenging of stereotypes and a focus on survival as an outcome.[6]

As a result of these developments, competing tensions exist in Aboriginal language learning, with government policies on the one hand providing Western models for language learning within educational institutions while, on the other, Indigenous Community-led structures are informing vital ways of recentring language pathways.

This paper builds on and contributes to the ongoing work on Aboriginal languages in Australia by examining the intersectionality relevant to the revival of Aboriginal languages. The aim is to understand the ways in which different knowledges intersect and interact to shape experiences of oppression, resistance and privilege, in order to address and challenge systemic forms of inequality and discrimination. This study draws on a framework informed by the relationship between Aboriginal knowledges and pedagogies.[7] This framework acts as a useful, yet destabilising element that brings into question how teachers teach and what systems of knowledge are applied. We also extend this framework to the concept of intersectionality, which is set in a history of challenges and resistance to ongoing systemic racism.[8] The intersection in the context of Aboriginal language education is a space of friction where Aboriginal educators work to resist the ongoing effects and challenges of colonisation and to secure their human rights.

The study draws on interviews with Aboriginal educators in both an Australian educational institution and their local community context in order to examine the relationships between people and society in the process of language revival, as well as the challenges posed and solutions offered by the ways in which various forms of knowledge intersect. The education context is located in the state of NSW and focuses on specific Aboriginal languages from Countries located within this state.

KNOWLEDGE AND PEDAGOGY

Differential power relations between individuals and structural inequities intrude into the very heart of teaching and evaluation of Aboriginal language pedagogies and curricula. Michael Apple framed the problem of differential power in a series of questions that became the basis for an educational theory investigating the power and politics of difference in teaching and learning.[9] Such a framework informs the moral and political dimensions of Aboriginal language education in Australia, which centre on questions including how knowledge is organised and transmitted, whose knowledge matters and whose interests are served by the production of such knowledge.[10] In this context, therefore, differential power relations foreground how dominance and subordination are reproduced, critically examined and resisted in society through Aboriginal language transmission.

Within the context of Aboriginal language revival, conflict has arisen between Aboriginal Nations. This is due to the ongoing effects of colonisation and structural inequities over what is regarded by some as privileging the teaching and learning of one language and cultural group over others. These tensions are identified by the *Social Justice Report 2009* as the result of colonisation and

decades of Australian government policies and practices banning and discouraging Indigenous people from speaking their languages during the assimilation years commencing in the early 1900s. This report has shown that current Indigenous language policy in Australia is inconsistent and in some cases contradictory. On the one hand, the Commonwealth has a national approach that values Indigenous languages and supports their preservation. On the other hand, some state and territory governments have policies that limit Aboriginal language teaching in the interests of promoting English-language literacy.

At the same time, research on the revitalisation of Aboriginal languages suggests that a lack of coordination in resource sharing and teacher training are the biggest challenges to be faced in Aboriginal language teaching and learning in Australia.[11] This lack of coordination is complicated by the fact that there is a diversity in language visibility and approaches, with a wide range of views on education held by the Aboriginal community. Koch's study of Aboriginal languages reveals that "the lack of qualified teachers of the language in the communities is an inhibiting factor."[12] This teacher shortage is complicated by the fact that many languages have been depleted by the loss of significant amounts of linguistic and cultural knowledge and may not be used on a daily basis.

Further challenges include resistance by some Aboriginal communities towards non-Indigenous people "learning languages or even having access to them."[13] Despite these challenges, bodies such as First Languages Australia are playing a role in developing a national framework to provide the guidance and support required by "local communities and schools for the development of local Aboriginal language or Torres Strait Islander language curriculums."[14] In the area of curriculum development, fundamental questions arise regarding the relationships between different Aboriginal Community groups and their languages competing against each other. Another dimension of this inquiry – beyond curriculum or content knowledge – is the connection between the pedagogy of language learning and the colonial history and politics of Aboriginal languages.

Pedagogy is best understood as a complex encounter between knowledge and the learner.[15] Pedagogy as a concept draws attention to the process through which knowledge is produced, transmitted and reproduced. In the context of Aboriginal language teaching and learning, concepts of teaching as knowledge delivery and learning as knowledge transmission – where knowledge is at times limited – involves complex, indeterminate and unpredictable pedagogies. The contexts, relationships, subjectivities and texts of an Aboriginal language, language learner and teacher are intertwined, connected and unfolding. This reality calls for a holistic approach to understanding pedagogy.

LANGUAGE LEARNING IN THE SCHOOL CONTEXT AND COMMUNITY-LED INITIATIVES

According to the *Report on Professional Learning to Support the Teaching of Aboriginal and Torres Strait Islander Languages*, produced by First Languages Australia for the Department of Education, Skills and Employment, the demand for formal language training "continues to grow" for people who are keen to teach Indigenous languages in schools.[16] Similarly, Mary-Anne Gale's study on the South Australian educational context suggests that there is a strong "demand from schools wishing to introduce Aboriginal language programs … with many schools actively seeking teachers of Aboriginal Languages."[17]

To qualify as a teacher of an Aboriginal language, a person needs to complete a course delivered by a registered training organisation. The report by First Languages Australia points out that in Australia, while each state and territory has clear pathways to becoming a classroom teacher, "virtually no state and territory has a clear pathway for those who wish to become an Aboriginal and Torres Strait Islander language teacher."[18] The various states and territories across Australia have diverse approaches to Aboriginal language teacher training pathways. In some states and territories, Aboriginal languages educators are often employed as teaching assistants or Aboriginal education workers, administrative or support staff, or as contractors.[19] In NSW, the state in which this study is situated, Aboriginal languages teachers in specific areas can be employed through an initiative known as the Language Nest program.

NSW ABORIGINAL LANGUAGE AND CULTURE NESTS

The Language Nest program first originated in New Zealand in the 1980s, as a part of the Māori language revival program. It has been successful in New Zealand and in Hawaii. In Australia, support for a similar initiative has come from various sectors. For instance, the NSW government's community-focused 2013 OCHRE Plan for Aboriginal Affairs has supported five language and culture Nests. Furthermore, the NSW state government, through the NSW *Aboriginal Languages Act*, has prioritised the revitalisation of critically endangered Aboriginal languages by supporting the implementation of the Language Nest initiative.[20] In addition to this, the NSW Aboriginal Education and Consultative Group (NSWAECG)[21] and the NSW Department of Education (NSW DoE)[22] have partnered to provide support for Language Nests.

Language Nests are programs for intergenerational language teaching and learning. Aboriginal Language Custodians, who are mainly Elders and language teachers from local Aboriginal communities, are critical for supporting the teaching and learning in these Nests. This program provides NSW public school children with exposure to language learning and acquiring fluency in their local Aboriginal language. NSW Language Nests are bound by public school districts and are found in the following NSW regional Aboriginal language areas: Bundjalung, Gamilaraay/ Yuwaalaraay/Yuawaalayaay, Gumbaynggirr, Wiradjuri and Paakantji/ Baakantji.

Through this program, educators can provide language classes at various schools under the supervision of a classroom teacher.[23] In terms of the NSW Education Curriculum requirements, Aboriginal languages are taught from the first year of compulsory schooling until the year before the final two years of secondary education (kindergarten until Year 10 or K-10). Furthermore, Aboriginal language study is not a mandatory subject. In 2024/2025, however, the NSW Secondary School Curriculum is planning to introduce Aboriginal languages as part of the Higher School Certificate (HSC – the highest educational qualification in NSW schools Years 11-12) component.[24] In terms of which Aboriginal languages are assessed, priority is given to the language of Country where the school is located.[25] The NSW syllabus website makes a point of stating that the "successful delivery of the Aboriginal Languages K-10 Syllabus" is "dependent on expertise and guidance from local Aboriginal knowledge holders and keepers, custodians and stakeholders to support classroom teachers,"[26] thus highlighting the role of local Aboriginal communities in the success and sustainability of Aboriginal language education.

Despite this, the challenge of identifying pathways for Aboriginal language teachers is an ongoing process, with calls for various initiatives to take place. Some of these initiatives target the need for vocational-level or tertiary education degrees to train Aboriginal educators in the area of language learning.[27] In the meantime, with the growing interest in language education, "a number of community language programs are developing non-accredited community language learning activities to help support educator language learning."[28]

COMMUNITY-LED INITIATIVES USING GRANDMOTHER'S LAW

Community-led initiatives draw on traditional structures centred on the role that Aboriginal Elders play in the transmission of Aboriginal languages, particularly Grandmother's Law. Grandmother's Law is one half of Aboriginal Law and stems from the Land. The Law was laid down by the Creator Spirits when the Land, its Nation and Language and the people belonging to it were created. According to this Law men and women hold equal positions, with reciprocal rights and responsibilities for maintaining societal harmony and balance in their own Nations. As Elder Betty Pierce, cited by Irene Watson, states: "We've got what we used to call Grandmother's Law, or Grandmother's Ways, Grannie's Ways … and the Grannies have got to stand up and the men have to remember that the Grannies, the women's stories are stronger than the men."[29] Aboriginal Law is also termed Business, Men's Business and Women's Business, and is managed jointly and separately by both men and women. Grandmother's Law holds the responsibility and obligation for sharing and passing down intergenerational stories, ceremonies, languages and cultural practices to future generations. Throughout this process, Aboriginal language is in itself a community, which connects kinship, Country, Land, Law and family all together to the self. This conception of self in Aboriginal culture is composed within a collectivist perspective that views the self as holistic and inseparable from, and deeply rooted within, Land, family, languages and community.

Throughout life, girls learn from women Elders, including Kinship mothers and Grandmothers. From the age of seven, boys progress their culture and language-learning journey through their male Elders, Kinship father and grandfather. These interdependent roles are designated as "Women's Business"[30] and "Men's Business."[31] "Grandfathers look outwardly, protecting home community, Land and camp."[32] Grandmothers look inwardly, teaching and nurturing younger generations to have respect and responsibility for caring for Country to benefit both Land and people and to maintain continuing cultural connections with family, Language and Land.[33]

Languages used in ceremonies through songs and dance are embedded in the spiritual and cosmological connections referred to as Dreaming, and form the basis of Men and Women's Business.[34] Aboriginal languages are living and deeply connected to Country, carrying encoded knowledge which guides both men and women through Country and are embodied through their gendered social roles and responsibilities to care for Country (Land, Sea and Sky). Women and men sing the histories of place, dance, practice art, tell stories and collect bush tucker (Native foods) on-Country, connecting both language and culture. They speak to their Totems and Ancestral beings in their sacred landscapes and seascapes. Language in these places carries cultural and spiritual restrictions based on age, Clan, Kinship and gender. For example, there are some Aboriginal languages that are gendered, and are only spoken by women and not men, and vice versa, and inform the inside and outside perspectives on Aboriginal languages associated with spirituality and sacredness. As Jane Jacob has identified, there are gender-based rules governing the knowledge of Traditional Custodians:

> To pass on such information would be a breach of [Aboriginal] [L]aws relating to women discussing '[M]en's [B]usiness.' Further, the very fact that some women are custodians of such knowledge reflects on the male member of the group who, in passing this information on, is also seen as not having complied with gender-based rules of secrecy, despite there being evidence to suggest that over time gender-specific song-cycles can become open.[35]

Dispossession from the Land, massacres, murders, prohibitions against language use and the forceful removal of generations of Aboriginal children, among a range of colonising practices and despite concerted resistance, have today undermined the fulfilment of language-related roles and responsibilities for many Aboriginal women, too often and for too long. Consequently, the present-day teaching of Aboriginal languages in educational contexts draws on the complex intersectionality of government legislation governing teaching training and Aboriginal Law, which understands language learning and nurturing in ways connected intimately to a community, the Land and the knowledge of Elders and Traditional Custodians.

RESEARCH SET-UP

In order to examine Aboriginal women's engagement with resistance to oppressive colonial Aboriginal language-teaching practices and policies, interviews were conducted with six Bundjalung, Gamilaraay and Wiradjuri NSW Language Nest educators in Sydney in November 2022. The six participants are women aged between 55 and 68, each with approximately a decade's experience of teaching languages in community in public schools at primary and secondary levels.

Out of the six women, three have family members from the Stolen Generations, whereby either one or both of their parents were forcibly removed from their families and communities by the Australian government. These members of Stolen Generations were forced to live with foster families and institutions with white carers in the context of Australia's assimilationist policies from the 1930s to the 1970s. Because they were only able to return to their Country in adulthood, there is a break in continuity and fluency in their Ancestral tongue. Given the small sample size, to ensure the anonymity of the participants, they have all been de-identified.

Within the context of the broader study, the main purpose of this paper is to recognise the role of Aboriginal women in Aboriginal language revival in the communities. These women navigate Aboriginal and non-Indigenous knowledge systems in their teaching, often motivated by a sense of language activism embedded within complex power relations. The participants' responses stem from their direct experiences and perceptions as women from the Bundjalung, Gamilaraay and Wiradjuri NSW Languages Nest, helping to shed light on and document the positive impacts of language reclamation activities in educational contexts, as well as to inform future policies relating to Aboriginal languages in NSW schools and community spaces. The themes that emerge from the findings centre on notions of belonging and knowledge, the role of Community Elders and language protocols.

BELONGING AND KNOWLEDGE HOLDERS

In the mid-twentieth century, ongoing government assimilation policies prevented the use of Aboriginal languages in schools favouring the use of the English language. Consequently, for some families there has been an intergenerational break in the learning of their Aboriginal languages. For teachers from specific Aboriginal language groups who invest their time in the teaching of Aboriginal languages, this disruption to their linguistic heritage is not uncommon and is a feature of their background as language educators. One of the participants in the interviews reveals this aspect:

> I learnt no Aboriginal language or culture as a child – it wasn't taught in schools in the 90s, it wasn't spoken in my family because my father was a member of the Stolen Generations. [Jane]

Another participant expressed a similar viewpoint:

> I never had spoken my language because my dad was a Stolen Generation. I didn't start speaking our language until I studied and graduated in Gamilaraay Language. Similarly, with those kids in my language school, [they] need to be taught our language and these students will be our future language teachers, but they're not regarded as role models by their schools. [Bernie]

One salient aspect of this language context is the lived experience of this disruption and its impact on some language teachers, shaping the way they understand the relationship between their language and its continuity and the importance of reviving and nurturing language for future language educators. This way of understanding Aboriginal language education is situated within a context of disconnection, manifesting in resistance and the hope of reclaiming the thread of language continuity through the Language Nest program in the school system.

In the context of language revival, for many of the participants in this study language is defined by the shared connection to community and their cultural identity. One of the participants, Bernie, stated:

> With Aboriginal people – our language informs our identity, and culture. I think for me and for most Aboriginal people, we grew up with community being the most important thing in our lives. It's not one person, it's not you who's the person, it's your whole community. [Bernie]

For this language educator the notion of pride is also associated with the way language learning strengthens students' sense of belonging to the community. She refers to the high motivation of students during their language learning journey:

> Gamilaraay language, it's mine, it belongs to the Community and that's our community's language. And I love the language and the students love learning about their Aboriginal language and culture – when I get to school on a Monday morning and the kids are like oh, we got you today. That is what makes me feel good, that is what makes me take more time, when the kids are keen to have language lessons. [Bernie]

At the same time, as a result of colonial disruption to many of the Aboriginal languages spoken in NSW, the authority of some of the participants as holders of language knowledge is often questioned. For instance, Jill, another Gamilaraay language teacher, states that people always question her Aboriginal accent. Yet, when she started teaching language, she challenged stereotypical assumptions:

> Sometimes my little accent comes through every now and then, and it annoys me when people say, "That's Aboriginal English." I say, "No, it's not that, it's my accent that's coming through." Now I confidently stand up, and I say to people, "I have an Aboriginal Ancestral mother tongue, my Aboriginal language that I should have been talking other than English and sometimes that comes through." [Jill]

> Aboriginal people have an accent. It annoys me when they say, "Aboriginal language," or "You talk mission," and I'm like, "There's no such thing as talking mission." It's just our accent that's coming through. Ancestral tongue. Yeah, when I can't spell something it's because I've only got 13 letters in my language, not 26. I was teaching a bit of Gamilaraay when I was at home, but that's about it. [Jill]

Despite these challenges to her knowledge, Jill has been able to build confidence within her student groups:

> When I taught out there, with the class that I had, I built a phrase that they could say, and it was, like, a normal phrase so that they'd just get used to speaking their own language and after a while they could speak it fluently, they didn't even have to read it up on the board, which was good. It was just, "Hello, my name is ***, and I come from Gamilaraay Country," and this is a place where two rivers meet, it wasn't anything fancy. It was where the Barwon and the Namoi meet. [Jill]

While Jill was able to overcome some of the stereotypical assumptions made about her language-teaching capabilities, other teachers have been faced with racist attitudes towards Aboriginal language learning. Bernie argues that not every teacher and student share the same attitude towards Aboriginal language learning. With past government assimilationist policies preventing Aboriginal people from speaking their languages, the systematic separation of people from their languages as a form of linguicide (language killing) persists in the current education system. One participant relates:

> My position in the school is the language and culture teacher. [I] love teaching, love my language and culture and [am] very proud, but it would be better to incorporate language into your school if everybody was on board. Currently not everybody is on board with the language and culture program. Unless we get the teachers on board and [get] all of them to respect our language and our culture, then we're not going anywhere, we're still going to go around in circles. [Bernie]

She adds that the Aboriginal language context is fragile due to the ongoing effects of past racist colonial policies which undermined Aboriginal languages:

> Very fractured, our community relating to our Gamilaraay language, and I can't even get all our teachers on board to say "Yamma" [hello] to the kids. Some non-Indigenous parents don't want their kids learning First Nations Language at all. No, it's just a tick box. Language is a part of our identity. [Bernie]

For educators teaching Aboriginal languages, finding support from teachers in their school can sometimes involve challenging implicit racism that undermines the value of Aboriginal languages.

THE ROLE OF COMMUNITY ELDERS

While the introduction of Language Nests and Aboriginal languages in the NSW school curriculum involves following NSW education-approved guidelines, Elders and Language Custodians also guide the learning of language and culture in schools and communities, giving local custodians cultural authority to teach younger generations. A Wiradjuri community language learner and a teacher, Lisa reflected on her personal language journey and the vital role of Elders:

> Uncle Ray passed you these stories and you are custodian of these stories, and you can go and teach so many people. And while he was teaching us Wiradjuri for over six months, his wife came in, who's now deceased, and we heard his stories and her stories, and as Elders. I just feel so spiritually strong that I got to hear that, because I was not only learning the language, to pass on to Wiradjuri students in the school, I was learning the culture of those stories, and that's the magic, isn't it? [Lisa]

For language educators, Elders share and pass on intergenerational knowledge and skills through their stories, language and culture to the future generations. Elders hold the responsibility for ensuring that their words are still listened to, that the younger generations are supported to know their language and to understand Country. Elders also provide individual mentoring opportunities for young people. Another Gamilaraay Language teacher, Julie, stated:

> But one of our boys had an Aboriginal mentor who was an Elder, and Brodie used to go and sit with him for hours. And they'd talk in our language. And he taught him all the food, the medicines, he'd take us out to see Aboriginal sites, etcetera. I know that Brodie has benefited from that, he's much stronger because of the cultural representation in his life than it was for the elder boy. And he wishes he had done the same. [Julie]

Some participants strongly emphasise that Aboriginal languages need to be taught by Traditional Custodians. According to Lisa, this aspect is more important than holding a teaching degree. For Lisa, Kooris (a term referring to some Aboriginal groups in NSW) should be the ones teaching language:

> If they want us to teach about Aboriginal languages, get a person, a Traditional Custodian, who usually comes from that local language area, to teach that element. I think that's something we can keep to ourselves, as Koori people, to be able to teach our way, and there's nothing more authentic than a Koori person teaching it. Because we use our ways of knowing, feeling, doing and being, and that's important and we connect it back to Country. It doesn't matter what it is, you can always connect it to Country, to people, or to place. It's highly localised, it's like a specialist local knowledge. I think even our Mob, when we've got them in the school, they may not have the teaching degree, but they're still teaching that knowledge – the Aboriginal language that they have is vital. [Lisa]

While the *Aboriginal Languages Act 2017* and the Department of Education 2024 strategy on teaching and learning Aboriginal languages acknowledge the role that Aboriginal community and Elders play in reviving Aboriginal languages, the Elders also understand their responsibility and are honoured and respected in their community. They embrace their role as knowledge keepers who connect their community to the past while forging a path for future generations. In addition, Elders as language custodians play an important role in cultural and linguistic continuity, as Bernie explains:

When I say that to the kids learning language at the school from K-10, [it] is very important to me because a lot of us work to revive language. We only heard words that our brothers and sisters said and talked about. Well, I only heard words then and I didn't know what they meant until I did the teacher training with our Elders. There was four or five Uncles, Elders, fellows who used to teach the language with us when the community first started teaching. Now, there's only one man who knows language in the Elders group and that's my uncle, who is sick at the moment. So now we don't have any fluid language speakers. [Bernie]

Bernie's concern for her language program reveals the fragile nature of the Aboriginal language landscape:

Our language program has been on and off, and there hasn't been any consistency since. I started teaching language and got offered the language teaching position. We've got an actual Elders group, but these Elders have only been there for a decade, so that's when I first started the training to learn language, when language first started coming into the schools. We used to go to a meeting at the Community centre every Friday and the female Elder would come in and take some ladies on Country. We have set up the Community Language Centre without these old fellows and teach Language, and at this stage there is no one here teaching language to the language teachers. [Bernie]

This last comment brings to the forefront the challenges faced by language educators when Elders are not available, due to Sorry Business (deaths, problems and illness), to support their language mentoring and to nurture their own learning pathways in their communities.

LANGUAGE PROTOCOLS

Language Nests are informed by teaching the true history and knowledge of the local area. This is not a 'one size fits all' approach to language teaching and learning, but is rather adapted to the context and the history of the local area. Consequently, the interview findings suggest that language teachers require protocols when using Aboriginal language in schools in order to address who teaches Aboriginal languages and how an Aboriginal language program is delivered. This is particularly relevant to how Aboriginal language protocols are understood by communities. For instance, Lisa points out that language and people are connected to Country and therefore community consultation is vital. Consequently, the findings suggest that Elders are crucial to supporting the teachers with language learning and culture. Lisa states:

The voices, opinions and the words around the room ... in Aboriginal language, it means nothing if the culture itself, the people and the feelings aren't there. Because people are the language and people are the Country, so community consultation is a massive role and incredibly important. It is quite difficult to engage quite a few community members, for whatever reason. They're off working ... [Lisa]

For Language Nest Elders and community educators of Aboriginal languages, this means that they are not only educating students within schools, but also other staff members. Often this aspect of language education is not visible in the school language curriculum. It represents a significant aspect of the language teacher's work in curating understandings around protocols for learning with Country and the ongoing relationships with Traditional Custodians of Language and Country. Bundjalung Elder, Maree, explains:

We've had two whole school staff development days so far. … We had a language one as well. … We're not just teaching the kids. We're teaching the staff. We're taking them on that journey too. I use that word a lot, but it's true, the journey, it's a Song Line. And for all of us to work together, kids and all, everyone needs to know about it. So, he [the principal] will come and consult with us if there's anything even relating to culture, he'll come and talk with us, whether it's individually or as a group. So, he knows the protocols, which is important, as every principal does, needs to. And he didn't know at the start and now he does and he's a different person, and I've got respect for him now. [Maree]

These protocols with non-Indigenous teachers are nuanced. Maree explains:

The true histories need to be taught [as] a compulsory subject in schools, [with] a flexible curriculum where the things that are learnt are local. There's Language Nests that are happening and we've ran our own language nest here, because it's Bandjalang Clan of the Bundjalung Country. There's Githabul, Minjangbal and Yugambeh dialects, so that's all – there's cross over? So, some of our words are very similar and some of our words are different, like buninge for echidna, and we say jena jena. For instance, a non-Indigenous teacher came with animal names for Githabul dialect the other day. I said to her, "That's not my language." She went on the internet to look up the word for echidna, assuming that we all have the same language – no way. But she's only been at the school for a couple of weeks and still learning. I said to her, "Let me change these and I'll put Bandjalang on there, but thank you for coming down and not going ahead with teaching incorrect Bandjalang Language in class." [Maree]

Maree's example unpacks the complexity of whose language can be taught, how it is taught and by whom, and why it matters. Accessing information off the internet and third parties creates tensions with the language keepers (Elders), teachers and learners. Sharing knowledge around language requires additional and deeper thinking around how Intellectual Property and protocols work in Aboriginal communities. These protocols also apply to Aboriginal teachers and language learners who are not Traditional Custodians of the local language. Bernie explains how these interactions are fraught with tension:

We've got Aboriginal teachers at the primary school from other Countries too. We don't work together and we're not all on the same page – we're going in different directions, which is sad. This Aboriginal teacher, instead of coming to me first, she photocopied a book that had some language words on it and then she's got language incorporated into her programs. She didn't ask me for permission to use the words first or even how it is used in a sentence – we have always asked for permission from the Elders. [Bernie]

Meanwhile, some of the participant responses reveal that not all language teachers understand the Aboriginal language policy and rely on non-Indigenous teachers, often teaching languages other than English, to explain the policy to the Aboriginal Language teachers. In such a context, one participant, Maree, explains:

A lot of policy stuff that I didn't know – but the people I work with sat me down and went through everything with me and explained. I had to do it and I did the job fine. Oh well, I know what I think and do, but yeah, but we don't get the opportunity to. [Maree]

RECOMMENDATIONS AND CONCLUDING REMARKS

Aboriginal languages are central to Aboriginal culture and identity. The loss of language is a source of grief for many. The number of Traditional Custodians who are fluent language speakers and who are available to pass their language skills on to future generations is diminishing due to Sorry Business of Elders, who have undertaken this important work in the past. Local Elders who contribute to teaching language in schools are knowledge keepers. Sound policies and relevant cultural protocols are essential in order to safeguard community interests and to protect the Intellectual Property Rights of Elders and the Indigenous knowledges of Aboriginal communities. This is significant both for current practice and to safeguard the interests of future generations. The narratives of the participants in this study reveal that policies are also needed to ensure that schools create culturally safe environments and develop programs which are relevant to Aboriginal communities, as well as culturally appropriate to the local context.

Examining Aboriginal language revival through the intersectionality of knowledge and resistance pedagogies is a starting point in the larger task of bringing to the surface the tensions and opportunities that exist in the space of Indigenous language education in the NSW school system. The narratives of the women given a voice in this paper identify the layers of protocols, policies, attitudes and beliefs that they navigate in order to secure a place in the education system to revive Aboriginal languages. Although this study of the revival of Indigenous languages highlights the challenges relating to the availability of local Elders, it also highlights current knowledge gaps in language pedagogy. The interview responses in this paper are timely and suggest that the pedagogy of language revival needs to include a political pathway with respect to the knowledge formation of both the teachers' professional development and the curriculum. As a result, the language program should be clear in acknowledging the relationship between Indigenous and non-Indigenous knowledge systems and between power differentials in the process of language revival. Likewise, the pedagogy of language revival should also include an understanding of the symbolic power of language as an inherent part of the diversity in the nation, while still recognising Indigenous people as representing the first culture of the land.

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WHAKAMANA TE TUAKIRI O NGĀ WĀHINE MĀORI I TE AO WHUTUPORO – FLOURISHING WĀHINE MĀORI IDENTITIES IN RUGBY: A LITERATURE REVIEW

This article presents a qualitative, autoethnographic exploration of personal realities and lived experiences in rugby. The literature highlights the potential harm of imposing a Westernised 'one size fits all' team culture, particularly in relation to its impact on Māori identity and aspirations. Herein we advocate for more inclusive environments that honour the intersections of diverse values, beliefs systems and perspectives of Māori, Pasifika and other marginalised communities. As an authorship team we sit within a research excellence group at the Centre of Indigenous Science. This space validates Māori and Indigenous identity, nurtures personal growth and embraces every facet of existence, from whakapapa to cultural identity, including our shared passion for rugby.

This systematic literature review pursues two primary research objectives: firstly, it aims to identify and compare the challenges confronted by wāhine Māori in rugby, examining both Western and te ao Māori perspectives. Secondly, it uncovers effective strategies for addressing these challenges, with the ultimate goal of safeguarding and empowering flourishing wāhine Māori identities (tuakiri) in rugby.

INTRODUCTION – "LIKE NEVER BEFORE"

This is it. As I take the field wearing the black jersey (iconic silver fern across my chest), with my sisters beside me, I hear the crowd chanting "Go New Zealand," along with my whānau (family) in the stands – my parents and brother's voices yelling, "Go Hine!" Time to leave it all out on the field, to give back to those who never doubted me and to show those who did, that I am good enough. As the final whistle blows the roar of the crowd tells us we've won, we did it! The first New Zealand (NZ) under-18 women's rugby sevens team to attend and win the Youth Olympic Games. As I receive my gold medal, I look to the crowd and see my whānau. My brother leads the haka (ceremonial war dance) "Ka mate" to us as we stand side by side in our own mana (authority), knowing that we have collectively made our childhood dreams a reality.

Reflecting, albeit auto-ethnographically,[1] I ponder what it means to be a wāhine Māori (Māori female) rugby player. I wonder what set that team apart from others I had experienced. Two values resonated: sisterhood and whānau. Encapsulated in these values was respect for all team members, managers and coaches included, no matter where they were from – in that team we were whānau (kin). Like the whakataukī (proverb) says, "E hara taku toa i te toa takitahi, engari he toa takitini – success is not that of an individual, but that of many." Everything we did was for collective success to achieve something special, "like never before." What made this team unique was seeing everyone as people before seeing them as athletes, recognising first our values and aspirations, then our individual talents. Throughout this experience we kept a healthy balance between personal and professional life – yes, to be better athletes, but more importantly, being better people.

Deeply rooted into our team culture was the mantra, "never before." This meant that nobody before us had done what we aspired to do – we were trailblazers. It also meant that we were leaving the jersey in a better place for those to follow. "Never before" meant so much more to me than winning gold. For I was the first in my whānau to represent NZ in any sport, the first of my Poppa's mokopuna (grandchildren) to step on the world stage, and the last he witnessed before passing away. The first Olympic medal any of my whānau had held, special for my Nan who passed away not long afterwards. Embedded deeply into my identity was a sport (rugby) that brought my whānau together.

Later, ironically, rugby would also become the very thing that made me question my achievements and capabilities. It became the thing that made me constantly question my worth and identity. Instead of being an escape from the stressors of everyday life, rugby became the very thing I wanted to escape … and so I did.

FAST FORWARD TO 2021

In September 2021, midway through the women's national Farah Palmer Cup (FPC) rugby championship, I made the decision to leave the sport in which, until then, I had experienced so much happiness, excitement and success. Essentially, I felt that my cultural identity, as a wāhine Māori, was not respected as the taonga (treasure) that it is. Consistently dehumanised, white-washed and tokenised, I felt like my hauora (well-being) was not flourishing within the rugby structures around me, to the point that I felt I no longer had a safe place of belonging. It was a difficult decision to make, but a necessary one when people categorised and judged me based on outdated racial stereotypes. Comments like "She is brown, she must not be intelligent, but ought to be fast and strong," or assumptions like "She can create our team culture, dance, lead our prayers and waiata (songs)." By means of "racial stacking,"[2] these stereotyped categories continually place ethnically diverse people under scrutiny in sport, because they do not conform to certain traits or characteristics perpetuated by hegemonic, white privileged discourse.[3]

Months later, I realised, however, that these experiences were not mine alone and were shared by others, including wāhine Māori in rugby.[4] For example, after the Black Ferns' (NZ's national women's team) disastrous Northern Tour in November 2021, Te Kura Ngata-Aengamate (a Māori rugby player) spoke out against ex-Black Ferns' head coach, Glen Moore, instigating a review into their team's culture and, ultimately, forcing a coaching 'reshuffle' just months out from the Rugby World Cup to be played in Aotearoa in 2022.[5]

For Ngata-Aengamate, now a former Black Ferns' player, similar experiences made her feel as though her cultural identity was a joke. She was constantly belittled by comments like "You were only selected to play the guitar," "You do not deserve to be in the team," "What would your students think of you?"[6] The continual disregard for her identity as a wāhine Māori or simply as a person (before being an athlete) made her feel isolated from her teammates. Her mana had been so diminished she felt that the only way to voice her concerns and raise awareness was by publicly posting them on social media.[7]

Ngata-Aengamate's post validated my own experiences. Having left the sport three months earlier, for similar reasons, I was still in a place of figuring out what I went through. I found comfort in knowing I was not alone in experiencing isolation and neglect. In only being seen when I could offer cultural aspects to the team, but soon forgotten because I had served my purpose.

Conflictingly, rugby has been both a site of identity reassurance and confusion. In a sense, rugby was the epicentre of who I was in my head, but in my heart, I knew this was wrong. With this tension came confusion. I questioned who I was outside of rugby, provoking questions like "Who am I outside of rugby?" and "How am I meant to lead a team or be the voice for wāhine Māori in my team, if I barely know who I am outside sport?" What hurt the most was that I was not alone in feeling this māmae (pain) because of the team culture, the leaders, the systems, everything. Although rugby provides a national and global platform for marginalised identities like Māori females to be seen and heard, there remain improvements to be made that allows wāhine Māori to be fully themselves, not diluted versions. Indeed, in NZ Rugby's (NZR) recent "Mind. Set. Engage" announcement, a rebrand of their "Headfirst" programme, NZR's culture and well-being manager, Nathan Price, said: "We're sometimes asking people to put on a mask when they're on the field, then asking them to take it off when they aren't. There is a bit of cognitive dissonance there ... we've created a mould of what it's like to be a rugby player, but that can be changed."[8]

Thus, there is an urgent need to better understand what can be done for wāhine Māori rugby players to be unequivocally themselves within these spaces. Therefore, it is necessary for culturally informed and appropriate structures to be created for and led by Māori, with Māori, rather than assuming that Māori are comfortable within the structures used to colonise their predecessors.[9]

Having set the scene through this anecdotal positioning and background context, we now focus attention on the study's aims and research questions.

RESEARCH AIM

The aim of this systematic literature review was to identify and compare issues facing wāhine Māori in rugby from both Western and te ao Māori perspectives and reveal how these issues can be addressed to safeguard and enable a flourishing Māori tuakiri (identity). The rationale for this research was to better understand wāhine Māori needs in rugby and to identify, from the published literature, how these needs can be best met. To scaffold this journey for wāhine Māori in rugby, we looked to understand the systems in place outlined in the published research, comprehend what this collectively expresses and close gaps that are yet to be filled.

RESEARCH QUESTIONS

Our overarching research question was: What does literature at the intersections of Western and te ao Māori perspectives discuss in relation to the flourishing identities of wāhine Māori in rugby? The sub-questions were:

1. What does mainstream discourse say about the needs and flourishing identities of wāhine Māori in rugby?

2. Utilising the Ngā Poutama Whetū Framework, what does te ao Māori discourse say about the needs and flourishing identities of wāhine Māori in rugby?

3. What do both perspectives have to say about the needs of wāhine Māori in rugby and how these needs can be best met to ensure the flourishing of tuakiri Māori?

THE INTERSECTIONS

In the following sections we explore the experiences of Māori in rugby, with a specific focus on the challenges faced by wāhine Māori. We shine the spotlight on the intersections of gender, racism and discrimination faced by wāhine Māori and the impact of these factors on their well-being and their ability to express their Māori identity safely. These intersections coalesce with a diverse range of viewpoints, including Western and Indigenous Māori perspectives, to provide an understanding of how unapologetic wāhine Māori identities might be nurtured within rugby.

EXPERIENCES OF GENDER INEQUITY FOR FEMALE RUGBY PLAYERS

Traditionally male-dominated, rugby has limited the growth capacity and capabilities of female players, coaches and managers.[10] Further exploration is needed to understand the aspirations of female rugby players beyond their physical and physiological needs. The lack of representation and visibility of females in rugby undervalues their skills and achievements, opportunities for growth and advancement in the sport.[11] Addressing these issues is crucial for promoting gender equity and inclusivity in rugby and providing female rugby players with support and resources for both their personal and athletic development.[12]

Male players, nationally and globally, receive generous compensation to support their families compared with professional female rugby players.[13] In contrast, females are forced to balance full-

time work, education and familial responsibilities with their rugby aspirations, without receiving fair (if any?) compensation compared with their male counterparts.[14] An outstanding example of this inequity is the Black Ferns who, until 2022, were expected to play rugby unpaid, or compensated well below the level of their male counterparts, the All Blacks.[15]

Although the Black Ferns hold six Rugby World Cup (RWC) titles out of seven contested, in comparison to the All Blacks' three RWC titles from eight, they were initially not budgeted to receive a bonus for winning, whereas the All Blacks each received a $150,000 bonus after their 2015 RWC win.[16] However, 29 full-time contracts were issued to the 2022 Black Ferns squad, where this select few got to live as full-time, professional rugby players, like their male counterparts.[17] It is necessary to understand these lived experiences of female rugby players, realities which makes this study important in bridging the equity gap between female and male rugby players, in sponsorship, contracts, support and visibility. Albeit a small step toward reducing this disparity, this study is valuable insofar as it validates the experiences of female players in rugby, both past and present.

With issues of gender covered, we now intersect gender with race.

RACISM – WHEN THE 'ODDS ARE STACKED'

Racism is defined as a global hierarchy ranging from superiority to inferiority, a structure that dominates all aspects of life and institutions to further subjugate marginalised communities, forcing them to conform to Western-centric, patriarchal and capitalist norms.[18] It is the structural process of racism that propels marginalised communities into an uphill battle to be seen, heard and supported for their ethnic, cultural and social differences.[19] Racism, oppression and subjugation are longstanding and persistent systemic issues that have continued to plague marginalised communities, like Māori, for centuries. The systemic and structural 'by-products' of colonialism have further compounded the disconnection and heightened intergenerational trauma experienced by Māori in all aspects of life, not just in sports.[20]

A common experience for ethno-culturally diverse sportspeople is "racial stacking."[21] Racial stacking is a phenomenon whereby non-white athletes are under-represented in leading and tactically astute positions, but over-represented in positions requiring strength, speed and stamina, as a result of unsubstantiated racial stereotypes. Thus, racial stacking limits the development of non-white athletes and hinders their ability to perform in positions outside their 'assigned' roles based on race.[22] Inherent within stacking practices are racialised assumptions about ethnically diverse athletes, usually to do with the fallacy of "biological race." Such assumptions perceive athletes as being physically dominant, while lacking the capabilities to be in decision-making positions.[23] Many of these racial assumptions were attached to both past and current tāne Māori in rugby. The existing scholarship supports this understanding of racial discrimination and shows that, instead of being culturally progressive and making changes to alleviate stereotypes and inequities, many systems in sports (including rugby) are counterproductive in terms of the development of non-white athletes outside the dominant white, heterosexual male identity.[24]

Thus, the next section briefly examines the intersections of race and gender for Māori men.

Experiences of racism for Māori men in rugby

The whakapapa (history) of tāne (men) Māori in rugby dates back to 1888-89, when the "NZ Natives" team toured the United Kingdom to 'showcase the colony' to Mother England.[25] One legacy of colonialism is intergenerational trauma and the subsequent impacts of this trauma on Māori identity, connection to self and whenua (land).[26] Hokowhitu highlights the perpetual negative stereotypes of Māori as savages and merely physical beings, stereotypes echoed by dominant white New Zealander narratives. Racial stacking, combined with other forms of colonialism such as racialised education and racially driven propaganda, helped solidify the image of Māori culture as backwards and stagnant.[27] According to Hokowhitu, the legacy of these racial stereotypes, embedded in the foundational structures of rugby,[28] despite perceived changes in attitudes and approaches over time, still remain deeply ingrained in the game.[29] It is crucial to acknowledge the experiences of tāne and wāhine Māori in rugby both separately and collectively, as while we can acknowledge the similarities in their experiences, we must also recognise the nuanced obstacles they may face in terms of social subjugation, identity expression and impacts on well-being.[30]

The following section highlights some of these nuances, specifically regarding wāhine Māori in rugby.

Experiences of racism for wāhine Māori

Although rugby in NZ is founded on structures that oppress Māori and other ethnic groups, the experiences of wāhine Māori players are exacerbated at the intersection of ethnicity and gender.[31] At this intersection of dual marginalised identities, it is difficult for wāhine Māori rugby players, managers and coaches to be as highly regarded as their male counterparts.[32] Palmer and Masters (2010) emphasise the need to understand the experiences of Māori generally, but to also recognise the intricacies of these experiences for other minority groups such as wāhine Māori. Homogeneously grouping Māori experiences as one and the same prevents advancement of wāhine Māori as their own group, with distinctive barriers to face.[33] Indeed, concealing or denying their experiences as separate from tāne Māori can create another layer of obstacles for wāhine Māori seeking to advance in the sporting and rugby worlds.[34]

METHODOLOGY

Because this research was inspired by a Māori worldview, the methodology chosen employed a mana-enhancing, kaupapa Māori approach, especially important in a review discussing wāhine Māori identities and aspirations. This systematic process juxtaposes the distinctive intersections of a Western worldview and te ao Māori (a Māori worldview) to better understand what each perspective offers, their nuances and similarities. Data used in this literature review was drawn from published qualitative research, across both te ao Māori and Western perspectives. These publications were analysed to identify three emergent themes: whawhai tonu – the continued challenges that Māori face; expression of cultural practices and Māori identity in rugby; and promotion of diversity and inclusion in rugby. (The common threads linking these themes are discussed below.)

The specific method used in this literature review involved the utilisation of the Ngā Poutama Whetū (stairway to the stars) model (Figure 1), informed by kaupapa Māori, alongside Smith's (2016) narrative thematic analysis of the literature reviewed. Narrative thematic analysis enables us to

analyse qualitative literature in a way that maintains the "essence" of the material.[35] According to Frank (2010) and Smith (2016),[36] this involves understanding the intersections of human lives in and across time, and in terms of both the relational and cultural fabric, while honouring the voices and lived realities of those whose stories are being retold.

A KAUPAPA MĀORI REVIEW APPROACH: NGĀ POUTAMA WHETŪ

In te ao Māori, a kaupapa Māori theoretical approach is described as research *by* Māori, *with* Māori and *for* Māori, in a way that protects and challenges Western ideologies about knowledge while ensuring mana motuhake (independence) regarding a given research task.[37] The use of kaupapa Māori theory in this current kaupapa involves the utilisation of the "culturally progressive" Ngā Poutama Whetū (NPW) framework review process, designed and imbued with kaupapa Māori values including kaupapa (the collective philosophy principle), tino rangatiratanga (self-determination), ako (culturally preferred pedagogies and reciprocity) and taonga tuku iho (cultural aspirations).[38]

Below is a brief discussion of what the NPW framework encompasses, the steps it comprises and their meanings, as well its relevance to this current review of literature.

Our kaupapa Māori approach, based on NPW and set out in Figure 1, provides a non-linear, cyclical review process that deviates substantially from the processes used in Western review methods.[39]

4. Taonga Tuku iho

3. Ako	Present	5. Kia piki i ngā raruraru
2. Tino rangatiratanga	**Te Kete-aronui/Searching**	**6. Whānau**
1. Kaupapa	**Te Kete-tuatea/Light/Known/Past**	**7. Kaupapa**

Te Kete-tuauri/Dark/Unknown/Future
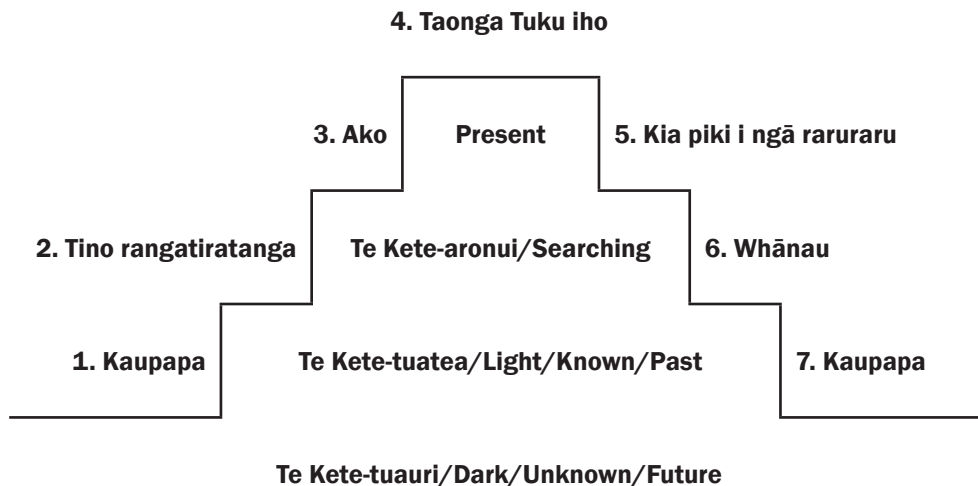
Figure 1. The Ngā Poutama Whetū (NPW) research framework.

Kaupapa (purpose). Steps 1 and 7 entail a clear understanding of the collective aspirations of Māori. In terms of this current kaupapa, it is understanding the collective aspirations of wāhine Māori in rugby, in being treated and seen as equals to their white male and tāne Māori counterparts. We return to this step at the end to ensure that the core of our kaupapa has remained the same and the essence of collective aspirations is intact.

Tino rangatiratanga (self-determination). Step 2 allows freedom in selecting and excluding literature, a process which Western review methods have strict rules about in terms of replicability and validity. Palmer's 2016 article, "Stories of Haka and Women's Rugby in Aotearoa New Zealand: Weaving Identities and Ideologies Together," for example, was not found on Google Scholar when searching peer-reviewed and published articles. However, this source was included due to its importance in understanding the voices and experiences of wāhine Māori in rugby.

Ako (culturally preferred pedagogies and reciprocation). Step 3 allows literature to be organised systematically in a way that meets ako Māori conventions – research *by* Māori, *with* Māori and *for* Māori. For te ao Māori literature, all three parameters needed to be met to be included, while for Western literature none of these parameters needed to be met.

Taonga tuku iho (treasures to pass on). Step 4 is the stage of deciding what material to include and what to exclude through the processes of evaluation. This is done by investigating the relevance of the literature to the research questions, outcomes and kaupapa as taonga (treasures).

Kia piki i nga raruraru (socioeconomic mediation). Step 5 entails further analysis of the credibility of information. This 'top up' measure ensures equity in assessing sources, standards that meet both academic and culturally progressive expectations. These scholarly expectations include peer-reviewed published articles as well as primary sources, and that the content of these works should be mana-enhancing in terms of the aspirations of Māori and wāhine Māori.

Whānau (familial relationships). Step 6 is whānau, which involves coding and analysing literature into broader familial terms used in te ao Māori. These are iwi for themes, hapū for categories, tāngata for key concepts. (However, for this review, we omitted the use of hapū as it was irrelevant to our literature review process.)

INTERFACE

This section explores the application of the "interface" approach, which integrates both Western process (PRISMA) and te ao Māori (NPW) worldviews and review methodologies. According to Durie (2004), the interface approach acknowledges the distinctiveness of various knowledge systems while identifying the synergies between them, offering particular benefits for Indigenous peoples, including wāhine Māori in rugby. In academia, Western positivist science has historically been the dominant paradigm, often regarded as the benchmark for research measurement and validation. Conversely, Indigenous knowledge and perspectives have sometimes been branded as 'archaic' within research discourse, although they do not fall into the category of true pseudoscience (Durie, 2004).[40]

Distinctively, the interface approach gives equal power to both knowledge systems, potentially strengthening our research focus, which is to understand how we can best support the identities of wāhine Māori rugby players and enable them to flourish. By taking this approach, we embrace a more holistic and comprehensive perspective, acknowledging the value and relevance of both worldviews in our quest for knowledge and understanding.

RESULTS

This section presents the results of our kaupapa Māori (NPW) review. The Western and te ao Māori sections into which the literature search was divided each contain seven qualitative items that were peer-reviewed and published between 2012 and 2023. The Western literature, selected via the NPW review process, indicates that research according to this kaupapa mainly comprised literature from Australia, the United Kingdom, Fiji and Canada, as well as NZ. They have been grouped by their leading concepts into "tangata" and "iwi" according to their major themes. These themes are: whawhai tonu – the continued challenges that Māori face; expression of cultural practices and Māori identity in rugby; and the promotion of diversity and inclusion in rugby.

FINDINGS

This systematic review process identified three key themes: whawhai tonu – continued challenges that Māori face; expression of cultural practices and Māori identity in rugby; and the promotion of diversity and inclusion in rugby. Also identified were similarities and nuances between the literature sets analysed, which inform the following balanced discussion of what both knowledge systems offer regarding the well-being needs of wāhine Māori in rugby.

DISCUSSION

Three major themes emerged from this review: whawhai tonu – continued challenges that Māori face; expression of cultural practices and Māori identity in rugby; and the promotion of diversity and inclusion in rugby. This discussion takes these themes in order before concluding by considering the research limitations and future directions that will hopefully enable the gap between these two distinctive worldviews to be bridged, demonstrating a consensus in understanding how we can affirm the identities of wāhine Māori rugby players and enable them to flourish.

Theme 1: Whawhai tonu: Continued challenges that Māori face

Racism and discrimination continue to profoundly impact self-expression and hauora for wāhine Māori in rugby, who constantly face barriers due to both their gendered and ethnic identities.[42] At this intersection of two marginalised identities, the social experiences of these 'minorities' in sport are severely compromised. Racism and discrimination, paired with "cultural blindness" in sport,[43] are challenges that both Māori and wāhine Māori, particularly, continue to experience. "Cultural blindness" is a lack of awareness or sensitivity towards different cultural beliefs, norms and values.[44]

Borell (2017) has argued that discourse in mainstream sport is predominantly colonial, with few studies examining the connection between sports and cultural identity, particularly for marginalised minorities such as indigenous groups like Māori.[45] The effects of beliefs grounded on notions of superior and inferior, especially for a culture founded in oral traditions, makes it harder to hear and understand the personal and collective voices of the community.[46] However, as Hapeta and colleagues have highlighted in two studies, the utilisation of kaupapa Māori approaches that are *by, for* and *with* Māori is crucial in ensuring that these voices are heard.[47]

Similarly, through a diversity and inclusion lens, scholars from both sectors note the need for a more nuanced and critical approach to making rugby more inclusive for indigenous peoples, one that accounts for their lived experiences and cultural beliefs.[48] These scholars recognise the importance for Māori of positive cultural representation within these predominantly white, male, structures, in order to challenge the status quo of the dominant discourse.[49]

The literature also demonstrates neglect of the 'female' aspect at the intersection of Māori and wāhine identities.[50] Borell argued that research into sport primarily adopts Eurocentric perspectives, silencing the diverse experiences of Māori athletes (and wāhine).[51] Further, Ratna and Samie concur that the experiences of females and wāhine Māori are silenced as rugby players and athletes due to scholarly ignorance.[52] With this muting comes the oppression of their identities and the promotion of racial stereotypes and racial stacking, acts that aim to further 'colonise' the bodies of indigenous, ethnically diverse athletes. However, Calabrò explains how resilient Māori athletes are in defiantly embracing their cultural identity, heritage and talents, despite the persistence of racial stereotypes perpetuated by Western institutions.[53] Wāhine Māori face myriad barriers, yet they remain in our national game.

Despite scant research on wāhine Māori in leadership roles, the term "mana wāhine" denotes the collective strength of wāhine Māori and the powerful movement of wāhine aspirations.[54] By recognising the journey(s) and potential of wāhine Māori, we can better promote flourishing wāhine Māori identities in rugby.[55] A key take-away from the literature is the need for celebrating the journey they have taken, and recognising who they will become.[56] Mana wāhine within rugby are shining examples of women speaking up for what is right and being proud advocates of the sport, including influencers like Te Kura Ngata-Aengamate and Professor Dame Farah Palmer.

Theme 2: Expression of cultural practices and Māori identity in rugby

Māori identity is intimately tied to their connection with tūrangawaewae (place of belonging) and whakapapa.[57] For some Māori, disconnection from self is associated with not knowing their whakapapa or connection to tūrangawaewae, caused by colonisation and alienation from their whenua, cultural practices and identity.[58] Thus, it is important to enable Māori to govern themselves and self-determine their priorities within (Western) institutional structures. This mana-enhancing approach would allow their hauora to flourish and would also help promote equity and respect for Māori identity.[59]

Identity expression is not limited to cultural background, but also encompasses gender, ethnicity and other elements of sense-of-self, as evidenced in the experiences and protests of Ngata-Aengamate.[60] Erueti and Palmer discuss how Māori athletes, both tāne and wāhine, excel at utilising strategies to overcome and adapt in the face of adversity, especially in navigating and maintaining their identity whilst seeking to assimilate to Western norms.[61] Thorpe et al. and Turconi et al. share the same perspective of sports resisting non-inclusive systems, while simultaneously being the oppressor that further disadvantages marginalised groups.[62] Turconi and colleagues discuss the impact of the privileged Western system of meritocracy, where ethnically diverse peoples, like Māori, are racially stereotyped for their 'natural' ability in sports.[63]

Burroughs and Nauright argue that racial stereotypes, which are heavily ingrained in women's sports, limit the expression of cultural identities and aspirations.[64] Smith et al. support this

Author/s (Year) Country#	Title (Kaupapa)	Tangata (Concepts)	Iwi (Theme)
Borell (2016) NZ#1	One step forward: Cultural politics in New Zealand sport.	Colonialism, imperialism, national identity, cultural politics, social mobility, social control, superiority, sporting identity; cultural identity, assimilation, stereotypes, muscular Christianity, hegemony	Expression of cultural practices and Māori identity in rugby; whawhai tonu: continued challenges that Māori face.
Erueti & Palmer (2017). New Zealand. NZ#2	Te whariki tuakiri (the identity mat): Māori elite athletes and the expression of ethno-cultural identity in global sport.	Ethno-cultural identity; sense of belonging; expression of authentic self; role of traditional Māori cultural practices in well-being; haka.	Expression of cultural practices and Māori identity in rugby.
Forster, Palmer & Barnett (2016). New Zealand. NZ#3	Karanga mai ra: Stories of Māori women as leaders.	Navigation of Māori wāhine in leadership; expressive; identity affirming; cultural identity informs leadership output; challenging hegemonic discourse; pūrākau	Expression of cultural practices and Māori identity in rugby; whawhai tonu: continued challenges that Māori face.
Hapeta, Palmer, Hermansson & Kuroda (2019a).[41] New Zealand. NZ#4	A kaupapa Māori, culturally progressive, narrative review of literature on sport, ethnicity and inclusion.	Challenging hegemonic discourse; Ngā Poutama Whetu framework; for Māori, by Māori, with Māori; social inclusion;	Expression of cultural practices and Māori identity in rugby; whawhai tonu: challenges faced by Māori.
Hapeta, Palmer & Kuroda (2019b). New Zealand. NZ#5	Cultural identity, leadership and well-being: How indigenous storytelling contributed to well-being in a New Zealand provincial rugby team.	Cultural identity; sense of belonging; storytelling; leadership; holistic well-being; team dynamics; pūrākau	Expression of cultural practices and Māori identity in rugby.
Palmer (2016). New Zealand. NZ#6	Stories of haka and women's rugby in Aotearoa New Zealand: Weaving identities and ideologies together.	Weaving of multiple identities and ideologies through haka; resisting dominant narratives; expression of culture and femininity; pūrākau	Expression of cultural practices and Māori identity in rugby; whawhai tonu: continued challenges that Māori face; D&I.
Thorpe, Brice & Rolleston (2022). New Zealand. NZ#7	Decolonising sport science: High performance sport, indigenous cultures, and women's rugby.	Colonisation; decolonisation; challenges to cultural identity; Indigenous knowledge.	Expression of cultural practices and Māori identity in rugby; whawhai tonu: continued challenges that Māori face.

Table 1. Western literature selection.

Author/s (Year) Country#	Title (Kaupapa)	Tangata (Concepts)	Iwi (Theme)
Burroughs & Nauright (2013). Australia & New Zealand. INT#1	Women's sports and embodiment in Australia and New Zealand.	Gendered stereotypes; normative femininity; culture of team environment; marginalisation and stigmatisation; agency; resistance.	Expression of cultural practices and Māori identity in rugby; diversity and inclusion.
Calabrò (2016) Fiji. INT#2	Once were warriors, now are rugby players? Control and agency in the historical trajectory of the Māori formulations of masculinity in rugby.	National identity; agency; control; masculinity; cultural identity; history of Māori in New Zealand.	Whawhai tonu: continued challenges that Māori face; diversity and inclusion; expression of cultural practices and Māori identity in rugby.
Gall, Howard, Diaz, King, Willing & Garvey (2021). Canada, New Zealand & United States. INT#3	Wellbeing of Indigenous peoples in Canada, Aotearoa (New Zealand) and the United States: A systematic review.	Holistic perspectives of Indigenous health ignored; culture; identity; community and family; sense of belonging; whānau (family); colonisation.	Whawhai tonu: continued challenges that Māori face; expression of cultural practices and Māori identity in rugby; diversity and inclusion.
Kanemasu & Johnson (2019). Fiji. INT#4	Exploring the complexities of community attitudes towards women's rugby: Multiplicity, continuity and change in Fiji's hegemonic rugby discourse.	Gender; whiteness; minority; colour and cultural blindness; heterosexuality; unconscious white privilege; marginalisation.	Expression of cultural practices and Māori identity in rugby; diversity and inclusion.
Ratna & Samie (2017). United Kingdom. INT#5	Mapping the field: Research about ethnic 'Other' females, sport and physical culture.	Oppression; power dynamics; scholarship as a tool of oppression.	Diversity and inclusion.
Smith & Spaaij (2019). Australia. INT#6	Migrant integration and cultural capital in the context of sport and physical activity.	Culturally and linguistically diverse peoples; cultural capital; social cohesion; integration; identity formation; sense of belonging.	Expression of cultural practices and Māori identity in rugby; diversity and inclusion.
Turconi, Shaw & Falcous (2022). New Zealand. INT#7	Examining discursive practices of diversity and inclusion in New Zealand Rugby.	Diversity and inclusion; agency; critical theory; othering; cultural blindness; meritocracy; rhetoric vs reality; diverse voices.	Whawhai tonu: continued challenges that Māori face; Eexpression of cultural practices and Māori identity in rugby; diversity and inclusion.

Table 2. Te ao Māori literature selection.

conclusion by exploring the experiences of immigrants who have moved away from their homelands where they feel culturally safe in expressing their identities.[65] Their findings highlight a need for spaces that do not judge or stereotype athletes and promote diversity and inclusion, rather than maintaining systems that seek to oppress marginalised communities further.

Calabrò suggests that sports can enhance hauora and relationships between Māori by providing a space of connection to other Māori and to their cultural identity.[66] Focusing on the benefits of sport for personal development and expression of identity, Burroughs and Nauright position the "sports-scape" as forever changing, where it is now becoming increasingly acceptable for females to be professional athletes.[67] Similarly, it is becoming more acceptable for females, including wāhine Māori, to forge their own identities and challenge gender-based norms and perceptions of what females should look, sound and compete like. Importantly, Western institutions heavily ingrained in heteronormative, male-dominant perspectives are being challenged to rethink and evolve with the times or be left behind.

Palmer (2016) showcases haka as a major expression of Māori identity, alongside other cultural practices which provide wāhine Māori with a platform to express their cultural identities, along with multiple others (rugby player, mother, aunt, daughter).[68] Through the expression of these cultural rituals, dominant discourses about Māori and femininity are challenged and resisted.[69] Burroughs and Nauright support this notion, explaining how embodying cultural practices not only challenges sport institutions themselves, but encourages other sectors, including the media and commerce, to rethink their approaches to marketing, supporting and expressing notions of femininity.[70]

The unapologetic expression of Māori identity and wāhine Māori identity must be continually embraced if there is to be significant change within the Western structures that dominate the sports-scape, including changes to the very foundations of rugby itself. To be Māori is something innate, to carry this identity is natural – so why should Māori settle for structures that fail to support them? In saying this, we can already see movement and change whereby Māori rugby players are able to represent their iwi and hapū at local rugby competitions and are no longer the token Māori or brown player, but part of a group enjoying the sport as Māori.

Theme 3: Promotion of diversity and inclusion in rugby

Dominant (Western hegemonic) discourse within rugby often disregards the inclusion of unique and diverse experiences and cultural identities of indigenous female athletes. This further perpetuates gender discrimination and the marginalising of their presence and contributions to the sport.[71] The ongoing racial oppression faced by indigenous women, in this case wāhine Māori, limits their sense of belonging and having opportunities to fully express their cultural identity in rugby.[72] Hapeta, Palmer and Kuroda have discussed the role of pūrākau (indigenous storytelling) as a way for players to connect with their cultural heritage, as well as with teammates who are non-Māori.[73] Pūrākau creates meaningful connections by recognising different cultural values and beliefs. They found that this recognition and inclusion of cultural difference aided the promotion of diverse viewpoints in rugby. Thus, embracing athletes' differences provided opportunities for growth in communities that are resistant to change.[74]

Furthermore, challenging outdated gendered and racial stereotypes and the systems that perpetuate these notions can create a change in attitudes towards the involvement of females

in sports, including rugby.[75] However, as noted by Turconi et al., the current discourse on diversity and inclusion in rugby is dominated by white, male voices.[76] More concrete steps need to be taken to ensure that women and people of colour are given equal representation and platforms to voice their experiences. It is not enough for women and ethnically diverse peoples to have a seat at the table, but they need and deserve to have their voices heard and respected in the same way as the dominant majority at the table. While sport has the potential to act as a powerful tool for social cohesion, bringing people together, definitions of well-being vary across cultures and a one-size-fits-all approach is insufficient.[77]

Wāhine Māori and other women of colour face discrimination and racism based on their gender and ethnicity, and find themselves constantly fighting patriarchal structures in sport to get the recognition and support they deserve.[78] As a result, it is critical that sport communities and industry work towards diversity and inclusion, recognising and embracing cultural differences and providing equal opportunities for all athletes to express their cultural identities. An approach grounded in indigenous knowledge and values can empower and support athletes, particularly for wāhine Māori in rugby. Smith et al. explain that rugby, by challenging gendered and racial stereotypes and creating more inclusive environments that encompasses different cultural values and beliefs, can be a space where athletes, like wāhine Māori, can belong and express who they are in safe and meaningful ways.[79] Furthermore, sport has the potential to foster greater understanding and appreciation of different cultural practices. It can contribute positively towards breaking down cultural barriers, which is critical for promoting diversity and inclusion in rugby. Turconi et al. suggest that the future of sport, as a space that is diverse in culture and inclusive of all backgrounds, can be brighter.[80]

CONCLUSION

Our primary research objective was to conduct a comprehensive review of the relevant literature, examining the intersections of gender and ethnicity with a view to identifying the factors that will enable the identities of wāhine Māori in rugby to flourish. This kaupapa involved a dual lens, incorporating both Western and te ao Māori perspectives, coalescing through an intersectional approach at the interface.

Reflecting of my rugby journey, it felt like I had nobody to support me, nor did it feel like I was supported in my team. Looking back, I would have appreciated better support systems that not only kept me healthy, but secure in my identity. We are privileged in this current generation, where rugby is evolving to become more inclusive towards diverse cultural practices and values. However, this has not just happened overnight, nor is it fully realised. If rugby was a completely safe setting for diversity and inclusion, with environments that allowed Māori to be unequivocally themselves, then this research would not be necessary.

But change is coming, with Professor Dame Farah Palmer as co-deputy chair of the NZR's board and more wāhine Māori being celebrated for their athletic accomplishments globally. What needs to evolve more rapidly, however, are the structures around rugby, founded in colonisation and racialised and gendered stereotypes. As suggested by Turconi et al., structures and environments that embrace cultural differences and diversity will continue to challenge the status quo. Structures that are established *for* Māori, *with* Māori and *by* Māori will create the environment where Māori

aspirations and interests are respected and nurtured.[81] By structural change we mean not just policy, strategy or board expectations, but the ongoing implementation and integration of cultural practices and values into team and organisational culture, as well as the ways in which coaches are trained and how athletes, both Māori and non-Māori, are influenced.

For us, the chief aim of this review was to assist players and rangatahi (youth) coming through in amplifying their voices. To this end, this study has recognised the successes wāhine Māori in rugby have achieved, the barriers they have overcome (such as paying to play, rather than being paid) and the journey ahead of them as they seek to gain the same equity, respect and support as male (including tāne Māori) rugby players enjoy.

Through this review, not only have we unveiled the barriers that exist for wāhine Māori in rugby, but we have also identified instances of micro and macro-aggression including racism, discrimination and sexism. However, uncovering these examples does not diminish the experience of players like Hinemoa Watene, but adds more weight to challenging why wāhine Māori in rugby are still subjected to outdated discourses. This review has highlighted the limited amount of scholarly research that exists, which may explain why some sports institutions like rugby have taken so long to pivot.

The limitations of this review include the scant scholarly literature available that intimately connects with the experiences of wāhine Māori within rugby. In addition, more general research exploring the intersections of Māori culture, values and practices and the flourishing identities of wāhine Māori identities in sport is also lacking. Exceptions to this include the te ao Māori literature utilised in this analysis, with four of the seven articles reviewed (co-) authored by Professor Dame Farah Palmer. From a Western scholarly perspective, this might be considered a limiting factor because of bias, validity and 'objectivity' issues, due to it being largely reliant on one author's perspective. However, from a te ao Māori and qualitative perspective, we believe this position can be challenged.

Future researchers in this area would do well to consider how we can change the existing sport (and academic) structures to encourage and include more Māori voices. How can we create diverse and inclusive environments where Māori cannot just sit at the table, but be heard? Where Māori identities, like wāhine Māori, are able to know that the barriers to full inclusion are not downplayed and that their experiences are not being grouped with the experiences of others, where they will be seen as the mana wāhine they are, where they can proudly and unequivocally be Māori.

As this article comes to an end, a waiata (song) comes to mind. One line resonates and will continue to do so on my journey of fully embracing who I am and who I will become outside of rugby and within academia:

> Because you're magic, magic people to me;/
> You're magic people to me./
> Hold your head up high;/
> Let your voices fly./
> I'm proud to be Māori ...[82]

Imagine how exciting future Rugby World Cups could be, especially for wāhine Māori, when they no longer need to expend their energy tackling gendered stereotypes, and racial discrimination as well.

Hinemoa Watene (Ngāti Whātua, Ngāpuhi, Rongowhakaata, Ngāti Porou, Whakatohea) is a Masters' researcher in the Centre of Indigenous Science and the School of Physical Education, Sport and Exercise Sciences at the University of Otago. Having completed her undergraduate studies in sports management and development and psychology, she undertook a summer internship with Ngā Pae o Maramatanga under the supervision of Dr Jeremy Hapeta, focusing on flourishing wāhine Māori identities in rugby. Her passion for rugby stems from playing for various women's teams, including the Auckland Storm and Otago Spirit FPC teams, the New Zealand Barbarians XV, and the Under 18's Black Ferns' Oceania and Youth Olympic squad. She aims to create a safe space for wāhine Māori in rugby, where they can be their authentic selves and know their voices will be heard.

Dr Jeremy Hapeta (ORCID ID: https://orcid.org/0000-0002-8853-1572) is a senior lecturer in Māori physical education (PE) and hauora (health) at the Centre of Indigenous Science at the University of Otago in Aotearoa New Zealand. Previously, he held various roles at Massey University including PE lecturer and research development advisor – Māori in the Office of Research and Enterprise. A fully registered teacher, Jeremy taught in primary, intermediate and secondary schools both in NZ and overseas. He played first class rugby for Manawatū and played professionally in Japan (Hokkaido Barbarians) and France and has coached rugby in Italy and NZ. His research interests include kaupapa Māori methods and methodology, Indigenous perspectives on sport for development, inclusive team culture and games sense pedagogy. Dr Hapeta also serves on NZ Rugby's training and education working group and academic reference groups for Sport New Zealand (including coach developer and physical literacy). In the governance space, he is a board member of Sport Manawatū and serves on a school board of trustees.

Professor Anne-Marie Jackson (ORCID ID: https://orcid.org/0000-0001-9576-0173) (Ngāti Whātua, Te Roroa, Ngāpuhi, Ngāti Wai me Ngāti Kahu o Whangaroa) connects to the Far North, which grounds her as a Māori academic. She is a (full) professor in Māori physical education (PE) and health and joined the School of Physical Education, Sport and Exercise Sciences at the University of Otago in 2011 after completing her doctorate in Māori studies and PE, examining rangatiratanga and Māori health and well-being within a customary fisheries context. In 2013, she established Te Koronga, a graduate research excellence group. She is also co-director of the Centre of Research Excellence (CoRE) "Coastal People: Southern Skies," a research collaboration that connects communities with world-leading, cross-disciplinary research to rebuild coastal ecosystems. Her research platform is focused on Māori research excellence that uplifts the hopes and aspirations of Māori communities in the context of Māori PE and health – the application of a te ao Māori worldview making for mauri ora, flourishing wellness.

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HELEN GUEK YEE MEI

EXAMINING THE INTERSECTION OF CULTURAL IDENTITIES: THE MALAYSIAN CHINESE EXPERIENCE

INTRODUCTION

This essay aims to present the intersections that constitute the cultural identity of Malaysian Chinese and suggest how their migration and settlement experiences have shaped their sense of who they are and who they are becoming through personal and family histories. I utilise a methodology analogous to the microhistory framework, where the individual assumes an active role in the process of memory formation and exercises agency in the selection, alteration and transmission of memories. This perspective encourages "understanding people in light of their own experience and their reactions to that experience."[1]

Most scholarly publications on Malaysian Chinese identity use a macro-level approach, emphasising the study of social and political institutions while giving less attention to personal introspection and micro-level research. A September 17, 2022, *New Straits Times* article quoted Danny Wong, a Malaysian historian from Sabah, as saying that family history, tales and memoirs help people comprehend both their past and their future trajectory. Wong believes that scrutinising one's personal history through the medium of family narratives can lead to a critical evaluation of the interconnectedness of familial, communal and national dynamics.

My artworks, reproduced in this article, aim to visually portray these submerged and accumulated layers of intersecting identity through a microhistorical perspective. Through my art, I present the intersecting and multi-layered inner reality that has accumulated traces of lived experiences. This inner reality is distinguished by its multicultural, multi-religious, multi-lingual character and multiracial experiences that combine to influence identity formation, under the impact of constantly changing social environments. The evolution of these inner realities is conveyed using visual assemblages combining printmaking, photography and digital manipulation in order to visually represent the socio-cultural formation of a Malaysian Chinese individual. The artworks reproduced convey the mutable nature of ethnic identity in conjunction with variables such as geographic location, degree of interaction, era, and age group.

Focusing on the Malaysian Chinese experience, I challenge the idea of a fixed and singular national identity, highlighting the complexity and diversity of the migration experience in a multicultural society with blurred boundaries around ethnic classification.

THE *BANGSA MALAYSIA*

Even given the relatively stable nature of Malaysian politics, nation-building has always been a central concern. Despite being a fundamental, ongoing national agenda, Malaysia's nation-building project remains unresolved. The introduction of the concept of *Bangsa Malaysia* (Malaysian race) by former Prime Minister Dr Mahathir bin Mohamad in 1991 was intended to resolve the "unfinished business" surrounding the nation-building initiative. Nonetheless, as the ideology of *ketuanan Melayu* (Malay supremacy) functions as the basis for official historiography in Malaysia, the nation is dominated by a Malay-centric ideology which positions it as a Malay-dominated plural society. In the absence of a unified Malaysian culture, many Chinese equate *Bangsa Malaysia* with *Bangsa Malay*. As a significant minority, Malaysian Chinese have favoured the multiculturalist *Bangsa Malaysia* concept. However, the term *bangsa* (race) is used in a Malay nationalist context to refer to the Malay race or nation (*Bangsa Melayu*).

Malaysia's official ethnic classifications of 'Malay,' 'Chinese,' 'Indian' and 'Others' reflect the country's diversity, while celebrating a multicultural and plural society. However, these categories, based on ethnic and cultural differences, often serve as a crucial identity marker in the lived experiences of Malaysian Chinese. When Hannah Yeoh, a prominent politician in Malaysia, and her Malaysian Indian husband tried to register their children's ethnicity as Malaysian, their request was refused, leading to a reassignment of their children's ethnic classifications. Consequently, their eldest child is officially recognised as Chinese, while the youngest is identified as Indian.

In Malaysia, the Chinese collective past and cultural identity have been systemically marginalised in official historical records, which emphasise two main constitutionally recognised categories: *Bumiputera* (literally "Land of the Prince(s)") and non-*Bumiputera*. The national history curriculum is obliged to align with government nation-building agendas. Despite the cultural diversity visible in Malaysia's historical record, the national narrative depicted in history curricula and official museum displays largely reflects the political commitment of Malay elites to maintain Bumiputera-centric policies. Historian Helen Ting notes that since the racial riots of 1969, Malay political primacy has been asserted in school history textbooks.[2] In addition to the compulsory requirement for a pass in Malay language, known as Bahasa Malaysia – which serves as the country's national and official language as well as the mother tongue of the predominant Malay ethnic group – history was made a mandatory pass subject for the Malaysian Certificate of Education (SPM) in 2013.

As a result of these measures, the state has become the arbiter of history by prescribing the curriculum and "simultaneously legitimising the textbook's version of history."[3] In contrast to many nations with a postcolonial legacy that celebrates an uncontested common history, Malaysians are an active embodiment of competing memories. History curricula frequently perpetuate hegemonic national narratives and marginalise alternative or minority histories by (for example) diminishing the contribution of Malaysian Chinese during the Japanese occupation and subsequent nation-building efforts. This marginalisation is exacerbated by the propagation of a "Malay-versus-non-Malay" perspective and the use of terms such as *pendatang asing* (immigrants) to refer to Chinese and Indian minorities, perpetuating the notion that these groups are "other."

Throughout the history of nation-building in Malaysia and in projecting an anticipated future, the government has invested substantial energy in promoting a unitary Malaysian national identity. In these efforts, the 'assimilation' and 'integration' approaches have been applied simultaneously. These two sociological concepts have both been associated with the terms 'alteration' and 'transgression' to describe the psychological responses of an individual or group to a different physical and cultural environment. However, closer examination reveals that they do so to varying degrees and in different ways, ranging between totality (uniformity, homogeneity) and difference (intersection, heterogeneity). They represent fundamentally dissimilar images and conceptions of a nation, expressing distinct strategies and visions. The achievement of cultural unity within a multicultural society should not be identified with uniformity; the coherence of a multicultural identity – *Bangsa Malaysia* (Malaysian) – is not a given, but a process of becoming that is continually evolving. It assumes a constant process of change in developing a new fusion culture, a process of overlapping and intersection, a fusion of different ethnicities that has contributed to shaping this diverse society, a unique nation.

TRACING THE SUBMERGED PAST

Although, as Ien Ang says, "every ethnic identity has a history and often the label is derived from a people's place of origin,"[4] if we care to spend a second thought on the notion of ethnic boundaries and even the meaning of ethnicity, most cases prove to be more complex and ambiguous in the context of the migration experience. Anthropologists have also debated the relevance of migration to culture and ethnic identification. Throughout their migration history, the heterogeneous characteristics of Chinese have been flattened out and sorted into standard classifications, often through the racial categories in the national census, which are determined by the official logic of racial and cultural differences. However, as Ang observes, "the very name with which the 'ethnic' is referred to – Chinese (or Indian) – already transposes her or him to … another site of symbolic belonging, a site which is not 'here.'" She also comments that her experience of being Chinese is "inscribed … on the very surface of my body." Ang's personal experience of being Chinese illustrates how identity is not just shaped by external factors such as culture, society and mental constructs, but is also perceived as physically embodied. This embodiment makes it difficult to escape the expectations and stereotypes that come with being part of a particular group.

Tracing the position of the Chinese in Malaysia today involves an accumulation of the migration history of Malaysia, which is complex and dynamic, with waves of immigrants arriving from different parts of the world throughout its history. The country is characterised by its experiences of human migration, both past and present, with its complex cross-cultural experiences and history of culture overlapping through physical relocation, settling down and participating in nation-building.

The earliest Chinese settlement in Malaya can be traced back to the Malacca Sultanate in the fifteenth century. Wang[5] noted that the Chinese communities had developed with successive "layers" of migration through the centuries. Records of the first generation of overseas Chinese merchants (Hua-Shang) can be traced back to 1349. More than 600 years ago, a Chinese–Malay dictionary was being used as early as 1403. The Chinese had established themselves in Malacca by the early eighteenth century. These early migrants intermarried with locals and developed a localised hybrid subculture, a unique fusion culture referred to as *Peranakan Baba Nyonya*. The settlers adopted the indigenous lifestyle, language and customs, and even acquired the local

language, Malay, as their mother tongue. However, in their customs and religious practices they maintained features of their ethnic identity as Chinese.

The second wave of migrants (Hua Gong) were mostly impoverished and frequently illiterate labourers with ties to their originating dialect groups and clan associations. The division by surname and major dialect groupings reflected their origins in various regions of China, the latter including Hokkien, Cantonese, Hakka, Teochew, Hainanese, Guangfu, Foochow and Guangxi. This feature distinguished various occupations based on the particular state and time of settlement.

These migrants set sail for Southeast Asia with the intention of returning to China, despite the hardships of the journey. Traditional Chinese culture valued respect, filial piety and lineage, producing strong sentimental attachments to the motherland. According to the Chinese tradition of 落葉歸根 (fallen leaves shall return to their roots), those who left China were expected to stay connected with their ancestral home and be buried where their ancestors were buried. However, the vast majority of these early migrants did not return to their ancestral lands and were interred on the land where they had lived and laboured. In numerous Chinese cemeteries throughout Malaysia the earliest migrants were laid to rest. Today, Malaysia's Chinese communities are predominantly composed of third- and fourth-generation descendants of early immigrants who were born in the host country rather than in China. Today, only a minority retain fragmentary recollections of their ancestral homeland.

From Chinese merchants (Hua-Shang) to labourers (Hua Gong) to Malaysian Chinese, the history of migration has progressed through various stages. This identity transformation reflects the localisation and adaptation processes through multiple overlappings of historical, cultural, national, communal, religious and educational dimensions. Cross-cultural experiences and evolving identities within a localised context have made Malaysian Chinese a heterogeneous group, with a localised fusion of identities regarding practices, beliefs, languages and ways of life.

Malaysian researcher Lee Kam Hing has pointed to the transformation of Chinese identity consciousness during the pre-war period. Because Chinese in Malaya considered China their ancestral homeland, this fostered a particular brand of nationalism, known as *huaqiao* (people of Chinese ethnicity) nationalism. This loyalty was temporary in character, as loyalties had the potential to shift between China and their new homeland. However, following significant political changes in both China and Malaya, early Malayan-Chinese leaders believed that building loyalty to Malaya was essential to obtaining citizenship and a respectable political role in the newly independent country.[6] Political participation and the formation of party allegiances indicate an awareness of a Malayan-Chinese identity during the pre-war period.

PROBLEMS AND CHALLENGES

As Malaysian Chinese transitioned from a diaspora and an identity as migrants from Mainland China to citizens who were rooted in the country where they lived, they encountered difficulties in adapting to their newly assumed cultural identity in Malaysia's socio-political landscape, where the Malay-dominated plural society created tensions and imposed challenges on the Chinese communities.

As it became involved in the project of nation-building prior to independence, the bedrock interests of the Chinese community included the right to full citizenship, including the opportunity for economic advancement, preservation of the Chinese language and Chinese schools, and outlets for public expression.[7] However, over time the Chinese community's position has weakened due to a decrease in the Chinese population relative to Malays – from 37% in 1957 to 23.2% in 2010 – leading to a decline in political power and influence. This has made it more challenging for them to advocate for their interests and secure their rights.

Chinese-language education in Malaysia has evolved significantly since the nineteenth century, with Chinese educationists playing a crucial role in its development. However, the inequable treatment given to Chinese primary schools and the requirement for Chinese secondary schools to adhere to the country's monolingual language policy have led to a struggle for recognition and support.[8] These difficulties were exacerbated by the Second Malaysia Plan (1971-75), which expanded education policy beyond compulsory education, establishing quotas to boost Malay enrolment and limit minority enrolment in higher education in the public sphere.

The earliest Chinese immigrants were labourers who worked in tin mining and rubber planting, among other sectors. They contributed to the growth of manufactured exports and small to medium-sized businesses. Adopted in 1971, the government's New Economic Policy (NEP) introduced affirmative action programs to improve the socioeconomic standing of the Malay community. However, many Chinese and Indians living in destitution were neglected. Chinese businesses adapted to an extended affirmative action policy by engaging with the emergent Bumiputera entrepreneurial class, competing with large government-linked corporations and expanding state-sponsored investment institutions.[9]

MULTIFACETED IDENTITIES

Drawing on his many years of research in Southeast Asia, particularly Malaysia, cultural anthropologist Chee-Beng Tan[10] has described the variations in continuity and change in the acculturation and localisation processes undergone by the Chinese diaspora. He concluded that the localisation process has contributed to the diversity of Chinese identities across the region. This process has also given rise to diverse perceptions of local identities and different models of Chinese culture. For him, "Malaysian Chinese identities have multiple levels and are multifaceted." Regarding ethnic Malaysian Chinese today, Tan has argued that although "some are more acculturated than others ... there are no pure Chinese, whether biologically or culturally."

Tan stressed that, in contrast to Chinese living in other countries, Malaysian Chinese are culturally and attitudinally distinct in many ways. Tan's research, along with that of others in the field, has revealed the heterogeneity found within Malaysia's ethnic communities and the porous boundaries between them. In Malaysian Chinese communities, a variety of collective identities can be found, each with distinct characteristics and influences. These identities frequently overlap, resulting in complex intersections of ethnic and cultural identities which are influenced by variables including familial history, educational background, linguistic preferences, religious affiliation, regional character and cross-cultural experiences. These diverse factors have produced a complex tapestry of diversity within the Chinese-Malaysian community.

In the journey to a new country, settlement and integration as Malaysian Chinese has been shaped by cross-cultural experiences, altered and layered by migration experiences within a plural society that continues to be shaped by an "everyday-defined" social reality.[11] Shamsul holds that identity is constructed "either in a 'static' manner, meaning identity is perceived as something 'given,' 'ready-made,' hence 'taken-for-granted,' or in a 'dynamic' manner, meaning 'identity' is viewed as an ever-changing phenomenon that is being redefined, reconstructed, reconstituted and altered."

Based on this foundation, Shamsul presented the Malaysian experience as a case study of his "two social realities" approach to the study of identity, comparing and contrasting "authority-defined" and "everyday-defined" social reality. According to Shamsul, in Malaysia "the never-ending story of identity formation and contestation seems to have become a permanent feature of society." He emphasises that an individual's identity is not fixed and immutable, but evolves as they navigate their unique experiences. The process of self-definition ultimately entails a constant negotiation between internal and external factors.

INTERSECTING IDENTITIES

In the cross-cultural migration experience, physical relocation involves a new definition of who we are in the environment. Through the insertion of new learned experiences, the various dimensions of one's identity intersect. Although the nexus of these dimensions will reflect different priorities for each layer, they are still interwoven and interdependent at the point of convergence. This internal process of self-identification enables the individual to establish a sense of placement and belonging within the larger society. In this context, identity is a dynamic and evolving process, always in progress and incomplete, a matter of "being" as well as "becoming;"[12] it belongs to the past as much as to the future.[13] Immigrant identity, in particular, exhibits a type of heterogeneous "multiple rootedness:" manifold, multiple and never singular.[14]

Reflecting on Shamsul's "two social realities" in the Malaysian context, in what follows I extend the discussion in order to gain further insight into the various dimensions of belonging in identity formation, and to advance the analytical approach used by Nira Yuval-Davis in her two models of "belonging." She insists on distinguishing between two analytical levels in the politics of belonging: the first pertains to social locations and the second to people's identifications and emotional attachments to various collectives and groupings. "These different levels are interrelated but cannot be reduced to each other, as so many political projects of belonging tend to do." She further analyses the differences between these two dimensions and explains political belonging as "compris[ing] specific political projects aimed at constructing belonging to particular collectivity/ies which are themselves being constructed in these projects in very specific ways and within very specific boundaries."[15]

Another area where Yuval-Davis takes a divergent view of "belonging" is the emotional attachment to a place, "about feeling 'at home' and, as Michael Ignatieff points out, about 'feeling safe.'" This feeling of belonging is partly generated through everyday practices and the experiences of being part of society. Most people long to see themselves reflected in the larger society and to be a legitimate part of society, not just as a by-product of their official rights and obligations as citizens. Indeed, place is defined as more than just a portion of geographical space, but as something which includes "the sentiments of attachment and detachment that human beings experience, express, and contest in relation to specific spaces."[16]

Yuval-Davis also acknowledged the human desire to form attachments through emotional investments, where individuals and groups are captured by the desire to belong and to become, a process fuelled by yearning rather than any notion of identity as a stable state. Identity is always in transition through the combination of "processes of being and becoming, belonging and longing to belong. This duality is often reflected in narratives of identity."[17]

"Home" is the first bounded society to which an individual or a group constructs a strong emotional relationship through personal experiences, and with stories and history constructed both on a personal level and also collectively. People tell themselves and others about who they are and also who they are not. These individual stories "often relate, directly or indirectly, to self and / or others' perceptions of what being a member in such a grouping or collectivity (ethnic, racial, national, cultural, religious) might mean."[18]

Thus, the true meaning of citizenship is belonging at an emotional level and it is constructed through attachment to the homely feeling of a place. Quoting Ghassan Hage,[19] Yuval-Davis[20] describes this fluid "home-making" process as an "ongoing project entailing a sense of hope for the future," which chimes in with Otto Bauer's notion (as cited in Yuval-Davis[21]) of "common destiny." "It is oriented towards the future, rather than just the past, and can explain the subjective sense of commitment of people to collectivities and nations, such as in settler societies or in postcolonial states, in which there is no shared myth of common origin."[22] In this dynamic process of "being" and "becoming," identity belongs to the past as much as to the future.[23] Yuval-Davis concludes by relating identity to the interplay of "volition, choice, and intentionality, in several different, if related ways," which play a central role in belonging.[24]

There are two common approaches to explaining identity. Essentialists attribute an individual's uniqueness to biology and trace their ancestry through similar physical characteristics linked to a fixed and unchanging mechanism. They perceive identity as an innate, unified concept like nationality, race, ethnicity, religion and gender. Social essentialists view the relationship between ethnicity and identity as fixed, stable, monolithic and exclusive. Social constructionists, on the other hand, acknowledge the fluidity of ethnicity in the cultural dimension, where identity is primarily formed by individual actions.[25] For social constructionists, identities are fluid and can be reconstructed in response to new social and cultural circumstances; linguistically speaking, both the past and present continuous tenses are utilised. In this reading, individuals are not passive recipients of ideas and behaviours transmitted from the past but, rather, culture can and will change over time. People make decisions to adjust and adapt to what is significant and relevant to them. In the context of migration, the process of physically relocating entails a new definition of who we are in the environment, while the experience of daily living will develop from our newly acquired knowledge, defining our identity over time.

Having redefined ourselves in terms of our new environment, our here-and-now lived experiences will overlap with our previous experiences to define one's identity over time. As a result of this crisscrossing of borders and overlapping of boundaries, the intersections of the various dimensions of identity are activated, and our newly learned experiences will be inserted and merged with the fixed and stable ones. In developing an intercultural and cross-cultural lifestyle, various elements have become intertwined with a person's collective memory and history. This includes the influences deriving from other elements of the environment, as well as localised encounters with people of various cultures and religions.

This analysis echoes the theories of intersectionality proposed by Yuval-Davis in her article "Power, Intersectionality and the Politics of Belonging." In her effort to bridge existing scholarship on intersectionality, on the one hand, and theories of belonging and citizenship, on the other, she challenges the essentialism of identity politics and outlines the intersectional nature of belonging. According to Yuval-Davis, belonging is multiple, multi-layered and dynamic: "people can 'belong' in many different ways and to many different objects of attachment in a stable, contested, or transient way."[26] She also investigates the concept of belonging as a means of enhancing and clarifying contemporary discussions about citizenship and develops the concept of "multi-layered citizenship." "Belonging is multiplex and multi-layered, continuous and shifting, dynamic and attached."[27] Her theories run contrary to essentialist notions of ethnicity and identity as fixed, stable, monolithic and exclusive. This blurring of boundaries through the overlapping and intersection of experiences and social realities is essentially an internal process that allows the individual to establish a sense of placement and belonging in their larger society.

Although the nexus in each individual's dimensions will still reflect the importance or priority of layering with "volition, choice, and intentionality," as Vertovec[28] has argued, "[b]elonging, loyalty, and sense of attachment are not components of a zero-sum game based on a single place," in which individuals must choose between various identity markers. It is possible to develop multiple facets of identity without contradiction, and these distinct dimensions will still cohere in a single individual.

Just as the concept of belonging is multi-faceted and fluid, similarly, a group may be defined at different times in terms of culture, place of origin or religion. There is no inescapable need to choose between these dimensions, as each can constitute a facet of what defines us as individuals. In identity categories, there are no consistent, unifying boundaries. We see the possibility of constructing unity through multiple and complementary identities, in which each person can identify with the various strata that form identities through the intersection of different dimensions, particularly in a culturally diverse state. However, given these multiple variables at our disposal, we also make decisions to alter and modify what is pertinent and meaningful to us.

BEING AND BECOMING

Focusing on the multi-racial influence on the formation of my personal identity, I am attempting to visually present these submerged and accumulated layers of my intersected identity through a series of artworks. I seek to explore this complex interior landscape through mixed media, including printmaking, photography and digital manipulation. These artworks attempt to visually manifest the intersecting inner realities of my experience of being Malaysian Chinese through visual assemblages. The artworks reproduced here imply the fluidity of ethnic identity, which is influenced by multiple factors including location, level of interaction, era and age group. Along with the text, they aim to challenge the notion of a fixed and singular national identity by highlighting the complexity and diversity of the migration experience in a multicultural society, with ethnic differences and classifications blurred in the context of the Malaysian Chinese experience.

In *Imprints of Memories* (Figure 1), I took my 80-year-old father as my subject of study: his experiences as a second-generation migrant leaving China when he was a toddler; 75 years of settlement in Malaysia; going through the Second World War period not long after he reached
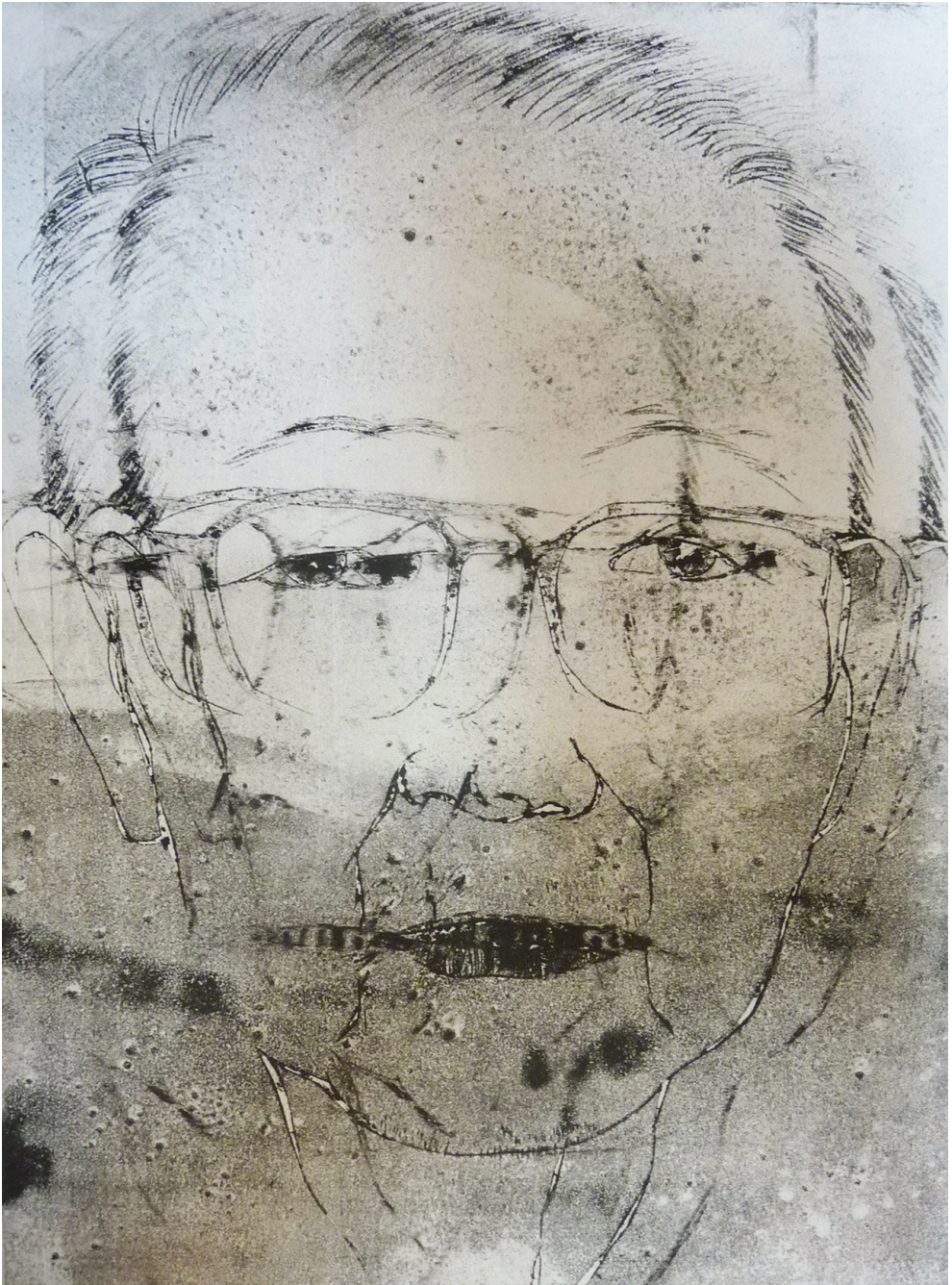
Figure 1. Helen Guek Yee Mei, *Imprints of Memories,* 2010,
Mixed medium on paper, 86x 60 cm.

Figure 2. Helen Guek Yee Mei, *History of the Explorer,* 2010,
Mixed medium on paper, 42x 286 cm.

Malaysia; and, together with many Malaysians, witnessing the moment of liberation from the colonial powers. He grew up listening to stories told by relatives and grandparents and was fascinated by the stories he found in Chinese classic literature. He scarcely remembers his earlier home in China. When he finally returned to China in 1998, he expressed disappointment in his experiences of the place and how people interacted.

My father's experience demonstrates that memories submerge and attenuate over time and space, including new lived experiences generated through engagement with the environment and everyday practises, which overlap and intersect, creating new meanings as well as a sense of identity over time, both at an individual and collective level. Iain Chambers has described an encounter involving conversations between one's present self and the resonating culture and memories of the past, meeting in new geographical contexts: "Our sense of belonging, our language, and the myths we carry in us remain, but no longer as 'origins' or signs of 'authenticity' able to guarantee the meaning of our lives. They now exist as vestiges, voices, memories, and murmurings that are interwoven with other histories, incidents, and encounters."[29]

In *Imprints of Memories*, I attempted to express the ambiguity inherent in attachment and detachment from places, with its lingering traces of memories, by revealing the internal movements of the individual, with the historical aspects of migration stories as background. This creates depth in the portrait through the literal imprint of memories.

History of the Explorer continued *Imprints of Memories* in exploring migration and settlement. I attempt to present the migrant experience, which makes a break in the linear story of family and ancestry, introducing novel living and social contexts in a new environment and enabling the viewer to experience the fragmented connections and discontinuous gaps in the past. Breaking from the past and taking root in a new land by adopting unfamiliar values and customs is a journey during which one accumulates new life experiences and memories in a new context of the here and now.

Through the arrangement of an extended visual narrative, with seven panels arranged horizontally, a landscape is carved out, symbolising the journey of overseas Chinese in search of a better life. This arrangement of a long visual narrative also suggests an epic journey of resettlement. The
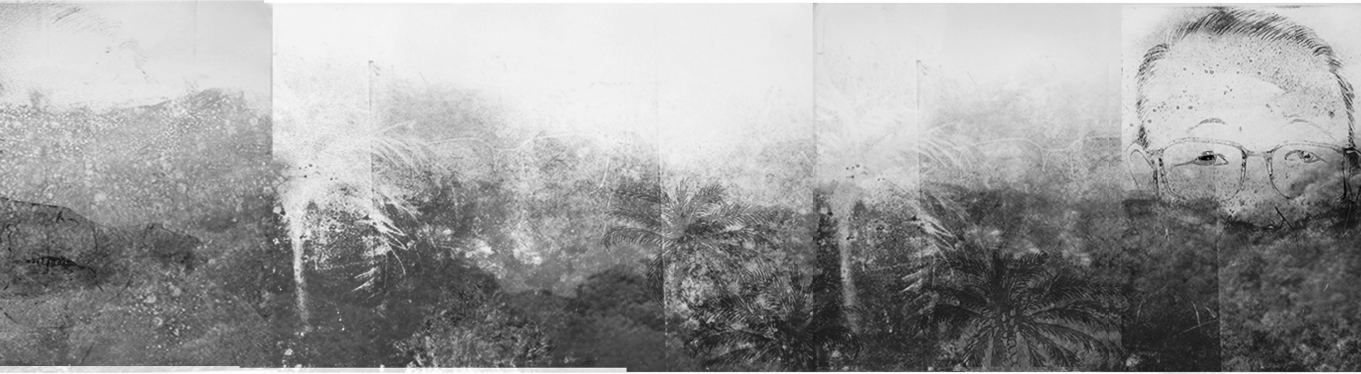
background image depicts the experiences of early Chinese migrants in general, with one side focusing on their origins in China and the other on the new land. The image of the rooster and the superimposed portraits of my father present a specific story within this general narrative, forming the only link between him and his native land. The right side of the image depicts a tropical setting with coconut trees and rainforest. When I queried my father about his recollections of the country where he was born and reared until the age of five before emigrating with my grandparents, he could barely recall anything, including the town and the house where he had lived. The only distinct recollection he had of China, a country he had barely visited, was a rooster rocker that he insisted on bringing with him to Malaya 75 years ago.

I used my father's experiences to inscribe a concise history of the lengthy settlement process undergone by Malaysian Chinese and to illustrate the fluidity of identity created by choice and mobility within the context of migration. Migration is not a static event, but rather a journey to call a place home, a journey which is measured not only by physical distance, but also by affection and a sense of belonging through adaptation, adjustment and self-positioning that requires an equally long journey of self-identification. It is an internal process that enables the individual to establish a sense of placement and belonging within the larger context of their here-and-now lived experiences.

My third piece is a digital printout on canvas (Figure 3). Seen from a distance, it appears to be the silhouette of a person without any indication of skin colour, race, cultural or national affiliation. However, closer inspection reveals fragments of unidentified landscapes that are discernible within the overlapping layers of a silhouette placed against a background made up of densely textured layers that are part of a Chinese ink painting that my father brought back from his first visit to China during his adulthood. The landscape features a Chinese adage that he cherished in his youth. The right side of the artwork features a pattern of local Malaysian floor tiles. In the central section, the image of a pre-war building emerges. It resembles my father's first permanent home in the new land, beside the town's port. As elsewhere in Malaya, many early Chinese merchants settled in the port and contributed to the establishment of the town through the small and medium-sized businesses they started. Almost the entire street was occupied by Chinese businesses, including banks, coffee stores, hotels and transportation services.

Figure 3. Helen Guek Yee Mei, *Layered Inner Landscape,* 2010,
Digital print on canvas, 151x 121 cm.

Layered Inner Landscape was created based on faded and fragmented memories of home set in an interior landscape. The different layers of imagery have become layered and sandwiched together without indicators of time or separation between eras, but joined together by memories.

The Traces of Descent (Figure 4) was created to explore feminist perspectives that would help interpret the migration experiences of Chinese women through the intersection of textiles and patterns. I gathered the textile patterns produced by three generations of women in my family. I began with my grandmother's "bound feet" – a common custom among Chinese women that originated during the Song dynasty, used here to symbolise the first Chinese migrant women who followed their husbands to Malaya. I remember her cradling me while seated in her family home, which my grandfather built to symbolise their "settling down" in the new land.

Many early Chinese migrants settled on plantations and estates. With limited financial resources, it took my grandfather many years to establish rubber trees, vegetables and fruit trees in jungle clearings. Amid these hardships, my grandmother had a miscarriage and she also lost her brother during the Japanese invasion of Malaya. During the Japanese occupation, the Chinese were subjected to the harshest treatment and many families continue to lament the loss of loved ones during this period. My mother told us these stories to remind us of our family's early history in Malaya and to appreciate the blessings and peaceful life that the present generation is experiencing.

I presented my grandmother with a pair of very dark blue pants with a pattern similar to one I had discovered. Most of the patterns it bears are traditional Chinese designs, which she sewed using fabric bought from a nearby textile shop. This pattern was so prevalent that I even spotted it on a local tablecloth. I altered the pattern to make it more visible on the canvas and overlaid it as a background to form part of my memories of that era. The backdrop consisted of village scenes with a few villagers, with coconut, rambutan, and durian trees added to lend atmosphere.

Figure 4. Helen Guek Yee Mei, *The Traces of Descent,* 2011, Digital print on paper, 73x 60 cm each.

As the second generation during the pre-Merdeka (independence) era, my mother is featured in the second part of this series. I presented her with a photograph depicting our youthful family in 1970, embracing our family home. I created photo montages using some of the ancient photographs I still possess. Along with the fashions of that era, I included the fabric she wore as the backdrop, but overlaid it with my grandmother's dark blue-patterned pants. Additional contextual layers were overlaid onto the old rural village that surrounded the new village homes built by Chinese.

Using the same concept and visual resources, I created a third piece which depicts two further generations of my family: my sister and her daughter, the new postcolonial generation of Malaysian Chinese, and the future generation, against the backdrop of my family home in the 1990s. The piece incorporated various clothing and pattern designs. This time, however, the newer layer was on the top, with history forming a solid foundation, the whole work layered with a sense of belonging to this place, with much to anticipate as our future homeland.

Both in tonality and colour, this series accentuates the notion of an evolving culture by merging patterns and clothing designs through past and present generations. These layers support the visual narrative by layering traces of descent and combining our family's accumulated experiences through the use of submerged imagery. The patterns and images used were widespread at the times and places in question. The memories shared are identifiable both as individual memories – the sense of belonging evoked through seeing and emotion – and deriving from our shared experiences.

In *Family Tree, t*he subjects were my parents and their experiences, arranged in a way that layered memories and stories across three works. The middle piece was the family's first wooden house, a symbol and the first ground to call home. The combination of these pieces showcased the rich layers of experiences through the ordinary family life setting, highlighting the influence of our surroundings on our identity and belonging.

Figure 5. Helen Guek Yee Mei, *Family Tree,* 2011, Digital print on paper,
78x 60cm (left), 87 x 60cm (centre), 78x 60 cm (right).from the exhibition "Being and Belonging."

CONCLUSION

In this essay I have described my ongoing research interests in identity, particularly the complexities of human existence that lie beneath the surface of the skin. I began with the concept of *Bangsa Malaysia* in a Malay-dominated plural society characterised by ethnically distinct identities. I proceeded to point to the disadvantages suffered by the Malaysian Chinese community and its portrayal in official narratives and historical records as a consequence of Malay-centric nationalist ideologies. Policymakers wanting to foster a cohesive national identity and a sense of patriotism among the peoples of Malaysia have a number of different approaches at their disposal. Changes in the historical and political landscape has meant that there is an ongoing contest between the 'assimilation' and 'integration' approaches.

I have traced the historical context of various waves and layers of migration in Malaysian history, aiming to analyse the Chinese community's cross-cultural experiences and the history of cultural overlap through physical relocation, settling down and participation in nation-building. I also briefly discussed the problems and challenges posed by language, education, culture and the economy that have led to division and a sense of alienation in the context of issues relating to official recognition and representation in Malaysia. It is a story of enduring disadvantage in the policymaking process for Malaysian Chinese.

Malaysian Chinese have diverse educational backgrounds – English-educated, Chinese-educated and Malay-educated – as well as variations in dialects and mother tongues peculiar to regions and states. The younger generation of Malaysian Chinese lean toward Mandarin Chinese rather than automatically adopting the family language and dialect. Able to communicate in various languages, code-switching is native to them. This practice is known as *Bahasa Rojak* (language salad)[30] and Malaysian English and Malaysian Mandarin are becoming new languages of identity for youth.

Diverse religious practices also differentiate the heterogeneous Malaysian Chinese. Traditional ancestor worship – a blend of Buddhism, Taoism, Confucianism and the veneration of local guardian spirits – is prevalent among Malaysian Chinese. This syncretic religion also incorporates local legends and halal dishes, forming a new micro-culture that varies according to localities and includes the deities of Malay-Muslim religion and Orang Asli.[31] The adoption of other religions, including Christianity, Islam and Hinduism, is primarily due to conversion through intermarriage and localisation over time. Chinese migrants' culinary knowledge and access to new ingredients led to the modification and invention of famous local dishes, resulting in both similarities to and radical differences from traditional Chinese cuisine.[32]

Unlike earlier generations, contemporary Malaysian Chinese embrace the country's contemporary reality. The "everyday-defined" form of social reality has intersected with their culture and ethnicity, creating a stronger national identity in terms of their self-identification. In a 2006 nationwide poll, 52% of Chinese and 35% of Malay respondents identified as "Malaysians first." In 2011, 55% of Chinese and 26% of Malay respondents identified thus, demonstrating an increasing preference for national identification above ethnicity among Malaysian Chinese.[33]

The varying pace and intensity of the acculturation or localisation process as it has affected Malaysian Chinese has contributed to the diversity of Chinese identities across the nation. This has also resulted in differing conceptions of local identities and models of Chinese culture. I have argued that beyond the superficial aspects of physical appearance, each individual comprises a composite of layers of identities, with specific identities assuming more prominence than others.

Several artworks shown in the "Being and Belonging" section of explore overlapping elements of my Malaysian Chinese identity. They reveal the coexistence of several localized experiences and blurred identity. The visual compositions of the artworks imply the interior dimensions of the concept of *"Bangsa Malaysia"* (Malaysian), which involves the mixing and intersection of several cultures and experiences, leading to the formation of a composite individual.

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GISELLE SU HONG GICK AND HAROLD THWAITES

CREATING A TOOL TO EXPLORE INTERGENERATIONAL UNDERSTANDINGS THROUGH THE USE OF VIRTUAL REALITY IN MALAYSIA

INTRODUCTION

This paper provides an introduction to a research-creation project, focusing on developing a prototype Virtual Reality (VR) educational tool. Younger people in Malaysia have limited exposure to or interest in information relating to the elderly, resulting in an intergenerational disconnect. The wider project aims to develop a VR teaching tool inspired by an existing role-playing simulation game (Aging Game). As a storytelling-based experience, VR can be used to share the discomfort faced by older people when using information and communications technology (ICT) such as computers/ cell phones, internet and social media.The project is to explore the potential VR has to act as a bridge between the generations and to raise awareness in younger people about intergenerational issues. The primary focus of this discussion paper is to discuss design and modification of the VR tool for creating interactive experiences that inhabit both the real and the unreal (virtual) world.

DIGITAL SOCIETY AND AGING

Information and communications technology (ICT) is a broad field encompassing digital tools, devices, applications and networking systems that enable communications and interactions. Smartphones and computers, with the internet as the backbone, are the most heavily used ICT devices. However, the adoption of these technologies remains relatively low among people aged 60 and above. The Malaysian Communications and Multimedia Commission (MCMC) reports that this age group constitutes the highest number of non-internet users.[1] This has led to a "digital divide" where elderly people lack access to ICT or value creation that they can contribute to society due to IT illiteracy.[2] Research suggests that ICT can enhance the quality of life and independence of older people[3] by helping them stay active through online communication, reducing loneliness, gaining access to information and increasing life satisfaction.[4] Through video calls and messaging apps, older people can stay connected to their friends and family. Social media can help in

expanding their social circle by encouraging them to join groups with similar interests, creating a sense of belonging and community integration. Without ICT adoption, older people may face social isolation[5] and a lack of self-esteem[6] as they struggle to keep up with new norms for society and lose autonomy in their personal lives.

Age-related challenges, such as vision, hearing and mobility issues, pose obstacles for older people using technology.[7] Complex interfaces and small displays can hinder usage, especially for those with cognitive impairments.[8] Older people with memory deficits may struggle to learn and recall functions on mobile phones with complicated interfaces or too many options.[9] They prefer technology that is easy to learn and adapt to, provided that the benefits outweigh the effort required.[10] Lack of confidence and fear of making mistakes can discourage older adults from using new platforms like social media,[11] and they may not perceive technology as a way to support their life or maintain independence.[12] However, these perceptions are often based on a lack of understanding and inadequate training.[13] Older adults may rely on younger relatives for assistance with ICT,[14] but not all are willing to seek help because they don't want to burden others. Addressing the digital divide becomes challenging when both older and younger generations lack the willingness to proactively seek or provide help.

INTERGENERATIONAL UNDERSTANDING

Providing the right support to older learners leads to a higher utilisation rate of technology amongst this cohort.[15] Intergenerational support is important to create a positive, understanding environment when helping older people to adapt to new technology.[16] However, such environments are hard to achieve when some young people have negative perceptions of the elderly. Young people may describe older people as pessimistic, conservative and grumpy,[17] or view them as a burden due to their decreased independence.[18] Such ageist attitudes can lead to discrimination and social exclusion of the elderly, and neglect of their welfare needs.[19] It has also been reported that young social workers may show less interest in supporting older people and their families.[20]

It can be difficult for a young person to comprehend the problems and challenges faced by an elderly person, as there are many differences in life experience due to age, physical and cognitive abilities, lived experiences, life roles and even life goals.[21] To encourage a stronger sense of connection for younger people towards older people, a simulation learning method called the Aging Game has been introduced as an educational tool for healthcare students.[22] However, such role-playing simulation activities are costly, time-consuming and labour-intensive.[23] It is our hope that Virtual Reality (VR) has the potential to develop simulation games which provide realistic scenarios which can be difficult to recreate (or cannot be recreated) in the classroom due to the limitations of real-life settings.

VIRTUAL REALITY

VR has been referred to as an "ultimate empathy machine" because it can allow people to experience a higher sense of involvement, thereby creating understanding of others' perspectives or emotions.[24] A fully immersive VR experience involves a head-mounted display unit (HDM) that blocks users from seeing the real world and replaces it with the virtual environment. VR has the potential to support complex narratives, to convey a story that generates viewer interactions and

intensifies emotions, thus enhancing the user's empathetic response.[25] It can also be used to replicate dangerous situations or carry out trials without harm to the users.[26] Research conducted to compare the empathetic response of participants towards homeless people using VR, on the one hand, and traditional media portraying the same narrative conditions, on the other, found that participants engaged in VR tasks exhibited a longer-lasting empathetic response and displayed greater willingness to support homeless individuals by signing a petition.[27] Whilst far from prompting systemic change, in this instance. VR possessed a greater ability to translate empathetic responses into actionable outcomes compared to traditional media.

Examples of existing VR narratives designed to increase empathy or understanding

Becoming Homeless: A Human Experience offers a narrative experience of living as a homeless person.[28] The VR environment closely resembles the real world and users interact with it as they try to overcome the difficulties of homelessness. Players are transported automatically to different scenarios while guided by an audio narrator. The VR experience is intended to generate an emotional connection and encourage users to empathise with homeless people by engendering feelings of anxiety and fear when users are faced with the necessity of acting in unfamiliar roles, standing in the shoes of the homeless person. This project successfully demonstrates how VR can serve as a medium to generate empathy and understanding of a particular social issue.

Goliath: Playing with Reality tells the true-life story of a man with schizophrenia through the medium of an audio narrator and animated visual representations. The VR environment consists of stylistically unrelated scenes that may appear confusing or disturbing, but are intended to give players a sense of how a schizophrenia patient views their reality. Some scenes are interactive, while others are not, and players are more like observers rather than the protagonist. Nonetheless, the game enables players to gain some understanding of the world that a schizophrenia patient experiences, from the patient's own standpoint.

The Key is a VR experience that presents the story of a refugee through metaphorical visual representations and an audio narrator. The game is structured as a progressive exploration of a symbolic dreamlike environment as the player uncovers the narrator's forgotten story as a refugee. The developer does not expect the audience to fully understand all of the metaphorical elements presented; however, a significant message is revealed at the end through the narrator herself after her memories have been recovered.

The principles underlying these three VR experiences were closely tied to the impetus behind our project: to enhance understanding of a group of individuals who have been neglected or misunderstood. These VR projects emphasised storytelling and narratives in creating and engaging users in immersive learning experiences. In *Becoming Homeless, Goliath* and *The Key*, the stories are presented within predetermined scenarios and frames, with an audio narrator serving as the storyteller. There are few interactions or choices involved, and none of the actions taken will have an impact on the plot. As a result, this kind of storytelling feels 'scripted,' supplied with a predetermined route, despite users having some freedom to interact.[29] This approach helps in supporting a narrative structure which ensures the continuation of the story.

In this project, however, we are interested in exploring the implications of an alternative, non-linear narrative.[30] The Aging Game primarily utilises experiential learning through task performance.[31]

Allowing players to interact in real time does not always result in generating events that are perceived as intended for narrative development.[32] Some people learn more effectively when they connect positive feelings with a particular element and physically interact with it in a specific context, rather than passively accepting information.[33] This opens an avenue for exploring other kinds of storytelling that can utilise the VR's interactive features, potentially enhancing the immersion level to achieve higher learning outcomes. Whether the degree of autonomy exerted in a storytelling VR scenario impacts learning motivation is an important question.

DESIGN PROGRESS

Ideation, development, challenges and testing

The development of a prototype took around three months, and was created using Unity, Steam VR and Samsung HMD Odyssey. The first design choices considered in this project related to the storytelling mechanics. While a predetermined storyline is a more secure choice than a fully multi-story pathway due to the nature of VR's 360-degree navigational mode, limiting the freedom to explore reduces the players' sense of autonomy,[34] so environmental storytelling was explored in this project, allowing players to explore with minimal interruptions and providing them the capacity to construct the story through their choices and level of understanding of the game. The narrative centred on the problems and challenges that older people face with technology. An elderly woman, inspired by the mother of one of the authors, lacks technological literacy. Her life is focused on her family and home and her role as a housewife. The game environment is based on Sungai Lima, a fishing village in Selangor, Malaysia, which the players explore at night. In traversing this environment, players hold a torch to navigate through the darkness. The story and its environment are desivgned to highlight differences in lifestyles and intergenerational engagement with ICT to encourage younger people to reflect on these dissonances.

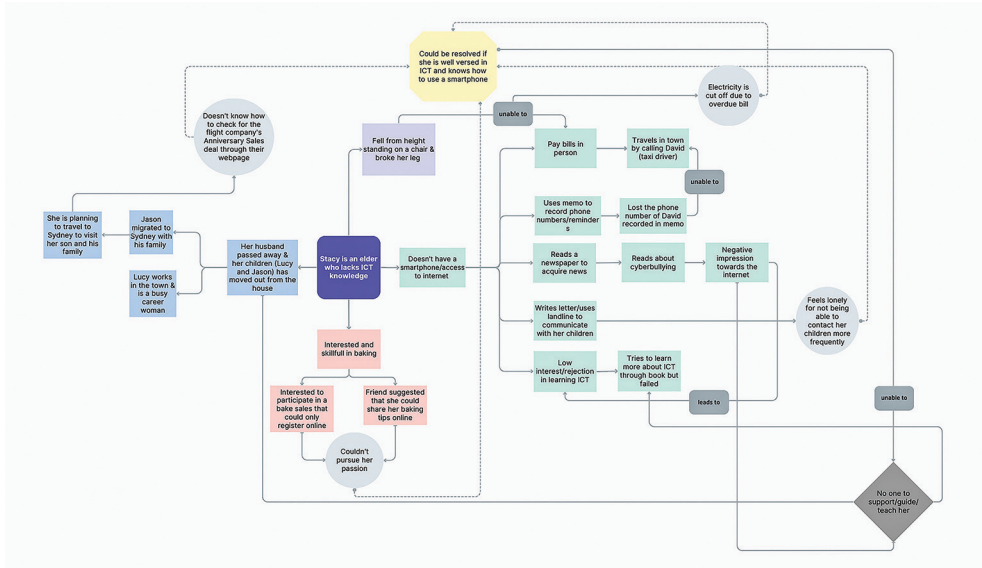Figure 1. The fishing village environment.

Figure 2. Flowchart of the events in the VR story.

The next step was to strategise the interactions possible for the story within the VR environment, given the limitations of both the software and hardware, and to establish an identifiable chain of events as part of setting up an environmental scenescape.[35] The structure and event flows within the story are illustrated in the flowchart in Figure 2.

Questions were presented at the start of the simulation to cue exploration before the gameplay began. Setting clear and specific goals was important for engaging attention and generating motivation for players.[36] Clues to the game task could be obtained through interactions and observation, including opening doors, drawers and cabinets, as well as picking up objects. Prioritising player safety and comfort, teleportation was introduced to reduce motion sickness when players were moving between points, despite the possibility of lower immersion levels as teleportation does not resemble movements in real life.[37] Other considerations for player safety were keeping gameplay time short to avoid discomfort from prolonged VR exposure.[38]

The game was exhibited during the Sunway University open day, and a total of seven students were recruited for user testing, which was conducted by one of the authors. Each participant was briefed with a basic tutorial on the controls used in the game and given ten minutes to explore the environment and complete the game task. An in-depth interview of each participant was conducted after the gameplay experience, alongside observational data collected by the author throughout the session.

Figure 3. Set-up for the open day trial exhibition of the game at Sunway University.

Figure 4. A pop-up view of the game questions can be triggered by a button at any location and time position (post-modification).
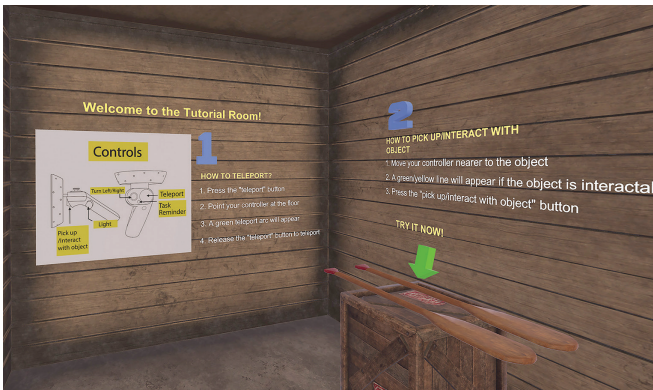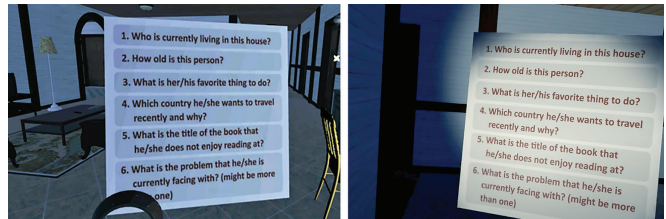

Figure 5. Set-up of the tutorial room (post-modification).

Figure 6. Flickering lights were added as a visual cue, replacing the original green light (post-modification).

Discussion and interview responses

Motivations

A high-immersion VR environment allows users to disconnect from the real world and feel more involved in the experience.[39] Factors which determine the level of emotional attachment to the experience include how enjoyable and meaningful it is felt to be and the relevance of the content to the participant.[40]

The findings from the open day exhibition indicated that most participants rated their experience as fun and enjoyable. However, its effectiveness in stimulating understanding through learning about the aging issue was questionable, as most participants failed to complete the task of developing a chain of events to reveal the whole story. Thomas Malone suggests that curiosity is one of the elements that cultivates an enjoyable learning experience, and a person's curiosity is based on the unexpected and constructive feedback they receive throughout the experience.[41] In this project, the questions were intended to evoke curiosity, but a lack of feedback caused some participants to become confused and lose motivation. Thus, the uncompleted tasks stalled learning opportunities and simulation potential to generate understanding. Participants' responses in the post-game interviews suggest that those who preferred exploration and multi-choice gameplay remained engaged, paying more attention to the details of the environment and giving more thought to analysing the questions and clues than the other respondents.

Participants with similar backgrounds, who share the same life experiences and family structure, were able to define and relate to the full story and expressed empathetic attitudes towards the aged, a result which aligns with previous findings that we exhibit stronger sense of connection and a sense of identity with people we recognise, or people who we consider to be like us.[42] Participants without similar experiences required more prompting to develop the necessary understanding of the issues.

VR was a new experience for many of the participants, who mentioned that they had difficulty with the controls. One participant stated, "I don't quite understand why the green light appears on the chair." Not understanding the mechanics of the game meant that the effectiveness of the experience was much reduced. The green light indicated that an object in the environment was interactable. For the next iteration of the game, one design solution was to set up a tutorial room for in-world pre-training so that users could to adapt to the VR controls prior to the session in order to reduce their cognitive load when playing.[43]

During the debriefing session after the game, it was observed that participants were more likely to put the story pieces together during the interview session when they were able to communicate with the interviewer and assimilate their thoughts,[44] including their insights about intergenerational understanding. As one of the participants remarked: "I think it's sad that she is living alone. It must be a little lonely when I think about it. And she wants someone to accompany her, that's what I have been thinking about … I was thinking, yeah, it's a real person. I was slowly getting into all these bits, so I like that part of it."

Moments such as this were encouraging and showed the potential for the tool to enable younger players to form new perspectives and emotional connections with the problems and challenges faced by the elderly. Another discovery was that even though some participants did not complete

the task and did not fully comprehend the story, they still enjoyed VR as a novel experience. While this aspect doesn't aid the project's main objective, it does show the potential for VR to engage users' attention.[45]

Autonomy versus control

Harvey Smith and Matthia Worch presented the concept of environmental storytelling at the Game Developers Conference 2010, in San Francisco. Building on the work of others, such as Carson's "Lessons from the theme Park," (2000) they defined environmental storytelling as the "act of staging player-space with environmental properties that can be interpreted as a meaningful whole, furthering the narrative of the game."[46] Without using cutscenes and dialogues to present important or contingent information to the players directly, environmental storytelling allows players to explore and investigate, to deduce and reach their own interpretation as to what is happening or has happened.[47] Players respond as active participants in uncovering the story through their own interpretations based on their own choices, making the experience more memorable and meaningful.[48] One non-VR project that incorporates this storytelling method is *Gone Home*, an interactive exploration simulator in which players explore and interact with the objects and elements in a house to uncover the story of the people who live there. The simulation aspects of *Gone Home* were a consideration in the development of the education tool in our own project.

Environmental story setting in VR allows users to view peripheral areas that are normally limited in traditional cinematic screen settings.[49] The user's vision can expand to include a wider field according to their body movements and behaviour. Despite reduced control over narrative flow, the ability to explore and interact enhances players' motivation. The majority of participants responded that they enjoyed teleporting around the environment and having the ability to explore. However, some participants reported that they struggled in searching for the relevant clues as they felt overwhelmed by the decorative elements in the environment.

One of the challenges of employing visual cues in a VR game is that, with a 360-degree navigational mode, it is difficult to predict the user's viewpoint,[50] and ways to navigate players to 'points of interest' need to be found for the game goals to be achieved within a shortish time limit. Visual cues used to direct attention to desired areas[51] included a green light which indicated that an object was interactable when touched. As mentioned above, some visual cues turned out to be less intuitive or effective than planned. While a time limit of ten minutes was set as a control factor to prevent discomfort or VR motion sickness, it also hindered the overall game experience. Some participants felt that ten minutes was too short to fully explore the environment and take in the complete story.

Realism in VR Storytelling

It has been suggested that realism is essential for VR training for professionals such as surgeons, firefighters and pilots.[52] However, the validity of realism depends on the context in which the VR experience is being presented to the user. The question here is, what should we prioritise in terms of user experience when creating VR interactions – immersion or realism? One suggestion is that user preference should be used to evaluate the effectiveness of VR experiences;[53] some users prefer simplified controls, while others see the controls as part of the immersion experience.

The extent to which a user's imagination is stimulated depends on the degree of 'realness' of the VR environment, which can in turn affect the participant's motivation to engage in the activity.[54] Realism in VR is achieved by a combination of visual, auditory, interactive and sensory stimulations.[55] Equipment such as gloves and controllers can incorporate haptic responses or feedback signals, such as vibration sensations, to users[56] when they interact with the VR environment.[57] The interrelation between these components of VR help determine the interactivity and immersion levels that stimulate a user's imagination.[58]

Striking a balance betweeen interaction, engagement and content is crucial in setting up the VR storytelling environment.[59] Defining 'realism' is a difficult task in VR applications. For some, replicating actions that are near-identical to real-world settings can help in enhancing the immersion level. Others believe that high-quality, detailed and complex graphics are required, while yet others argue that the conditions for 'realism' have been achieved if users successfully recognise the environment or items within it, even if intricate details are lacking.[60] The torch-lighting device was introduced into our game to accurately simulate the grabbing sensation of taking a torch in real life using the controls of the VR controller, including button pressing. However, we found that participants frequently dropped the torch as they struggled to continuously press the button for light. While some participants found this element realistic, many found it cumbersome, which detracted from gameplay as well as our objectives.

The next stage

Limitations of the study included the complexity and time-consuming nature of VR development, which made it difficult to conduct adequate user testing with the limited resources available. While VR has been around for over a decade, it is still an emerging technology, we experienced hardware issues including low-resolution imagery,[61] unstable game displays and other glitches which were beyond our control. To overcome such limitations, we suggest that the evaluation of the performance of VR environmental storytelling be broken into several stages (Figure 7).
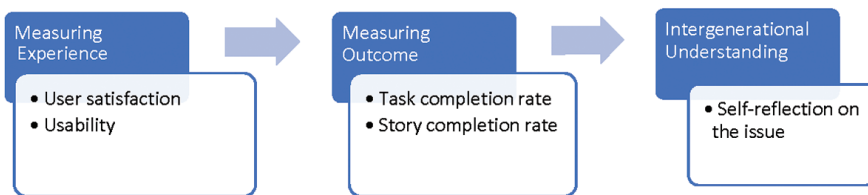

Figure 7. Diagram showing stages for evaluating the effectiveness of VR environmental storytelling.

Several modifications were made to enhance the game experience, including a pop-up function so that users could view the questions at any time during the game; changes to the visual cues; changes to player controls to eliminate the torch-dropping problem; and longer play times (20-30 minutes). Follow-up pilot tests showed that these changes improved the gameplay experience, but further research is needed to determine whether they are sufficient to help users advance to the next stage and achieve the project's ultimate goal of raising awareness and inspiring intergenerational understanding.

FUTURE POTENTIAL AND SUGGESTIONS

This paper describes the use of VR in the Malaysian context, but our experience will usefully inform similar projects in other locations. With its immersive and interactive capabilities, VR environmental storytelling is particularly impactful for younger generations, as it enables them to immerse themselves in shared experiences that resonate with their digital-native sensibilities. This ongoing research–creation project holds the potential to serve as an educational tool, not only for younger people, but also for software designers looking to create ICT interfaces that can cater to the needs of older people.

Looking ahead, the integration of storytelling and VR promises exciting opportunities for fostering intergenerational understanding. However, VR is only one component of many activities in the community and education tool box for fostering these connections and bridging generational divides. Project such as this can be integrated in community inclusiveness programmes, encouraging younger people to actively participate in such programs – an approach which has been successfully used in Malaysia to foster social connections and mutual learning and support between older and younger generations.[62]

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CECILIA NOVERO

STRIKING (UP) INTERSPECIES COLLABORATIONS WITH CROWS AND FALCONS

INTRODUCTION

This essay discusses two different kinds of human collaboration with wildlife. First, I consider the short non-fictional text *Krähengekrächz* (2016) by German author Monika Maron. Second, I look at young artist Hara Walther's body of work, including her falconry, work she performs with her animal companion Sicilia.[1] I deem both creative engagements to be two distinct yet related cases of zoopoetics (more on this below).[2]

Maron's text is an incomplete and tentative account (in German *Erzählung*) of her attempts at striking up a friendship with a crow in the Berlin neighbourhood where she lives. As the writer announces at the outset, her experiment in interspecies companionship is initially in the service of a planned novel featuring a crow among its main characters.[3] However, as I shall argue, while explicitly conceived with such an agenda in mind, precisely by following the crow's movements, Maron's text strays from such a goal –or map– but rather follows what Thom van Dooren might call the crow's "interjections". For Van Dooren, an interjection involves an interruption of the status quo, a getting in between what is and what might be, whether verbally or bodily, in an effort to realize something different, to propose an alternative configuration of how we may get on together.[4] Indeed, Maron's text functions as one such interjection itself, for, in being "recruited" by the crows, the narrative breaks away from any specific genre. As I hope to make clear below, this story or rather collection of stories is less the result of the author's intention than a meandering response to the crows' own experimental gestures in the emergent interspecies contact zone where woman and crows meet.[5]

Walther's art is the offspring of her long partnership with Sicilia. For example, Walther has created colouring books for children, books she uses to teach falconry in her school *Falconette*, as well as watercolour paintings and assemblages with materials acquired during her hunts with Sicilia.[6] Her art is made of *markings* that, as is the case in Maron's text, are neither authorial nor authoritative. In contrast, her art follows the trail left by her wild animal companion and collects the traces as gifts. Issues of creativity, vulnerability, and impermanence punctuate the joyous gestures of co-becoming in Walther's work. For this artist, therefore, falcon and human are creatively joined in the everyday practices of falconry, teaching, and art.

Despite their differences, these two practices of interspecies collaboration emerge from what van Dooren calls the work of *attentiveness*, "of paying attention and attending to the complex realities of actual animals."[7] As van Dooren remarks, such a labour of attentiveness is first grounded in curiosity, with all the obligations that come attached to it, and, second, "takes us beyond our previously known worlds … putting knowledge at risk and allowing others, of all shapes and sizes, to make a difference to the process of knowing, and so of being."[8] The labour of attentiveness thus interpreted informs both Maron's essay and Walther's art practice: they both are expressions of particular, contingent, and mundane[9] interspecies relationships (and the ensuing accountabilities) that repeatedly demand that the humans involved rethink ethical cum aesthetic codes. In short, their practices are "efforts" –i.e., ongoing experiments– to *re*describe (as in to take a second look, *re-specere*) something that matters to both animals and humans, whether it be the birds' ways of life at their intersections with the human life-ways, the places these birds share with humans, or their interactions within and beyond their species, "so that [this something] becomes thicker than it first seems."[10]

It is thus that Maron's text and Walther's art practice, reveal their zoopoetics, and do so in a twofold manner: first, as experiments in multispecies living, which recognize, in Aaron Moe's words, "that nonhuman animals (*zoon*) are makers (*poiesis*), and … have agency in that making" and second that "when a poet undergoes the making process of poiesis in harmony with the gestures and vocalizations of nonhuman animals, a multispecies event occurs. It is a co-making. A joint venture."[11] Maron's and Walther's creative practices of writing and art are the mediated renditions and translations, as well as the sites for the unfolding, of these women's ongoing efforts (essays) to respond to the diverse modes of being, agency, and understanding that their interspecies collaborations bring about, the "im-pressions" of which they then register on either page or canvas.

A few more words on zoopoetics may be in order here. As a *practice*, I interpret zoopoetics as a kind of zoopoiesis, which, in turn, occurs as sympoiesis, the practice of worlding that, according to Donna Haraway, is always a complex, unfinished and non-innocent "becoming with."[12] On this reading, zoopoetics describes the generative and expansive material and semiotic capacities to create, construct, and weave worlds that humans and non-humans share and in which they are, at all times, imbricated. As a *method*, zoopoetics involves human noticing, imagining and re-describing (van Dooren) these interlaced multispecies acts of worlding, which our actions and thoughts affect and by which we let ourselves be affected. Thus texts, events, signs, and matter commingle, but also dis-agree, and shape each other often in surprising and unpredictable ways. Serenella Iovino and Serpil Oppermann's clarification of the diffractive method and intra-action of matter may be invoked here. They write:

> Instead of concentrating on texts and seeing how they "reflect" the world's phenomena —natural life or a society's cultural practices—such an interpretation [my note: the diffractive method] reads world and text as an agentic entanglement. … According to this vision, text and world can be read as "circulating references," the same way that nature and culture can be read and thought through one another in laboratories, gender politics, or hybrid collectives of humans and nonhumans. … the "diffractive" method allows us to actively participate in a creative process in which material levels and levels of meanings emerge together.[13]

In short, as Haraway variously puts it "the partners do not precede their relating; all that is, is the fruit of becoming with,"[14] and: "to be one is always to become with many."[15]

according to the more or less precarious relations between these women and the wild birds they attend to, birds who are free to leave the "game" at any time they wish.

Below, I look at how Maron and Walther, on the one hand, experience and move in space differently in the company of crows and Sicilia, the falcon, respectively. On the other hand, I consider the performative aspects of both text and art, how they caw and cache, swerve from intentions and canonical representations, and thereby make themselves into capacious "carrier bags" for unfinished stories of earthly living and dying together.[22]

MARON'S JUMPING-JACK DANCE WITH JUMPING-JACK CROWS

Maron's *Krähengekrächz* (Crows Cawing) is, at first sight, a short and rather simple first-person account about the research *cum* experiment the author conducted for a novel, in which she featured a crow. This 'pre-text' presents itself as a reflection on that experience, i.e., a second-order narrative that both precedes the novel and differs from it, as the book's genre revealed on the cover makes apparent. In this way, the pre-text announces it is temporally framed by a beginning and an end, an end that, here, also implies the objective mentioned: when the author is released to write her novel. The account, furthermore, is clearly identified in literary terms, confined within a specific genre, which further cements a reader's expectations. Or so it seems.

However, on closer examination, while the above textual scaffolding remains in place, things within the text get more complicated, less predictable, as is the case when corvids become involved in human storytelling, at least according to most ethological studies and literature that take these animals as their subjects.[23] To be sure, Maron's narrative morphs from the pre-text she intended to write – her intention is emphasized by the recourse to verbs such as undertake, decide, plan – into a *pretext*. This is a pretext for following the local living crows along their errant and Terran[24] paths, for approaching them both in the flesh, in person, and performatively in her writing, e.g., in the space of the city, and through the proliferation of multispecies stories the text collects. As such, the narrative discloses that the author, her omnipresent dog, and these wild birds continuously interject their bodies through their gestures, gait, voice, and in their communications. At the same time, these interjections can only take place within the bounds of each participant's expectations which they have inherited from history and/or texts (including those that are associated with literary genres). In the process, they all learn to enhance their bodily and perceptual capabilities and they make each other available to previously unsuspected sites of affective and physical attachment. Nothing short of happiness finally ensues from this "curious game," a sensate joy that, as declared in the closing passages of the narrative, in fact overflows the boundaries the author had set for her scientifically informed research. The experiment-turned-game with the crows subverts the literary instrumentality that had motivated the author's initial interest in these birds, ultimately exceeding even the contours of the reflective account itself.

As Maron writes, these crows leave indelible affective traces in her thinking about humans, their lives and history, so much so that: "… for reasons that I find almost impossible to name, I can no longer reflect on humans without [reflecting on] animals."[25] In this statement, the crows turn into *ambassadors* for other animals, which they draw into material-semiotic configurations of all sorts of extant and potential interspecies imbrications, configurations that Maron, as per her statement, will no longer be able to disregard when writing of human affairs.[26] If, as she adds, to learn to know animals one must learn to know oneself, this self –as this text uncovers– will only come to know

itself through a human's acknowledgment of its own animality, which, in turn, reveals the human species to always already be an interspecies encounter.[27] Maron's dog's participation in the daily encounters with the crows testifies to this.

While animals had been a constant in Maron's prose prior to *Crows Cawing*, as critics have noted,[28] *these* local crows gradually and unexpectedly press themselves into this text, in her words, and recruit her: [29] Maron's animal interest is pushed beyond that which she usually finds in those creatures with "beautiful eyes and soft fur, and especially those who respond to my concern for them." (Kindle Edition, np) In short, through the Berlin crows, she learns with surprise that it is possible to forge a special bond with *wild* animals, and thus to enter into a sort of conversation with them as *gossip*.[30] While she confesses that, against her expectations, she cannot befriend a crow, because only crows recognize human faces and not vice versa, crows make good "companions." In other words, one can "break bread" with them, for they are curious and sociable animals, ready to take risks, if with caution.[31]

Poignantly, the author's experiment with the crows starts with their mutual recruitment in the everyday practice of food sharing. Through every exchange and attempted contact or visit with each other, their respect for each other's ways, as these transform in their co-presence, grows. Thus, Maron's experiment, which started for opportunistic reasons – i.e., in the service of literature – turns into play, a daily game where crow, woman, and dog, literally feed each other with mundane yet reliable moments of joy. At the end of the book, Maron writes that she has put a stop to her academic research *about* the crows because, as she maintains, she has gathered enough information to write her crow novel, yet the nourishing encounter with the crows does not end: to do so would be to abandon the opportunity to engage seriously in what must always be the unfinished labour of companionship. This would only cause the crows' dis-appointment, a word that in German brings to mind to dis-illusion (*Enttäuschung*). In this sense, calling off the game of interspecies relationality would be like turning down the opportunity to craft the world in the imaginative and surprising ways that multispecies engagements afford and gift.[32] It would amount to accepting the fated narrative of a forever disenchanted world, where animals and humans have parted ways. In contrast, Maron's feeding game with the crows anchors her firmly in the fleshly, earthly materiality that, the crows remind her, she shares with other non-human animals –a materiality that, once embraced, compels her to face the discomfort and suffering, but also the joys, that come with dwelling in Terran Paradise with mortal beings.[33]

Accordingly, the interspecies feeding game that runs through the text literally adds flesh to the canonical representations of corvids, which often reduce these birds to morbid allegories of a miserable death, or symbols of divine punishment for acts of disobedience. As a counterpoint to the prejudices that have affected crows and contributed to a "dark chapter in cultural history," as the *incipit* reminds the reader, Maron's text collects a gamut of stories, poems and ballads that, in featuring ravens and crows as they revel in the fallen heroes' human corpses, consider mortality from these carrion birds' material point of view: after all, humans too, animals among animals, decay and turn into nourishing compost. These carrion feeders lead the way through their rowdy chorus (*Krähengekrächz*), a recruiting cry that is also performed by this text. The author herself ultimately concedes that, once the initial horror humans feel at the thought of becoming a crow's meal passes, to look at death through a crow's gaze may bring relief – indeed, even provoke laughter. The crows' law is straightforward: a corpse is a corpse, whether that of a friend or a foe, and all is compost.

Consequently, Maron rejoices at the sight of the loudly cawing crows that slowly gather in numbers on her balcony in order to feast on the sausage she provides for them. She is happy to imagine that their recruiting calls –their *cra cra*, as the calls are marked on the page–address her, perhaps with complaints, demands, or thanks. To determine the meaning of these sounds can only be of secondary importance here, and that also applies to the fact of their opportunistic motivations for the initial contact: food for the crows; a novel for Maron. What matters now is that physical communication has ensued from their respective, now mutual, interests in one another. Indeed, Maron writes, in time she comes to forget the goal of her experiment. After a couple of crows dares to cross the threshold and join her and Momo (the dog) indoors, she feels rather that she must accept the crows' invitation to continue their feeding game outside, on the streets, an engagement that goes above and beyond any of her original expectations.

The crows crossing the threshold to get to Maron's food offering is the first step in the multispecies dynamics of recognition that unfolds: prompted by the risky curiosity that is typical of crows, this daring proximity initiates a familiarization process that breaks with anthropocentric views of domestication as human mastery.[34]

Here, in contrast to such notions of mastery, the woman narrator curiously observes without ever disturbing the crows; the dog, having understood that the food is not for him, seeks Maron's caresses as reassurance; and the crows, with their characteristic jumping-jack movements, signal their cautious endorsement of a three-way relationship in which each practices polite commensality in a real contact zone. (Dog and crows are even fed the same food.) On this threshold and beyond it, in the physical space of the neighbourhood, the boundaries between outside and inside, nature and culture, wild and domestic constantly shift and are re-negotiated.

The meat pellets and nuts that Maron first places on her apartment's floor to invite the crows into her home and, later, tosses onto the streets from her little "carrier bag," palpably draw the contours of new and flexible multispecies con-figurations: woman, dog, and crow dissolve as distinct, species-specific images to emerge as a fluid, movable assemblage: woman-with-dog-with-woman-with-crows-with-dog-with-crows. At one point, for example, Maron is sure that, during her dog walks, the neighbourhood crows recognize her as the "Woman in Black with Black Dog." Seeing herself through the image she imagines the crows have of her (and her dog), she acknowledges the crows' agency in matters of social recognition: they affect how she views herself. But they do still more: the crows provide her with the opportunity to gain a new subjectivity; they make her (and Momo) into the subject of a painting they paint, and paint again. Following another experience, for instance, she understands that the crows slowly learn to recognize her even when she wears prominent dark sunglasses. Maron deduces that the crows can figure out that the "Woman in Black with Black Dog" occasionally also has "Big Black Eyes." A novel arrangement thus comes into view. In turn, the crows' initial reticence to approach Maron, and which they then manage to overcome, confirms to the author that she too "affects" how the crows see her. As van Dooren explains throughout *The Wake of Crows*, in each different situation humans and corvids are influenced by each other's modes of recognition; they are made and remade in their relating. This practice of mutual interspecies recognition out of which, in Maron's text, new dog-woman-crow configurations emerge makes everyone responsible (response-able, accountable) to the other, in ways that require situated attention, indeed bodily attunement.

When following the crows up, down, and around the streets of Schöneberg, the author discovers that she and Momo adopt the crows' jumping-jack gait. It dawns on her that in other people's eyes this behaviour makes her *look like* a "bird lady." In fact, she soon discovers she is turned into a crow, as if by magic, when a drunkard addresses her explicitly as one: "You, crow," she calls to her, in Berlin dialect. Such an appellation, pronounced in dialect, on the one hand identifies Maron, the old crow, as belonging to the neighbourhood while, on the other, the form of address – coming as it does from a person on the margins – extends the drunkard's liminality to Maron (the dog, and her crows). Having been recognized as one crow among the Schöneberg crows, the author (*cum* her animals) is invited to join the members of an emergent "community of difference" that only then – it seems – comes to her attention. These different modalities of interspecies recognition the text suggests, perhaps unwittingly, can be of political consequence: along with the challenges and complexities that interspecies entanglements always entail, along with the taste of co-presence, one may also acquire a taste for configuring the world in unanticipated ways.

If, on the one hand, the syncopated movements of these always emergent arrangements of different bodies in space draw alternative maps of Maron's neighbourhood (maps that expand to include those on the margins, such as vulnerable old ladies and drunkards), on the other, the text, as evinced in its title, also performatively rehearses the multiple practices of becoming-with-crows that Maron's text illustrates. A few examples will have to suffice as evidence.

The guttural alliteration in the composite German title, *Krähengekrächz*, emphasizes the power of the onomatopoeic name for this species of birds: the word "crow" derives from the corvids' raucous voice. As Josef Reichholf, amongst others, reminds us, to utter the name means to invoke the thing itself, to summon a crow's presence. Maron's title doubles the onomatopoeic name (*Krähen* and *Gekrächz*, *Crows* and *Cawing*) and, with it, also the sound/noise typical of their calls. The title, therefore, not only summons the birds' presence materially (as written signs on the page, and then as subjects in the stories told), it also helps to echo and proliferate cacophonies, sending out noises that reverberate throughout the text as the marks/signs of the crows' both bodily and vocal interjections. Such multiplication returns in the compounding of stories that, as mentioned, break with the laws of genre, including the looser one of "narrative." Significantly, the German term for genre is the same as "genus" and, as such, also relates to species. Arguably, then, from the start, this genre-multiplying and thereby genre-defying text opens up as a space for uncontainable, buoyant cross-species dealings and kin-making practices. As I have shown with the feeding experiment above, movable configurations of bodies breed from the seeds Maron scatters from her small yet capacious carrier bag.

Moving rather erratically, the text – like Maron and Momo following the crows – mimics the corvids' characteristic jumping jack behaviour. It proceeds by trial and error, with doubts, contradictions, questions and ellipses that capture well the fleeting, unsure, and indeterminate nature of the unfolding interspecies relations. The ineffable, as much as indelible, traces that the material encounters with the crows leave in the author's phenomenal and perceptual world are also rendered rhetorically and typographically: besides the onomatopoeia already mentioned, anaphors make an appearance – for example when the author confesses her guilty feeling to a captive bear, in a zoo: "I am sorry, I am sorry," she repeats; and dinkuses graphically break the page, put a halt to a flow of thoughts, before the text veers off in a new direction. Thus, the Schöneberg crows' jumping-jack bodies and their vocal interjections interrupt and derail the narrative purpose of this account that, distracted from its "end," makes room for the unfinished stories of multispecies becoming, within its capacious bag.[35]

HARA WALTHER AND SICILIA: THE MAGICAL ART OF INTERSPECIES ENGAGEMENT[36]

Unlike Maron who initially approached the crows for her experiment with a clear goal in mind, falcons appear and "fall" into Walther's life as if by chance (*Zufall*), setting her art and life on what retrospectively looks to her like a "predestined" course. This is the path the artist / falconer will follow. According to one account, Walther discerned *a posteriori* a falcon's contours in an early 2007 automatic drawing, sketched according to the Surrealist tradition; the chance discovery of a falconry book, a true found object, followed, and so Walther was inspired to delve into this art.[37]

According to another account, she became "transfixed in wonder and [was] transported in sense," to quote Bennett's words,[38] when, around 2009, she saw a falcon perched in a neighbour's garden. Walther relates this experience thus: "The ... aura of this falcon left a strong impression on me. I felt a magical attraction. ... I was allowed to touch and carry the falcon, and it even
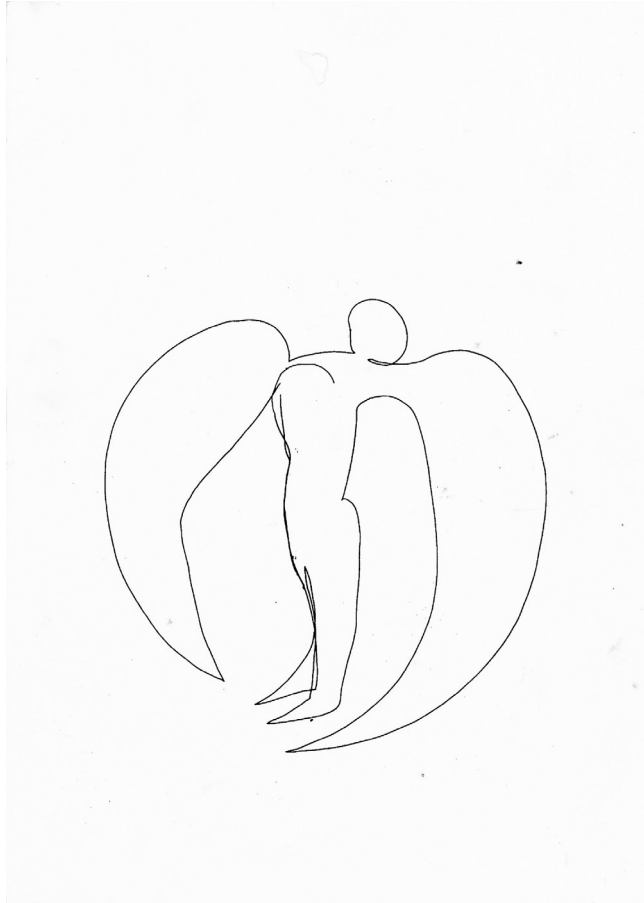

Figure 1. Hara Walther, *Oracle Drawing*, 2009, Automatic Drawing with Seismograph, 29.7x21 cm. Copyright Photograph by Nikolaus Steglich, Courtesy of Künstlerhaus Marktoberdorf, Maya Heckelmann, Director.

ate from my hand. Then I knew that I wanted to become a falconer. I wanted to be in touch with this magical being." (Letter, Dec 1, 2022)[39] Whereas in Maron's case, then, the crows distract the writer from her research objective, and thereby authorize a *sui generis* text that takes her off the beaten path, in Walther's case the falcons show her the way: since that first physical encounter, she has devoted her life to nurturing her partnership with falcons and to sharing this bond's very material "magic"[40] with other humans. This she does through her three distinct but related practices, all brought together under the wing, as it were, of her Lanner falcon-companion, Sicilia. She is a trained artist, an expert falconer, and the founding director of a children's falconry school, *Falconette*, in which she also teaches. Before focusing on her art, let me say a few words about Walther's school.

Kate Rigby has illuminated how what she calls a creaturely ecopoetics – i.e., a merging of ecocriticism and zoopoetics– may manifest in literary texts. She shows how, for example, the humming of bees experienced by a poet instigates a poetic language which is inflected with that non-human sound/sign: the humming of bees is thus first perceived and then, echoing in the poet's body, finally resonates in and around the text, through onomatopoeia and other rhetorical devices.[16] The workings of zoopoetics manifest through these kinds of reverberations that –for Jane Bennett – are tantamount to the enchanting "sonority" one experiences in refrains when ordinary meaning-making practices are suspended and new (sensate) meanings emerge. Bennett writes:

> Such breakaway vibrations put your body in contact with the other potential refrains humming around it. … You whistle a song started by a bird; you shudder in the wake of the cawing of a crow… Through sound, through the various refrains we invent, repeat, and catch from nonhumans, we receive news of the cosmic energies to which we humans are always in close, molecular proximity.[17]

For her part, Rigby reads the "humming" poem as an event of sounds and signs taking place on, around, and off the page. The poem, on this reading, responds to and augments, conjoins and multiplies the humming of the bees, all the while fostering a kind of human affective communication, thus connecting symphonically the poiesis of bees and humans, each co-becoming in the ongoing dynamic practice of sympoiesis.

This form of attunement does not have to do with sounds only and does not have to be harmonious. As Maron's text shows one can be paradoxically in attunement with "cacophonous" crows.[18] For the purposes of the following analyses, attunement refers to animal and human *bodily* movements that emerge through the labour of adaptation and response to one another, as such labour is elucidated by Vinciane Despret.[19] More to the point, interspecies bodily attunement involves reciprocal – physical – interjections, namely those gestures and interruptions, including misunderstandings and recalcitrance, that happen between partners in conversation. Such gestures and interjections morph into the subtle signs, digressions, doubts, and contradictions that constitute Maron's text and typescript, on the one hand while, on the other, they *in-form* and shape Walther's art, among other things, through Sicilia's traces.

Thus, Maron and Walther's interspecies collaborations are less about human representations of companion (wild) animals, or our knowledge of them, as pointed out above by Iovino and Oppermann. Rather, they are repeated attempts – in the sense of being quite literally imperfect and faltering *essays*[20] – at approaching, approximating, and adjusting to the crows' and falcon's own initiatives and responses to the attention they receive from these two humans as the latter endeavour to follow what it is that interests the birds themselves.

Through the performativity inherent in (diffractive) zoopoetics, the text and art under scrutiny here repurpose or, as van Dooren writes, "inherit otherwise" the typical representations and symbolism of crows and falcons.[21] The writer and artist trouble and re-signify these animals' generic representations: Maron, for instance, probes the death symbolism associated with "the" raven through her mundane encounters with the living urban crows in her neighbourhood. Through her paintings of a falcon's chicks, Walther, for her part, insists on the fragile material presence of one individual and very mortal bird, rather than falcons in general. Walther's works always invite us to appreciate a falcon's complex world beyond its allegorisation (as perfect predator and thus war machine, for example). Text and art are always works in progress, ready to change course, veer off,

In her school, her apprentices are taught to approach falconry by way of the visual arts: their first introduction occurs primarily through a colouring handbook, *Become Falconette!* that Walther crafted when working with children in kindergartens and primary schools.[41] Walther's book, inspired by Friedrich II von Hohenstaufen's classic text in 6 volumes, *De Arte venandi cum avibus* (1240s), provides the key principles, techniques, and basic ancient vocabulary of falconry. The children learn to appreciate the very same by cultivating patience, mindfulness, attention to detail, and individual creativity, all skills that are required for both colouring and falconry. She writes:

> You have the opportunity by playing to learn much about this art [falconry] and furthermore to create marvellous images that others will enjoy. … To colour templates is a very contemplating and creative process. Let yourself be surprised by the enjoyment you'll find in it, and the insights that you'll get from it! … You will learn to understand wind, weather and clouds [*Wolken* in German]. You will get to know the wilderness, the avian world, and nature more generally. Your understanding for accuracy, reliability and responsibility will grow. … This will help you later to keep a raptor yourself, perhaps."[42]

Significantly, the passage above suggests many of the tenets that hold together Walther's threefold practice: First, the hand that draws –and that also crafts the gear for falconry, which the children also learn—connects body and mind, and yields enjoyment, for oneself as much as for others. (The children's art is on view, for instance, on the website.) One finds oneself centred, situated, not just individually but within a dynamic ecology of relations, which, through the falcon, extends to a respectful experience of "unfamiliar" nature. The text weaves art appreciation, as an individual body-mind activity, with a broader context in which ecological responsibility matters.

Second, the text also highlights poetic terms (through its word-choice), essential features that return differently expressed in Walther's own paintings, with which I deal more in depth below. For example, it is striking that, when moving from the instructions on colouring templates to falconry, Walther has recourse to the alliteration *Wind, Wetter, Wolken.* This rhetorical figure conveys the airy sensation of the falcon's flight environment (ecology) that one gains when one is syntonized with the bird during hawking, something which, as anthropologist Sara Asu Schroer reports, falconers translate as the sensation of "becoming a bird."[43] In Walther's own words, falconry's goal is "to become one with the falcon." (Letter, December 8, 2022). The goal and/or sensation of becoming, however, does not happen spontaneously but, rather, requires mutual training on the part of both bird and human as they engage in a co-responsive, two-way relation. "To become [with] a falcon" means to train each other in understanding the other's different sensorial and bodily apparatus so as to see, move and act in the landscape together in ways that imagine those of the other being. For example, a falconer must learn to see how a falcon's prey moves, to understand its speed, in what direction it runs, etc. This kind of attunement, which for Walther involves telepathy and trained attentiveness to a whole ecology, is rendered through the text's alliteration. The latter's sound also captures, I believe, the airiness of Walther's paintings. Through her use of light and a suffused pencil touch, Walther's representational paintings manage to arouse such complex dynamics with simplicity. While her assemblages, including feathers and other physical remains, such as the skulls and bones of Sicilia's prey, bring to the fore the shared material existence and collaboration of bird and woman, the watercolours depicting Sicilia more surreptitiously gesture towards the situated, always precarious, relationality at stake between falconer (and/or viewer) and bird. (More on this below)

The book itself is thus more than a textbook. It functions, perhaps in disguise, as an additional *trait-d'union* between Walther's art and her falconry: it pairs artmaking with the art of falconry, attentiveness with imagination, training (including training responsibility) with creativity (the movements of the hands in syntony with those of the mind). In doing so, the book highlights the communicative impulse inherent in Walther's threefold practice. One could then conclude that Walther's passion for art, falconry and her pedagogical activity manifests the desire for training and sharing a comportment that, according to Bennett, nurtures responsiveness to enchantment. In Bennett's words, this means letting oneself be affected "by other selves and bodies and [thereby] more willing and able to enter into productive assemblages with them." [44]

In Walther's case, such assemblages involve networks of people (the children, teachers, and parents, who encouraged her to open her school; other artists; her falconry teachers; and people she meets all over the world when practicing her falconry); animals (besides Sicilia and her chicks, this includes the falcon's prey, for example), and artworks that, as was the case for Maron's *sui generis* text, escape rigid classification. Mostly ensuing from Sicilia and Walther's long interspecies partnership, the artwork has followed, recorded, and/or retraced the events that have punctuated this falcon's life and, consequently, have affected Walther's. I will now take a closer look at how Sicilia has inflected Walther's art.

In approaching falcon imagery, both as a viewer and, I imagine, as an artist, it is hard to escape the mythical, symbolic, and allegorical associations with power and nobility, war and heroism, that have accompanied this bird's various representations all over the world and across different epochs. Yet, I argue that Walther's art resists reifying *the* falcon because she adopts representational techniques and uses materials that always stem from her embodied relation to Sicilia, from her ongoing collaboration with *a* living falcon. From this situated positionality reformulations or reprisals of classic genres also occasionally arise in her work - for example in a recent mosaic, depicting Sicilia seated on a perch with simple pebbles, first created during an exhibition in Sicily.

Walther's recourse to this ancient art is a kind of "archaeological" dig into its history, and through it, of mosaics' connections to her own art and her bird-muse, Sicilia. Mosaic, a word derived from the Greek original for "muse," indeed flourished on this Italian island, during the Norman Kingdom in the twelfth century. In this place and at that time, falconry also took off. Through the collection of natural pebbles out of which Sicilia's profile emerges the genre of the mosaic turns, in Walther's hands, into a vehicle for a material re-collection of this bird's historical and artistic genealogy. The simple mosaic grounds, in the real sense of the word, Walther's art, falcon and falconry: it harks back less to the legacy of the majestic hunting scenes such as one finds, for instance, in the Villa Romana del Casale's mosaics, a UNESCO World Heritage site.[46] Rather, Walther's mosaic pays homage to her companion animal by adopting more modestly the technique of some of the earliest, less decorative, mosaics. These, like hers, used natural pebbles, stones that, importantly, were the same as those used to pave floors. Walther's intimate mosaic with falcon signals here the attachment of both woman artist and bird of prey to the Terran –literally *pedestrian*– materiality that unites them in their patterned, quotidian lives. More broadly, it unites falcons with humans, beyond all crucial differences.

For a 2023 solo exhibition in Sicily, Walther produced a series of large format drawings, some with watercolour details, devoted to the life cycle of eyasses from the moment of their hatching to their first hunt.[47] The chicks are depicted in all their vulnerability, as they sleep on a few pebbles or a rose-bed, alone or while being fed by caring parents. [48]

Figure 2. Hara Walther, *Mosaic*, 2023, Natural Pebbles, 50x30 cm. Artist's Collection.[45]

The classical image of the potent falcon is here suspended and replaced by that of fragile animals that, not unlike humans, need attending to in order to fulfil their potential. It is no coincidence that, at least in German, the term used when training a chick is *Ausbildung*, which translates as education, apprenticeship, formation, schooling among other connotations. As caring as the adult falcon is in feeding its chicks, so is Walther's attention to detail in her drawings of both parent and chick, and their interactions. Occasionally, depending on the painting, one finds touches of colour that vary from pale pink and yellow to bright red. These add an emotional undertone that affectively connects the viewer with the delicate scenes. Similarly, the wavy brushstrokes used to show a fledgling's grey or whitish down synesthetically elicit softness. While one may be inclined to interpret such representations as examples of anthropomorphism, or of a domestication of the wild falcon, perhaps other readings are in order. What if the artworks were instead troubling strongly held positions about the meanings and presumptive incompatibility of these terms? Falcons, for instance, don't make their nests, they "squat" in those of other birds, and —while they would probably not breed on rose hedges— they do live and roost in cities, on towers and skyscrapers.[49] Furthermore, when being trained, they often share the domestic space of their falconers, and engage in close, playful interactions with them, though this does not mean they relinquish their wildness.[50] It is possible to look at these scenes as the imaginative attempt at opening the human domestic space to its gentle occupation by another species.

Other watercolours, with or without assemblages, specifically show the intimate and profound relation between Sicilia and Walther, even when, as mentioned, some of these appear to be entirely devoted to portraying Sicilia alone. This raptor's grip on the artist goes deep into her thoughts, which, Walther observes, would never have been the same without Sicilia in her life. Her 2019 self-portrait[51] viscerally illustrates this: Sicilia's talons and beak penetrate and pick Walther's brains, the only coloured portion of the painting. If Walther offers herself as food to her falcon, the falcon appears as this head and brain's physical protuberance, e.g., the incarnated tranquil thought of a concentrated woman. In another instance, Walther lightly sketches her gently reclining head as suspended in mid-air from Sicilia's claws, which hold it in its tight grip.[52] Both figures are suffused with the light and air of the watercolour's background, with which they merge. On the one hand, the dreaming artist is lifted by her bird into the sky, and thus made part of Sicilia's airy world; on the other, the bird rises vertically, as a material body, not just a figment of the imagination, from this faint human figure. Both, in short, hold each other in thought and body, each in her own way.

There are paintings where Sicilia appears alone, as a solitary form sitting on a perch floating in the sky, as if ready to take off and possibly never return. While in these cases, the paintings express the precariousness of the bond between falcon and falconer –the falcon is always free to leave— they also convey the attachment and attunement between them, despite the falconer's absence.

To begin with, one of the bird's eyes is shown as turned towards the viewer and/or falconer standing just outside the frame. The interlocking of their gazes suggests that the falcon's imminent flight may be one of approach, or return, rather than of departure. Further, the use of translucent watercolours for both the bird's body and the sky allow for the merging of one and the other, foreground and background. Because the watercolours also overflow the boundaries of the paintings, exceeding their frames, and thereby creating a porous atmosphere, the human outsiders are affected and drawn into the picture. In this way, Walther shows falcons and humans as breathing the same air, partaking of the same atmosphere, albeit in distinctive ways.

Figure 3. Hara Walther, *Chick on a Rose Bed*, Artist's Collection.

If the branch on which Sicilia rests is an indication of the bird's attachment to and dependence on the earth and the life that treads upon it, Walther's assemblages materially testify to this: they gather the physical traces of their shared life, and mark their ongoing co-existence and collaboration, especially during their hunts. Hence many such works are Sicilia's own trophies.

They include small objects made with claws and bones, or watercolours with birds' skulls and feathers, the remains retrieved from Sicilia's hunted prey.[53] Alternatively, Walther produces portraits of Sicilia with her moult feathers, which she carefully collects, labels, and mounts in accurate rearrangements of her plumage.[54]

Both types of assemblages ultimately function as *memento mori*. The death of the prey only anticipates that of the predator, including the falconer. The assemblages collect these material traces, i.e., the feathers, as traces of a passing life, in order to commemorate (re-collect) such life; these works therefore situate both this human and this falcon, and their art, in the fleeting time of mortals. Finally, Sicilia's assembled feathers remind us that this falcon is a living presence, a body. They are also this bird's signature: with these feathers, Sicilia leaves her mark on her (and Walther's) life-work. For her part, Walther's indiscrete initials morph into the traces of tiny claws on the margins of the canvas.

CONCLUSION

In this essay I have taken the "inter-" in the title of this journal's issue to refer to the forms of conviviality or interactions encountered between humans and non-humans —specifically, those between humans and birds (crows and falcons). These interspecies engagements, I have maintained, stress the agency of the avian partner in the relationship; properly speaking they are collaborations, creative in nature and reciprocal in their effects.

Zoopoetics, a theory variously described, has informed my analyses, and has helped me to focus on the entanglement of species and the dynamic movement of their inter-relationship rather than their being an encounter between two discrete and bounded *zôon*. I have expanded on this idea to discuss how a mutual, interspecies attentiveness gives rise to peculiar forms of attunement, which should not be understood as implying interspecies harmony but rather a complex field marked by interjections, resonances and even cacophony.

With reference to Maron, and her engagement with crows, I have argued that a zoopoetic view of this interspecies relationship should consider the ways in which an openness to these birds radically destabilises ontological boundaries: between 'animal' and 'human', within human social identities, but also, importantly, in the forms used to represent interspecies (such as the *Erzählung*). The result is, I suggest, a kind of overflowing of borders in which each new material level in the engagement between species produces its own level of meaning in an unending task of companionship. This notion of companionship looms large also in my discussion of Walther. Here, attunement and attentiveness become a praxis that, as with Maron, results in something that is "sui generis" and difficult to confine within traditional definitions: Walther's expert practice of falconry cannot be separated from her work as an educationalist, and neither can be divorced from her artistic production that itself also partakes in this border-crossing.

Figure 4. Hara Walther, *Hunting Painting*, 2014. Scissors Cut and Watercolour, 79.7x60 cm,
Copyright Photograph by Nikolaus Steglich, Courtesy of Künstlerhaus Marktoberdorf, Maya Heckelmann, Director.

Figure 5. Hara Walther, *Trophy 2*, 2014, Heron's Skull, Feathers and Watercolour, 79.7x60 cm.
Copyright Photograph by Nikolaus Steglich, Courtesy of Künstlerhaus Marktoberdorf, Maya Heckelmann, Director.

Figure 6. Hara Walther, *Moult Image*: *Labelled,* 2019, Assemblage on Laid Paper, 80x110 cm, Artist's Collection.

In sum, my overarching point is that, as examples of zoopoetics, Maron's crow text and Walther's interrelated practices of art making, falconry, and education demonstrate that, by paying attention to processes of interspecies attunement and interjections, new modalities of communication and new languages unfold thus making room for surprising sites of attachment to emerge. An important corollary of this argument is that, in their contingent and unfinished ways, these creative practices also participate in what van Dooren terms "multispecies ethics," i.e., the open-ended, situated, and provisional work (labour) of worlding with others.[55] Indeed, I have reasoned, Maron's crow text and Walther's artistic collaboration with Sicilia redescribe what we see so as to make the visible anew, to provide the world with some more complex story, and thus understanding, all principles at the core of Van Dooren's notion of emergent ethics. Both text and art, as reiterated above, "give others vitality, presence, perhaps 'thickness' on the page," and the canvas.[56] Furthermore, as shown, in defying closure, through the multiplication of meanings and perspectives, these works "craft spaces for the collaborative imagination," thus holding open possibilities and interpretations.[57]

In conclusion, Maron's and Walther's zoopoetics engage the biocultural complexity of the worlds that we always craft with others, both humans and non-humans. In exploring their entanglement with avian species, the writer and her text, the artist and her art, and all the animals engaged in their lives and work provide important insights into the crucial ways in which, as Anna Tsing puts it, "human nature is an interspecies relationship."[58]

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1. Monika Maron's book title translates as *Crows Cawing*. As far as I am aware, no English translation has yet been published. All translations are mine. *Krähengekrächz* (Frankfurt am Main: S. Fischer, 2016). I use this edition's Kindle version that does not support page numbers.

2. Anne Simon's *zoopoétique* relies on a reading of the Greek term *zôon* that is flexible or broader than generally assumed. Following Francis Wolff, she underscores that *zôon* designates neither the animal nor the living but rather movement, including that of stars and demons. Wolff proposes to translate *zôon* as that which is animate or animated. *Zoopoétique* thus interpreted would include the motion, emotion, and animation of living matter (the word "anima" reverberates in soul, animal, and breath). It would call for a language that follows the movements of the living *(les vivants),* the animated world, as Simon puts it. See Stephanie Posthumus and Anne Simon, "Conversation Questions, Interview with Lucas Hollister," *Contemporary French and Francophone Studies,* 1 (2021), 16-41.

3. Monika Maron, *Munin oder Chaos im Kopf* (Frankfurt am Main: Fischer Verlag, 2018). The novel has sparked controversies in the press due to Maron's recent politics, which, for several reviewers, informs her book. Here, it is not my intention to discuss whether Maron's politics find expression in *Crows Cawing* or how the text examined here might forebode that politics.

4. In *The Wake of Crows: Living and Dying in Shared Worlds* (New York: Columbia University Press, 2019) Thom van Dooren writes that "animals take initiatives in a hybrid community," and he goes on to claim that: "Community is always a kind of negotiation of sorts." Van Dooren provides the example of Brisbane's urban crows swooping people– a behaviour that also occurs in Berlin, as Maron notes. Swooping is, accordingly, the corvids' experimental gesture at doing community with humans, their way of communicating their political demand, namely, what might be needed from humans to share and divide the living space available. (Ibid., 41)

5. These are the contact zones where companion species are always co-emerging as entangled. Donna Haraway appropriates and adapts the term contact zone from Mary Louise Pratt (*Imperial Eyes: Travel Writing and Transculturation,* originally published in 1992) and James Clifford (*Routes: Travel and Translation in the Late Twentieth Century,* Cambridge: Harvard University Press, 1997). For Haraway, contact zones occur within and across species; in contact zones, species come undone. Making kin across species boundaries becomes crucial (against the species-focus on, for example, reproduction). Contact zones offer the possibility to make the world differently, to "retie some of the knots of ordinary multispecies living on earth." For Haraway's discussion of multispecies contact zones, see *When Species Meet* (Minneapolis and London: University of Minnesota Press, 2009).

6. See Walther's webpage: https://www.falconette. eu (Accessed 1 August 2023).

7. Thom Van Dooren, *The Wake of Crows,* 9.

8. Van Dooren, *The Wake of Crows,* 9

9. I use the word "mundane" in the sense of "pertaining to the world."

10. Van Dooren, *The Wake of Crows,* 11.

11. Aaron Moe, *Zoopoetics: Animals and the Making of Poetry* (Lanham: Lexington Books, 2014), 2.

12. Donna Haraway, *When Species Meet,* 17, 237. See also Haraway, quoted in Katherine Wright, "B for Becomings," *The Multispecies Salon,* https://www. multispecies-salon.org/becomings/ (Accessed 8 October 2023). Wright poignantly elaborates: "From this multispecies perspective becoming-with can be understood as an ecology, where becomings are openings into the responsive capacity of all earthly life, with important implications for ethics." (Ibid.)

13. Serenella Iovino and Serpil Oppermann, ed., *Material Ecocriticism* (Bloomington: Indiana University Press, 2014), 9-10.

14. Haraway, *When Species Meet,* 17.

15. Haraway, *When Species Meet,* 4.

16. Kate Rigby, "'Piping in their honey dreams': Towards a Creaturely Ecopoetics," in Frederike Middelhoff et al., ed., *Texts, Animals, Environments: Zoopoetics and Ecopoetics* (Freiburg i. Br, Berlin and Vienna: Rombach, 2019), 281-293, in particular 283-284. There, she writes: "'Humming' is of course onomatopoeic, and in this way the written text bears a zoopoetic trace of an other-than-human voice. In conjunction with other metonymies of place and time ... this apian mood music summons the 'atmosphere' ... of dreamy, drowsy easefulness arising from a creaturely somatic-affective responsiveness to particular socio-environmental conditions."

17. Jane Bennett, *The Enchantment of Modern Life* (Princeton: Princeton University Press, 2001), 168. It is interesting to note that Walther, when describing her connection with Sicilia in flight, uses the term telepathy, a term that recurs when she speaks of her connections with animals more generally. Walther, email message to author, 1 December 2022.

18. I read "attunement" as a variation on the term "attentiveness" above. In particular, I take it here to include bodily and affective availabilities and responses to animals' ways of being. In this sense, I borrow the term from Vinciane Despret. It is not Maron's term. See the next endnote. More on Maron's text below. On the rowdy and cacophonous paths traced by these "lowly" and earthbound songbirds (the corvids), see Jeff Cohen and Julian Yates's book *Noah's Arkive* (Milwaukee and London: UMP, 2023), 233.

19. Vinciane Despret, "The Body We Care For: Figures of Anthropo-zoo-genesis," *Body & Society,* 10:2–3 (2004), 111–134. Despret speaks of the attunement between horses and riders. The latter learn to behave and move like horses who, in turn, teach their riders how to move like them. This interspecies communication is now known as the "isopraxis" phenomenon. She comments: "Both, human and horse, are cause and effect of each other's movements. Both induce and are induced, affect and are affected." (Ibid., 115) Despret shows how humans and animals make each other capable in novel ways.

20. In French, "essayer" means to try, to attempt.

21. Van Dooren, *The Wake of Crows,* 17. Van Dooren underscores the *ethical obligation* involved in matters of inheritance(s) –for example of the problematic legacies inherent in concepts such as community or hospitality, which must be rethought but not renounced. Haraway similarly insists on the *political* responsibility intrinsic in inheriting these histories, with their figures of speech. They both stress the importance of how and which stories and languages one chooses in order to craft better stories for earthly survival and flourishing (i.e., earthly = impure). Both insist on facing up to the mundane (earthly, material) complexities and contradictions that have gone into the figures and gestures that shape the living and their worlds, always in particular locations and at specific times.

22. I refer to Haraway's appropriation of Ursula Le Guin's "The Carrier Bag Theory of Fiction" (1986) in *Staying with the Trouble: Making Kin in the Chthulucene* (Durham and London: Duke University Press, 2016), 117-125. Haraway writes: "Sympoiesis is a carrier bag for ongoingness, a yoke for becoming with, for staying with the trouble of inheriting the damages and achievements of colonial and postcolonial naturalcultural histories in telling the tale of still possible recuperation." Stressing the non-innocent ways in which worlds come to be and co-become, she remarks that for the sake of ongoingness one must not look for "rectitude and final peace." Rather, she is committed to paying attention to "the finicky

and disruptive details of good stories that don't know how to finish. Good stories reach into rich pasts to sustain thick presents to keep the story going for those who come after." In this regard, "Symbiogenesis is not a synonym for the good but for becoming with each other in responsibility." (Ibid., 125)

23. Maron's text starts with a quote from the ethological study of crows by Josef H. Reichholf's *Rabenschwarze Intelligenz: Was wir von Krähen lernen können* (Munich: Herbig Verlag, c.2009); I have already mentioned van Dooren's book, which also references other ethological works on ravens and crows, including Despret's. In her book *Quand le loup habitera avec l'agneau* (Paris: Seuil, 2002) she analyses how ravens "dismantle" the boxes into which experiments want to fit them. The entire experimental apparatus that tries to "figure them out," according to the experimenter's expectations, and how crows defeat it, is discussed in Jeff Cohen and Julian Yates's *Noah's Arkive,* 247. At one point they write, "To the raven belong stories of waywardness, tales peripheral to the plot, of making the best of it when you find yourself unable or unwilling to participate in expected conclusions. A satisfying ending is built on the casting away of alternatives, tales full of challenge that will not culminate in the desired destination, that might even wreck the narrative ship." (Ibid., 238) Here, the authors refer to the "bad" reputation ascribed to the raven that, after Noah charged it with the search for dry land, in fact does not come back to the Ark. The raven abandons ship, stays with "the earthly trouble," binds itself to mortal catastrophe, preferring this over obedience, the price of salvation: it "exits the allegory for a world of penetrating smells and delicious tastes." (Ibid., 251)

24. Haraway uses the Latin-derived *Terran* to imply of the earth, mud, humus, dust in contrast to the Olympic gods, and human heroes. See for example Haraway, *Staying with the Trouble,* 40.

25. No page reference is available on the eBook version I have in hand.

26. "Ambassadors" is the term used by Frederike Middelhoff et al., ed., *Texts, Animals, Environments,* 27. The crows in *Crows Cawing* are very material and situated animals. At the same time they become the conduit for Maron's reflections and stories about how she is affected by other animals, from horses, to giraffes, chimpanzees, other birds, and a bear in a zoo.

27. Anna Tsing, quoted in Haraway, *When Species Meet* (Milwaukee and London: University of Minnesota Press, 2008), 19.

28. Among others, see Elke Gilson, "Postface" in *Krähengekrächz,* np, and Paola Quaderelli, „Von Menschen und Tieren im Frühwerk Monika Marons," *Recherches Germaniques,* 48 (2018), 95-110. https://doi.org/10.4000/rg.426 (Accessed 1 September 2023).

29. My use of this term comes from Cohen and Yates who, in turn, borrow it from Despret in "The Enigma of the Raven," *Angelaki* 20:2 (2015), 57-72. According to various ethological experiments, most notably Bernd Heinrich's, as reported by both Despret and van Dooren, the uncooperative crows recruit other crows, for example, inviting them to share food (or according to practices of interspecies mutualism). This contravenes traditional models of evolution and the questions these models pose including the answers they provide and the ways they go about answering them. The ravens who act not according to plan invite, or recruit, the really interested researchers to pose more interesting questions to the unreliable birds who resist the answers expected of them. Thereby the really interested scientists also come to question their own models and apparatuses of investigation. To be recruited by the ravens means here to take the ravens seriously, hence conferring on them the "power not to submit to his [the scientist's] interpretations. ... [to address] them above all where they actively resist the models to which they could have been subsumed." For Cohen and Yates, to be open to recruitment by ravens means to take on the challenge of the imagination, and "not write off the capacity of stories to work out differently, to go awry, the possibility that we may all learn something ... unscripted." (*Noah's Arkive,* 248-249)

30. "A gossip is ...someone with whom to gather and keep good company, to flock. Gossip is [also] conversation ... the news in unofficial circulation, the work of imagination, the energy of story in motion." (*Noah's Arkive,* 234)

31. As van Dooren relates, experiments have proven that crows live in a world that to them, as for us, is peopled with distinct subjects, individuals with particular projects and understandings. They possess what is known as a "Theory of Mind," that is, they can see how we look at them; in other words, they are capable of intersubjective engagements with one another and with other species. See *The Wake of Crows,* 165. Haraway translates this kind of intersubjective and interspecies practice of recognition with the phrase "the taste of co-presence." Taste here refers to the shared/sharing of bread, hence of interspecies companionship, as a "delicious" if messy affair which involves much digestion and indigestion. See Haraway, *When Species Meet,* 17, 31.

32. Baptiste Morizot speaks of the "ancient wonder of bewilderment and gratitude" human beings feel when entranced by the howls of wolves. Once it is extricated from the intentionality of a gift-giving God, this gratitude for something that is given and received, without either source or recipient ever being adequately defined, makes possible all kinds of "immanent blessings." *Ways of Being Alive,* trans. Andrew Brown (Cambridge, UK: Polity Press, 2022), 29. Bennett calls this ability to receive gifts "natality" and roots it in an "ontological susceptibility to contagion." (*The Enchantment of Modern Life,* 159)

33. In Cohen and Yates's words, to follow the raven's trajectory means "to veer into a space of no return, a disaster paradise that provides everything the creatures need, but nothing to trigger further journey" - by which they mean the return to Noah's Ark, to being saved, to eternal paradise. They add: "it will certainly not be winging home with chunks of scavenged flesh." (238) The throngs of pleasure taken when embracing fleshly mortality return in a scene from Maron's *The Defector* (*Die Überläuferin,* 1988). During a storm, the protagonist throws herself to the ground and wallows in the mud like a pig. Following the experience, "an unknown feeling of agreement resonated within me like a wonderful chord." (My translation) Quoted in German, in Paola Quaderelli, "Vom Menschen und Tieren im Frühwerk Monika Marons" online version, no page number.

34. According to Cohen and Yates, perhaps anthropocentric domestication would follow the itinerary of Noah's docile dove that trades writing its own script, winging its own flight, for the destination promised by salvation - in contrast to the wayward raven whose unscripted story seduces the human imagination, inviting it to leave the Ark (its "fated denouement") and choose the pleasure of errancy over the price of salvation. See *Noah's Arkive,* 238.

35. While the above reading has emphasized the performativity of the crows and through it that the text holds open the notion of community, I am aware that this is not necessarily Maron's political position, i.e., "outside" the text, as her most recent literary work and public statements seem to indicate. This prompts us to remember the importance of mediation between text/art and world. In turn, this reminds us that ethical *cum* political (sympathetic) dispositions towards animals and democratic politics don't necessarily overlap. On Maron's turn to right-wing politics, see, for example, Stefan Dege "Monika Maron: Chronicler of the GDR turns 80," *Deutsche Welle,* 6 February 2021. https://www.dw.com/en/monika-maron-chronicler-of-the-gdr-turns-80/a-57758191# (Accessed 15 August, 2023).

36. My thoughts on Walther's art with her falcon Sicilia are rooted in an email correspondence she and I had on and off between November 2022 and August 2023. I saw Walther's work at the opening of her two-person show (with Daniel Spoerri) at the Künstlerhaus in Marktoberdorf, titled *Jäger und Gejagte* (Hunters and Hunted), on January 16, 2015. The exhibition ran until 15 March 2015 and was curated by Maya Heckelmann. In this essay, I focus on one specific example of interspecies collaboration, which has involved a partnership between a woman and a bird for over a decade. I don't engage the controversies about whether the Sport of falconry or the breeding and captivity of falcons, more generally speaking, are cruel practices. This would be for another paper.

37. Wenzel Jakob, "Die Aneignung von Natur," *Die Aneignung von Natur: Walther/Walther*. Catalogue Kunststiftung Petra Benteler (Murnau: Germany, 2016), np.

38. Bennett, *The Enchantment of Modern Life,* 5.

39. Helen MacDonald mentions that several falconers' accounts of their first encounters with their raptors speak of a sort of destructive seduction or enslavement to the bird. They "pathologize" their activity, MacDonald writes, "They say they never meant to be falconers. They say that they came under the grip of an impulse they couldn't control. ... I have heard falconers bemoan how falconry has ruined their careers..." See Helen MacDonald, *Falcon* (London: Reaktion Books, 2006), 69. Walther's own story is one of "love at first sight," and then ongoing companionship. As she puts it, she and Sicilia are "lovers." Yet, their relationship is not of the romantic sort, it is rather rooted in the bond that unites human and animal in practices of living, and sharing their very distinctive phenomenal worlds, day after day, in a work of ongoing attunement. See Letter, November 1, 2022.

40. Magic is meant here as Bennett intends it: Not magical in the sense of "a set of rituals for summoning up supernatural powers within a coherent cosmology," but in the sense of cultural practices that mark "the marvellous erupting amid the everyday." (8) See *The Enchantment of Modern Life,* 8.

41. Hara Walther, *Werde Falconette! Begleitbuch zum Kurs FALCONETTE 1* (Copyright Hara Walther 2017), 8.

42. Hara Walther, *Werde Falconette!,* 8.

43. Sara Asu Schroer, "Voler d'Amour," *Billebaude,* 18 (Spring – Summer, 2021), 49.

44. Bennett, *The Enchantment of Modern Life,* 3-4, 131.

45. All images of Walther's art have been reproduced with the artist's permission.

46. https://www.villaromanadelcasale.it (Accessed 6 September 2023).

47. "Falco e Falconeria: Mostra di Opere di Hara Walther," *Agemina, Terrasini,* 21 May – 21 June, 2023.

48. Hara Walther, *Mother and Daughter,* 2018, Pencil and Watercolour, 60x90 cm. (Accessed July 15, 2023). https://www.falconette.eu/#WerkeundAusstellungen And, Hara Walther, *A New Falcon's Life Begins,* 2020, Pencil and Coloured Pencil, 20x30 cm. Ibid.

49. MacDonald, *Falcon,* 32, 35, 175-186.

50. MacDonald, Falcon, 67-68.

51. Hara Walther, *Selbstportrait,* 2019, Pencil and Watercolour, 90x60 cm. https://www.falconette.eu/#WerkeundAusstellungen (Accessed July 15, 2023).

52. Hara Walther, *Emotion,* 2015, C-Print, 23X16 cm. *Die Aneignung von Natur: Walther/Walther,* np.

53. Hara Walther, *Trophy: Magpie,* 2013, Feathers and Watercolour, 79.7x60 cm. Image 40, in *Jäger und Gejagte: Daniel Spoerri Hara Walther* (Künstlerhaus Marktoberdorf, 2015), 20.

54. Hara Walther, *Moult Image Labelled,* 2019, Assemblage on Laid Paper, 80 x 110 cm. https://www.falconette.eu/#WerkeundAusstellungen (Accessed July 15, 2023).

55. Van Dooren, *The Wake of Crows,* 8-9.

56. Thom Van Dooren and Deborah Bird Rose, "Lively Ethography: Storying Animist Worlds," *Environmental Humanities,* 8:1 (2016), 77-94. Ibid., 85.

57. Van Dooren, *The Wake of Crows,* 56.

58. Van Dooren and Deborah Bird Rose, "Lively Ethography: Storying Animist Worlds," 86.

SUE TAYLOR

GOOGLE EARTH AUGMENTS VIEWING THE SPECTACLE OF RUIN IN SELECTED 'IN-BETWEEN PLACES' OF OLD INDUSTRIAL JOHANNESBURG

INTRODUCTION

South Africa is said to have the worst social inequality in the world, and examples of this inequality can be seen in the shack settlements, backyard shacks and hijacked properties in many parts of the city of Johannesburg. These unsafe and neglected 'interstitial places' are where the poor live in inadequate housing, squeezed between factory buildings, railway lines and motorways in the city. One of the challenges of capturing visual information about these settlements in these difficult settings is getting access to the areas where photographs can be taken. In Johannesburg, many areas are no longer safe for outsiders to visit. These unsafe, informal and often well-hidden areas can be considered 'interstitial' in relation to other areas where middle-income earners live in decent houses in pleasant suburbs with amenities. It is these 'unsafe' areas that the author wished to explore as a source of images and impressions for creative works.

This study takes an autoethnographic approach to exploring three neglected suburbs of Johannesburg, South Africa (Cleveland, Denver and Jeppestown), which all date from soon after the first discovery of gold in 1886. Through this work, the author hoped to make sense of observed changes within the city and the proliferation of informal, survivalist settlements seemingly arising without town planning interventions. Many open areas and dilapidated buildings are now occupied by low-income earners, perhaps because city governance has been overwhelmed by the thousands of work-seeking migrants arriving in the city on an ongoing basis.

To explore the many visual indicators of poverty in these selected areas of Johannesburg, the author used Google Earth remote sensing images and Google Earth Street View to augment site visits. Google Earth is a valuable research tool, as one can quickly explore marginal areas that are not safe for outsiders to visit. One can also view activities that are not visible from the street – for example, illegal motor repair operations occurring behind high walls. Ethical issues abound in these acts of anonymous looking at the poor and destitute and finding the picturesque in neglected buildings, dismal living conditions and slums, as well as the privacy and surveillance issues relating to those being observed. This essay will dwell on some of the benefits of the Google

Earth virtual globe software, as well as the ethical discomfort that can result when observing people, poverty and informal living places – whether using remote sensing methods and driving around these areas with a camera, or using the images and perceptions gained for personal use as a source of inspiration for art making and fiction writing.

EXPLORING INTERSTITIAL SPACES

The concept of urban ruin, derelict 'non-places' and places that once meant something, but no longer do, is compelling for the author, as is the concept of 'interstitial' spaces that appear to have no practical use, but on closer examination are seen to be serving diverse functions for diverse groups of people.

Cities are composed of built-up areas and unoccupied spaces. The unoccupied spaces are often regarded as mere gaps in the urban fabric, or as abandoned spaces that should eventually be built on, yet cities cannot be fully understood without reference to the 'interstitial' areas that lie between developments.[1] Interstitial spaces can be undeveloped tracts, pieces of countryside, protected areas, brownfields, green corridors and other 'urban gaps' triggered by different factors and with diverse impacts, and can also be derelict former industrial areas.[2] Interstitial spaces, although often ignored, empty or inert, are never entirely abandoned, inactive or forgotten and, in Johannesburg, these underdeveloped or abandoned areas and buildings are occupied by the urban poor, making uncertain lives for themselves within the urban fabric. Black South Africans are particularly confined to unserviced or unsuitable areas in South Africa's cities, and informal living and a poor quality of life have become a significant dimension of South African urban life, including in Johannesburg.

The recent Marshalltown fire – where 77 people died in the Johannesburg inner city in an overcrowded derelict building – has highlighted the harsh and unsafe living conditions of those living 'in-between lives' in unsafe and unsuitable places. The fire has prompted a belated call for urgent interventions to overhaul the city's many informally occupied and highly problematic buildings to create decent, low-cost, rental residential living.[3]

The ultimate aim of this project, using site visits and Google Earth, was to equip the author to write both academic and popular articles, as well as fiction, using these areas and buildings as a locality. The present essay reflects on personal observations made of informal living arrangements during ten years of exploring three of Johannesburg's inner city suburbs east of the Central Business District (CBD). These include the industrial areas of Jeppestown (including Wolhuter), south of the east–west railway line, and industrial Denver and Cleveland, all established soon after gold was discovered in 1886. Now more than 137 years old, these suburbs constitute a social and architectural palimpsest at a time of new use, informality, poverty and extraordinary need.

This essay considers how a free, online, virtual globe remote sensing tool, Google Earth, can be used to investigate selected 'bad' areas of Johannesburg, or indeed of any city. Through the use of Google Earth and the associated Google Earth Street View, it was possible to explore the urban neglect and degradation of Johannesburg without visiting these areas and to speculate on what these ruined places might mean for people leading 'interstitial' inner-city lives under appalling conditions. The author is writing from a position of white privilege and as an outsider to these suburbs, but also as a long-term resident of Johannesburg.

OCCUPYING INTERSTITIAL SPACES IN JOHANNESBURG

The poor in Johannesburg, who are largely Black South Africans, seem stranded: stranded in the transition to modernity, stranded between cultures, between belief systems and physically stranded in the periphery, between the rural and urban, between marshy mine land and rusting railway lines. The key factor promoting 'interstitionality' in South Africa is the very large gap between income levels, which is racially biased and of long standing[4] and in Johannesburg is embedded in the spatial legacy of the city.

Owen Crankshaw explains that the post-apartheid period and its spatial form is characterised by a completely new division of labour that has caused new forms of racial inequality linked to skills and employment, and that the current racial inequality in Johannesburg is not the result of the persistence of apartheid-era causal factors. Rather, new factors have interacted with the historical effects of apartheid to produce new patterns of racial inequality and exclusion, visible largely as residential segregation along racial lines. The southern neighbourhoods of Johannesburg have become ghettos of exclusion for working-class Blacks and are typified by chronic unemployment. The northern suburbs of Johannesburg are white and middle class.[5]

Black persons, who make up most of the 'poor' in Johannesburg, have always had to endure 'in-between' lives as workers grudgingly needed for the gold mines, but not actually wanted as city residents. Historically, efforts to manage 'non-white' labour in Johannesburg focused on restricting where Black Africans could live or settle and preventing them from bringing their families to the goldfields.[6] An outbreak of the plague in 1904 enabled a ploy that resulted in the 'clearing' of Newtown's slums and resettling people of colour much further west. Building hostels for single male mine workers was also symptomatic of the growing city not wanting Black people to settle permanently in Johannesburg with their families. Many of the gold mines along the Witwatersrand (the ridge where the gold reef is located) were already worked out and closed in the 1950s, with only a few struggling mines remaining, but workers' hostels and other slum and mixed-race areas remain as a legacy from these early times.

An historic feature of city planning in Johannesburg under apartheid was the use of degraded mining landscapes as a buffer zone to separate races and classes. These vast former mining lands are now filling up with both formal and informal housing, but still form poorly serviced peripheral areas and remain Black neighbourhoods. Also, while many foreign migrants seeking a better life make it past South Africa's borders, as undocumented immigrants they are forced to live on the 'fringes of society' in unsafe conditions.

STUDY METHODOLOGY

This study is an autoethnographic narrative that draws on the informal observations and perceptions that the author made over almost ten years (2013-23, except for 2020 and 2021 during the pandemic) while she was exploring three of Johannesburg's oldest inner-city suburbs east of the Johannesburg CBD. Trips were made randomly, about every three months.

Autoethnography is a qualitative research method that allows for personal, spontaneous and non-quantitative research findings that can include opinions and perceptions.[7] Challenges in utilising this methodology include questions relating to data quality, legitimacy and ethics.[8] In the present

study, the author sought to engage with her emotions in order to capture the drama of the city's 'ruined' landscape and, ultimately, to communicate scenarios that she witnessed or imagined are at play in the three study suburbs. It can also be important to introduce a psychological perspective to such scenario development, putting the human dimension at the forefront and recognising the principles of human cognition, emotion and methods of storytelling and communication and how they can drive changes in attitudes and behaviour in individuals and communities.[9] All these elements feed into an autoethnographic research approach.

The study took as its key assumption that the lives of many low-income people newly arrived in the city of Johannesburg can be described as 'interstitial,' taking place in-between other lives, between other ways of living, between traditional and modern, between safe and unsafe, legal and illegal. The basic study method involved driving through the selected suburbs, observing the built environment, activities and people and taking photographs with a small camera (Canon Powershot SX610 HS).

The virtual globe software download, Google Earth and Google Earth Street View, were used to supplement the site visits, but also to plan new areas to visit. A basic literature scan was also performed to add context to what was seen. The Street View imagery was updated frequently, with 2023 images available for some localities.

SOFTWARE FOR LANDSCAPE VIEWING

Google Earth, a 3D virtual globe constituting an interface with the planet, was publicly released in June 2005. The software has attracted widespread public use and attention due to its ability to provide views of landscapes in fairly realistic three dimensions, using a combination of digital elevation models and satellite imagery. One particular advantage is that it is directly accessible to a wide range of users. There are broadly two groups of users – one comprising scientists and experts from various disciplines, utilising the software to contextualise their work, and the other comprising lay users who can freely access these tools over the Internet and potentially interact in new ways with spatial images.[10]

Google Earth is free, easy to use, requires no special remote sensing skills and 'democratises' landscape visualisation for millions of viewers. There are, however, concerns about Google's monopoly of the digital map industry and the fact that Google can use search results for their own corporate interests. However, mapping systems like Google Maps and Google Earth can be beneficial by providing accurate spatial data quickly to large numbers of people. There are many philosophical and practical issues arising from the development of this new, easily accessible map technology which are beyond the scope of this essay.

While Google Earth itself is based on satellite images, the Street View option provides high-quality photographic images taken at street level. Google Earth Street View requires that the Google Earth vehicle and its camera can physically get to places, and there are some places that cannot be viewed. As well as virtual globe software like Google Earth and Google Earth Street View, there are many other types of software available for viewing and analysing complex natural or urban

landscapes, including aerial photography; Geographical Information Systems (GIS), which deploys remote sensing and physical data; software programmes like World Wind, ESRI's ARCGIS Explorer, UTOOLS and LANDIS and map-making software like Lidar, but most are subscription-based and suitable for large projects.

The use of virtual globe software like Google Earth has extended the scope for the impersonal viewing and easy recording of landscapes, people and settlements, with resulting ethical challenges. Google Earth has been seen as a panoptic viewing technology that leaves no voice to those being viewed.[11] Google blurs out vehicle number plates and the faces of persons in Street View images to ensure privacy.

This study also made use of the City of Johannesburg's property zoning platform, available at https://ags.joburg.org.za/cgis/index.aspx, in order to identify the zoning of the derelict properties viewed during trips to the study suburbs.

THE THREE STUDY SUBURBS IN JOHANNESBURG

The City of Johannesburg Metropolitan Municipality, in Gauteng Province, is South Africa's most populous city and 21.7% of its 5.7 million residents live in informal settlements.

The study investigated three of Johannesburg's oldest inner-city suburbs – Jeppestown (Sub Place 798015115, Census 2011, but including Wolhuter which is a separate census sub-place), Cleveland (Sub Place 798015117, Census 2011) and Denver (Sub Place 798015118, Census 2011) (Figure 1) – and examined buildings, streets, signage, open places and the visible signs of neglect and poverty. These industrial suburbs are on the eastern side of the Johannesburg Central Business District (CBD) and were established soon after a gold-bearing geological reef was discovered in 1886. Mining gold led to the establishment of the city of Johannesburg.
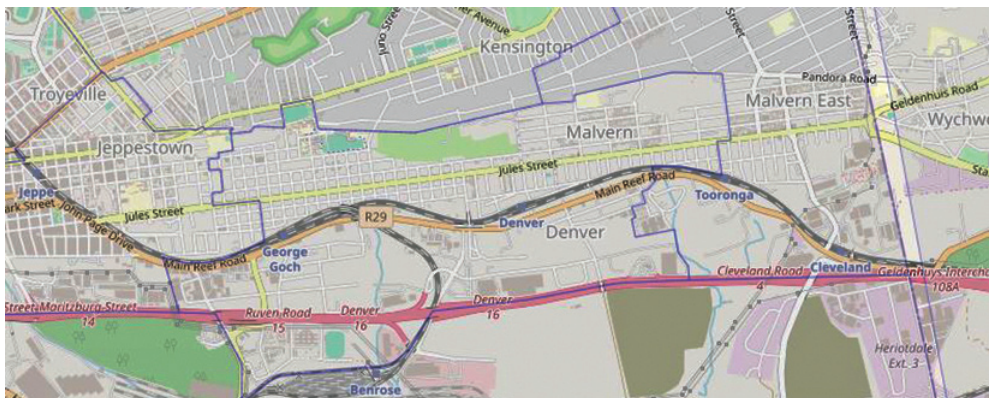

Figure 1. Map of the study areas, Jeppestown, Denver and Cleveland. Source: Wazimap.co.za.

In Wards 61 and 65, encompassing Jeppestown and Denver, 80% and 85% respectively of residents are South Africans; 44 % and 46% respectively were born in KwaZulu-Natal; and 55% and 60% respectively speak IsiZulu as their home language. Cleveland is part of Ward 118, where English is the major language spoken; 67% of residents were born in South Africa and 74.8% are South African citizens.[12] In two of the three study suburbs, the predominant language is Zulu, indicating inward migration from Black South Africans, rather than by foreigners.

The three study localities were selected because they are notorious for having suffered years of decay and also because, although they are industrial areas, they exhibit four 'crisis' characteristics of informal residential housing in Johannesburg: informal shack settlements, backyard dwellings, hijacked inner-city buildings and all-male worker hostels (Census 2011). These three areas are also accessible via a 15-minute drive from the author's home in one of Johannesburg's more affluent suburbs. While Jeppestown is moderately well covered by research writing,[13] Denver[14] and Cleveland have not attracted much inquiry.

Denver and Cleveland are industrial areas with both old and new factory buildings and warehouses, as well as very old shops, shabby residential areas and informal settlements.[15] Cleveland was established in 1903 and named after Cleveland, Ohio (US), as the suburb was used for the storage of mining equipment by American firms.[16] Denver was zoned as a residential township in 1898 and named after Denver, capital of Colorado, again because several American mining machinery firms built offices there. Denver and Cleveland are notable for the squatter camps (informal settlements) clustered between factory buildings and around the male workers' hostel. Denver and Cleveland are located in the industrial areas south of the east–west railway line. Jeppestown was originally a residential area for the white middle classes of early Johannesburg, but is now a mixed-race area and made up of mixed residential, commercial and industrial zoning, with most residential and commercial property to the north of the railway line and the industrial areas lying south of it. The southern industrial area of Jeppestown was investigated in this study, not the more residential north.

A SITUATION OF CRISIS IN JOHANNESBURG

The new South African Constitution of 1996 cancelled all remaining legal instruments of apartheid and affirmed universal rights to human dignity and equal protection under the law. The ending of the apartheid system of racially based spatial segregation in South Africa brought about massive social changes in the country. Those changes have been particularly pronounced for Black South Africans because they were the most disadvantaged group under apartheid. Geographical mobility, previously restricted by apartheid migration control laws, is now legally open to everyone.[17] However, the new democratic South Africa inherited the vast challenges of racially based inequality, poverty and unemployment, which have taken much longer to address, with Black South Africans still the most disadvantaged group in the new democracy.[18]

In 2023, the City of Johannesburg Metropolitan Municipality is South Africa's most populous city, with the population estimated at just over six million, and with 21.7% of its residents living in poverty in neglected and unsafe areas.[19] Johannesburg is also the economic hub of South Africa and is the destination of job-seekers across the country, as well as economic migrants and asylum seekers from the rest of Africa.

There have been many recent research studies investigating the ways that the city of Johannesburg has changed in the post-apartheid era, with most reporting that informal settlements and poor quality of life has become a significant dimension of urban life.[20] Evidence of a widespread housing crisis can be seen in the mushrooming of informal settlements near industrial areas, or on vacant, under-supervised, dangerous or unsuitable pieces of land, as well as in the proliferation of backyard shacks.[21] This situation is reminiscent of trends throughout the developing world, where rapid urbanisation and the urbanisation of poverty are marked features.[22]

The consequences for safety and security, crime and mental health of living in inadequate housing are well known.[23] There is a close relationship between poverty, social stress and mental health problems and, in some cities like Glasgow, where the issue has been studied in depth, there are a host of indicators that link poverty and poor mental health, including lower mental well-being and reduced life satisfaction, and higher rates of common mental health problems, higher prescribing figures for anxiety, depression and psychosis and greater numbers of hospital admissions for psychiatric conditions.[24] In South Africa, the same health outcomes of poverty exist, but are less well recognised.[25] The mental health status of persons living in unsafe shack settlements and hijacked inner city buildings has hardly been explored.

Figure 2. Informal street eatery, corner of Janie and Wolhuter Streets, Jeppestown.
Source: Google Earth Street View, 2023, https://earth.google.com/web/search/Jeppestown+Johannesburg (accessed 15 August 2023).

SURVIVALIST ECONOMIC ACTIVITIES

Visible human poverty is on every corner and open space of the inner-city areas visited, revealed by both Google Earth Street View and site visits. The study areas are marked by a proliferation of everyday, potentially unlawful, activities, mostly driven by survivalist needs. In Jeppestown, Denver and Cleveland, examples of these activities, which are of questionable legality, include water theft, electricity and firewood (tree) theft and the sale of illegally cut trees as firewood, as well as more organised activities like the many 'Cash4Scrap' dealers who buy up scrap metal of dubious origins or the automobile 'chop shops' behind high walls processing wrecked vehicles for resale. There are

also many taverns and kiosks which may or may not comply with hawker or health regulations or urban zoning regulations, selling cooked food and alcohol. Persons involved in illegal or semi-legal activities do not want themselves or their activities to be photographed, yet their activities can be seen clearly in Google Earth Street View (although they may be unaware of this) (Figure 2).

TYPES OF INFORMAL AND CRISIS DWELLINGS

The most visible aspect of the study areas was the way that existing decrepit factory and warehouse buildings have been put to use for residential purposes, even though they remain zoned for industrial use. Also present are informal settlements composed of self-built shacks on public open spaces and road pavements, and the proliferation of backyard shacks of various quality in the yards of formal buildings. Informal shack settlements have also sprung up around the former all-male hostels associated with gold mining to provide accommodation for the men's families (Figure 3). The Junkers informal settlement in Cleveland (Figure 4) is notorious for violence, and church volunteers will not enter this area (informal comment from church volunteer).

Figure 3. Google Earth remote sensing view of the Denver Men's Hostel (top right) and associated informal settlement, as well as nearby industrial buildings. All this land is zoned Industrial 1, yet now has an informal residential component.
Source: Google Earth 2022, https://earth.google.com/web/search/Denver+Johannesburg (accessed 15 August 2023).

Figure 4. The Jumpers informal settlement, Cleveland, located 'in-between' industrial buildings on the site of the Jumpers Deep Gold Mine Ltd, East Incline shaft, now defunct.
Source: Google Earth 2022.

BACKYARD SHACKS

In Cleveland, Denver and Jeppestown, many backyard dwellings are deliberately hidden at the back of formal houses or behind high factory walls; although it is often almost impossible to see some of the older backyard dwellings, Google Earth reveals these hidden urban settlements. While more recently built dwellings in Cleveland, Denver and Jeppestown are no longer hidden in backyards, they are likely to be illegal and lacking planning permission (Figure 5). Backyard shacks are a major feature of informal living in Gauteng province.[26]

Figure 5. Here to stay: permanent, upper-storey addition in Karl Street near the Wolhuter Men's Hostel. The addition is likely to have no building approval but is not hidden, indicating a lack of municipal oversight.
Source: Google Earth Street View, 2023, https://earth.google.com/web/search/Jeppestown+Johannesburg (accessed 15 August 2023).

URBAN BLIGHT AND HOSTELS

During the late colonial and apartheid periods, mining compounds and migrant labour hostels formed a key element of the migrant labour system serving the goldfields. The all-male hostels in Johannesburg were originally designed as tools of control and repression of Black workers and have become synonymous with violence, overcrowding and squalor.[27] The now-ancient hostels continue to provide low-cost accommodation for male work-seekers, but not for their families, who contrive to live in informal settlements in the area around the hostels (Figure 3). The Wolhuter Men's Hostel (Figure 6) is different in that the men's families and other persons live in semi-derelict factory buildings nearby. The impact of the hostels has driven away investment and potential improvements in the area, and while most of the buildings are severely neglected, they are still lived in. Some appear to be hijacked buildings. The streets around the Wolhuter hostel are also severely blighted by neglect and informal activities (Figure 7).

INDUSTRIAL BUILDINGS AS RESIDENTIAL ACCOMMODATION

Many of the original 1950s factory and warehouse buildings near the Wolhuter Hostel appear hijacked, showing signs of extreme neglect, and are likely to be illegally run as residential buildings by criminal elements (Figure 8). The hijacking of buildings has become an intractable problem for the city in terms of the way that they 'blight' the inner city landscape, the loss of municipal revenue, as well as the negative social consequences of overcrowding and a lack of safety in these buildings.[28]

Figure 6. View of the prison-like Wolhuter Men's Hostel, looking east along Wolhuter Street. Several thousand men live in this hostel.
Source: Google Earth Street View, 2023, https://earth.google.com/web/search/Jeppestown+Johannesburg (accessed 15 August 2023).

Figure 7. Taxi washing in Ford Street, opposite Wolhuter Men's Hostel. The water main has been illegally connected to a tap, resulting in 'water theft.' Source: Google Earth Street View, 2022.

Figure 8. A 1950s factory building on the corner of Hanau and Janie Streets, Jeppestown. The structure shows many signs of being a hijacked building, notably spectacular neglect. Shacks have been built on the roof.
Source: Author's image, 2022.

Figure 9. An illegal shack settlement on a suburban road, Concession Street in Jeppestown, north of the railway line.
Source: Google Earth Street View, 2022. https://earth.google.com/web/search/Jeppestown+Johannesburg (accessed 15 August 2023).

HIJACKED PUBLIC SPACES

Interstitial urban spaces newly invaded by informal settlers are evident in the cul-de-sac streets abutting the railway line that runs through Jeppestown, as well as in areas where buildings have been demolished. There is washing hung up between the pavement trees, fresh produce is sold from informal kiosks and small children are playing in the street. There is no municipal water provided or waste collection. These streets are public assets that appear to have been informally 'privatised' by new 'street lords' with impressive cars (author observation) (Figure 9).

A SENSE OF DANGER IN EXPLORING DILAPIDATED INNER CITY AREAS

Some parts of Johannesburg and the greater Witwatersrand are dangerous places for local residents and outsiders alike, with the Gauteng City–Region Observatory (GCRO) finding in a 2017/18 Quality of Life Survey that one of the biggest community problems identified by residents of Johannesburg is crime. Most crime hotspots are in the inner city.[29] Other risks for residents and outsiders alike include the poor state of the roads, rampant vegetation at the side of the road where criminals can hide, non-existent lighting at night and non-functioning traffic lights. In the context of the present study, hostility can result from persons unwilling to be observed or photographed by a stranger – for example, undocumented migrants who fear being discovered and deported. The free 3D Virtual Globe software download, Google Earth and Google Earth Street View became important tools for the author to gain an understanding of the spatial layout of particular areas before visiting in person. For more formal research projects, negotiations with ward councillors and local leaders would enable access to buildings in these areas. Buildings like the men's hostels cannot be accessed without a police escort.

OUTRIGHT CREEPY RUINS

The author often felt unsettled by poverty and the ruined and apparently hostile inner-city urban landscape, as well as by imagining the precarious lives of those living in deprived areas, the impacts of criminality and undiagnosed mental health conditions. Francis McAndrew and Sara Koehnke argue that a defensive "creepiness detector" is engaged in response to the strangeness of unsafe places.[30] For them, a sense of the creepy is a type of anxiety aroused by the ambiguity of whether or not there is something real to fear in a given situation, and the nature of that threat. The author found this unease and anxiety to be a valuable factor in the creative process, possibly through invoking additional observational as well as instinctive alertness. The author also experienced 'creepiness' because of the perceived threat of illness or danger emanating from the unsafe and unhealthy buildings surveyed. Some of the massive factory buildings in the study areas are spectacularly neglected, gloomy and rather frightening, invoking 'zombie apocalypse' imaginings as one speculates on what type of creatures would tolerate such damp, rotting and potentially spore-contaminated conditions (Figure 10). Creepiness, along with horror and the macabre, can be an aesthetic in art and literature. Tim Haynes' book, *Hollow City: Stories of Hope and Horror from Joburg's Inner City*, is one example of the fascination elicited by Johannesburg's extreme urban ruins.

Figure 10. Gloomy 'monster' building. This factory building on the corner of Browning and Wolhuter Streets, Jeppestown, is visibly damp, with vegetation growing out of the brickwork. An open side door hints that people may be living in this horrible place.
Source: Google Earth Street View, 2022 (accessed 15 August 2023).

THE DEFERRED EMERGENCY

Wilhelm-Solomon warns of the "deferred emergency of occupation in inner-city Johannesburg" and asserts that there is indeed a humanitarian crisis in the Johannesburg CBD. However, it could be said that this crisis extends more widely than the CBD, as the author viewed during her explorations. The recent fire at a building in the Johannesburg CBD, 80 Albert Street, where 77 people were burned to death, may accelerate changes in the way that old buildings are used for low-income earners and undocumented foreign residents, hopefully leading to improvements in living conditions in abandoned or neglected buildings in Johannesburg.

Industrial Jeppestown, south of Jules Street and the railway line, as well as the contiguous suburbs of Denver and Cleveland, constitute a bizarre and extreme urban environment, perhaps a setting that one would expect to find in a dystopian city affected by war or some other disaster. Throughout this informal study, the author took personal risks to view derelict, ruined and neglected buildings in the inner-city study areas, yet she was only able to see the outsides of these buildings and the general urban landscape, as it was not possible to enter any of the buildings. The depth and character of urban ruin in these areas is tragic, almost unbelievable, and ominous in terms of the potential for discontent and unrest. It was unsettling to confront the reality of Black poverty in the study suburbs, especially considering that affluent white areas are not far away.

Visiting these areas in person, or using Google Earth, but taking a 'crisis and emotive' perspective, there are many sights that astonish and appal, and one quickly understands that these sights are signs of economic stress and municipal neglect and are not part of a 'normal' urban residential

environment. In fact, these are not even residential areas, being zoned industrial. There are no local churches, clinics, libraries, very few crèches or schools and no banks, ATMs or modern shops. It cannot be a good thing that so many people are living in this disintegrating environment, not to mention the circumstances creating unemployment that force Black people to live in these areas.

Many of the buildings in the three industrial suburbs are filthy, broken, dilapidated, looted, vandalised, ruined or just plain neglected – they are not suitable for human habitation, yet people who are unable to improve their circumstances live there. Women and small children are among the residents of these buildings. Living in these buildings must impact human physical and mental health. I can only imagine the internal environment of these buildings – cold, dark, damp, infested with vermin, with nowhere to lock up valuable possessions, with 'creepy' and violent people on the loose, with persons coming and going day and night, drug-taking and prostitution. This must be a very unpleasant and stressful living environment.

However, despite this extreme poverty, the existence of built infrastructure like roads, water mains, drains, street lighting and solid buildings, as well as proximity to a passenger rail system and motorways, is an advantage for people living here, compared to informal settlements on the periphery of the city which have no services or built infrastructure assets (personal observations). In the study area, all properties are owned, with none listed as abandoned, meaning that property investors may be speculating on the long-term improvement of these areas and will eventually demolish the buildings they own.[31]

CONCLUSION

The free virtual globe Google Earth software allowed the author to gain insights about derelict, impoverished and unsafe areas in Johannesburg before going there, or even instead of visiting in person. However, with the use of Google Earth and Google Earth Street View, the time lapse involved meant that the virtual representations often differed from what was seen during a site visit due to changes in the landscape including demolitions, new buildings and roads and seasonal differences. There were also differences in time between the Google Earth satellite images and the corresponding Street View images, notably seasonal differences. If no site visits are to be made, care must be taken to recognise these temporal and seasonal limitations before the remote images are used in landscape planning and other decisions or to form assumptions based on the Google imagery alone. Even for creative purposes, site visits would be essential to augment assumptions, emotions and perceptions garnered from Google Earth images.

The strong visual spectacle of the blighted, crisis landscape in the three Johannesburg suburbs studied has the potential to provide 'dark' inspiration for artists, as well as for writers working in crime fiction, Gothic fiction or dystopian and apocalyptic fiction, or the speculative fiction genre more broadly, that requires a spoiled urban backdrop with complex historical, racial, political and socio-economic overtones. Finding the picturesque or tragic in neglected buildings and trying to make visual sense of the human tragedy underway in old industrial inner-city Johannesburg evokes a range of emotions, some of which can be harnessed for art-making and writing, or utilised in urban activism to campaign for a more sustainable and liveable city through different creative forms including film.

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Dr Taylor is one of the editors of a book on Phuthaditjhaba, an informal city in the former homeland of QwaQwa, South Africa, published in January 2023, and has also written one of the chapters discussing greening as a way of climate preparedness for towns and cities. The book is called *Sustainable Futures in Southern Africa's Mountains: Multiple Perspectives on an Emerging City,* Editors: Andrea Membretti, Sue Jean Taylor, Jess L. Delves. Springer 2023. The book is available with open access at https://link.springer.com/book/10.1007/978-3-031-15773-8.

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