

Perpetual Connections: Connecting the dots....

The benefits cultural diversity offers aesthetic education are well established in the manifestos of numerous design institutions. Oddly though with Eurocentric Modernist ideals remaining dominant in design curricula, non-western social, cultural, and creative practice albeit acknowledged as highly valuable, are still side-lined. Critical of this duplicity, this paper asserts that to enable more culturally empathetic design solutions, Indigenous visual spatial strategies should be engrained into current design pedagogy. Guided by Māhina's holistic Theory of Reality, this study identifies previously unrecognised connections between Pasifika visual spatial languages and strategies of vā (space) and tā-vā (time and space) and contemporary design education. This study argues that Indigenous visual spatial languages and strategies are in fact tacit within Modernist expressions of design and design pedagogy or visa-versa, and asserts these, of themselves laudable languages and approaches should therefore be acknowledged and celebrated as central to contemporary and future pedagogical structures for design.

Unlike traditional art and craft, design as a discipline developed well after the colonial period in the mid twentieth century; as such, design research has tended to disregard indigenous culture as having little to offer the disciplines. This has resulted in current design pedagogy being dominated by a working model that privileges western, and although not directly addressed in this paper, affluent and masculine influences. An increased demand for diversity within design education and practice has called for a re-evaluation of this stance. In support of a shift away from this apparent homogeny, design theorist Alain Findeli (2001:17) posits twenty first century design should broaden the scope of inquiry. This paper asserts that to facilitate the desired shift beyond the current paradigm and to enable more collective and culturally expressive design solutions, Indigenous symbols and visual-spatial strategies should be acknowledged within the pedagogical structures practiced. This study aims to show that the inclusion of Indigenous tenets, specifically those of the Pacific region, known as Moana, within contemporary design pedagogy is not as much of a cultural stretch for aesthetic education as one might perceive. I will argue that visual references to culture, understood by reformists in the nineteenth century to be visually excessive, specific to few and therefore not universal, were not unequivocally removed from aesthetic education. They are, I will posit, tacit within both the aesthetic language instigated by the reformists and further used in the development of the universal visual language by design modernists. I will address this claim and posit that Indigenous visual spatial languages, if not yet celebrated as having contributed to the roots of the modernist design pedagogy, certainly demonstrated and continue to implement comparable ideologies and should be acknowledged, recognised and celebrated as doing so. As a result, this research will exemplar first year student design work that has incorporated the use of reductive graphic codes, Indigenous symbolism and visual narratives in collaboration with both the Tongan ideologies of vā and tā-vā to illustrate both the historic connections and the enrichment of future visual-spatial languages through the inclusion of Indigenous culture.

From the borders of ancient Greek temples, pottery markings of the Lapita people, religious iconographies, carvings on the rafters in Māori *whare*, lashings of the Samoa *fale*, to the embellishment atop New York's Chrysler Building, ornament is expressive. Ornament speaks to us and about us through both figurative and rhythmic languages. As an article of culture, ornament is as important as it is misunderstood, misinterpreted and misused. Whether regarded as essential enhancement, fundamental cultural expression or immoral adornment, ornament has always been a consideration in the production of forms, the visualisation of narratives and the expression of both symbolic and pragmatic meanings. To clarify the backdrop that incited the removal of cultural referencing within a shared aesthetic language, an abridged review of what ornament was perceived to be and why it fell from favour is required. Aesthetic education celebrated the formal embellishments of Vitruvius (c. 90-c.20 BCE) in the first century AD, Leon Battista Alberti (1404-1472) in the fifteenth century and the decades that ensued where ornament flourished in both theory and practice to the late nineteenth century where the extravagant use of ornament within industrialised production caused it, along with cultural, religious and historic visual references to be considered an obsession and to be scrutinised as such. Reacting to the denunciation of the excess and wastefulness of the Rococo, the horrors of an emergent wave of mass-production and an economical social divide that flamed discontent, the reputation of ornament bore a substantial weight in the social reformation led by John Ruskin (1819 - 1900), Owen Jones (1809-1874) and associates.

As part of the nineteenth century Reformist's legacy and as a well-constructed trajectory to their ideals, early twentieth century architects and designers began to question the use of ornament, with Austrian architect and follower of the modern aesthetic principles of the Vienna Secession, Adolf Loos (1870-1933) veraciously scorning ornament, labelling it degenerate and no less than a crime. Loos' defamation, in which he specifically cited expressions of indigeneity as counteractive to the evolution of a modern culture devoid of primitive ornament was one of the earlier and most fanatical outbursts that initiated the turning point in which the study of ornament began to be eliminated from the curricula of art and architecture. Polemic as many of the arguments were, the success of the nineteenth century aesthetic reformations continued to gain traction. Throughout the later part of that century and the early twentieth century Ruskin and Jones' ideals were imbued in an education that sought an egalitarian and more universal approach that would offer an understanding of aesthetic languages that class or status did not now own or define. The historical trail that followed was filled with as much politics, diplomacy, economics, war, peace, personalities, jealousy, duplicity, success and demise as any efficacious work of fiction let alone historic non-fiction could promise.

In this study I will initially, with some expediency, summate educational theorist Friedrich Froebel's (1782–1852) instigation of aesthetic education that armed Ruskin and Jones and then enabled the development of modernist design pedagogies. Building on this I will elucidate how these holistic and abstractive theories were further cultivated by Johannes Itten (1888–1967),

László Moholy-Nagy (1895-1946) and Josef Albers (1888-1976) within the German design academy, the Bauhaus (1919-1933) and then as part of their later endeavours in the United States of America. This study will then reveal from this not so teleological path forward a rather obscured feature, that of a connection between Froebel's theories, Ruskin's and Jones' manifestos, the Bauhaus, and Indigenous Pasifika and Māori visual spatial languages. The efforts made by Froebel and the Bauhaüslers have been accredited, by numerous established historians, with fashioning the bedrock of a modernist aesthetic education. Additionally, Jones extensively documented the abstracted graphics, flat patterning and ornamentation of many cultures whose aesthetic strategies became highly visible, albeit recognition, in modernist works. These ideals continue to be widespread within western design pedagogy and practices today with, quite quixotically, no mention of the Indigenous visual spatial strategies that pre-existed the industrial reformation and that also clearly demonstrate numerous and distinct similarities to the reformists' ideals. These holistic strategies and rationalised reductive visual expressions were established well before Froebel, Ruskin, Jones or Loos noted their own discontent with the irrational, excessive and visually meaningless.

Using the holistic ideals championed by Tongan academic Hūfanga 'Okusitino Māhina in his Theory of Reality, *ta-vā*, (space and time) to draw analogies between Indigenous visual-spatial strategies and those of Froebel and the Bauhaus this research will elucidate not only the relevance but the opportunity Indigenous culture holds for contemporary design thinking and practice. By paralleling the historical trajectories of both, the uses of reductive graphic codes and the holistic ideologies as espoused by Froebel and the Bauhaus with those embedded in Māhina's theory this study will not only expose the historical connections but the congruence between the ideals imbued in *vā*, *ta-vā* and contemporary design education. I suggest that the acknowledgement, inclusion and reflection of Indigenous culture should not be considered an interesting historic or cultural deviation but as a visual spatial language that, albeit recognition, is deeply rooted and highly relevant in its application and enrichment of design education, research and practice.

Inspired by Jean Jacques Rousseau (1712–1778) and Johann Pestalozzi (1746–1847), Froebel believed that teaching simple elements of form alongside sensory learning would achieve unity within struggling societies. As a keen observer of nature and humanity, Froebel approached education from both a biological and a spiritual perspective, believing that what separates humankind from other life forms is the ability to alter our environment. Froebel's philosophy embraced all things in nature as connected and endeavoured to express these interrelationships between the living and the innate. Froebel honoured the relationships and connections held in the space between nature, people and things building his pedagogy upon holistic, sensory, spatial and social ideals. Froebel introduced, perhaps more correctly, re-introduced to the new world, the values of nurturing and respecting the individual and acknowledging their progressive contributions within a larger collective, be that family, community or the environment. Froebel's pedagogy, although instigated

as early childhood education has been credited with having had a direct, influence in the architectural history and all plastic arts beyond any predictable expectation.(Brosterman 1997:18) Froebel's teachings directly and very personally influenced the creative processes and social ideologies of the inspirational Bauhaus founder Walter Gropius (1883-1969), his *Vorkurs* studio masters Johannes Itten (1888–1967) Paul Klee (1879- 1940), Wassily Kandinsky (1866–1944), Lázsló Moholy-Nagy (1888–1967), Swiss architect, Charles-Édouard Jeanneret, known to all as Le Corbusier, (1833 – 1965) and prominent twenty century American architects and designers Frank Lloyd Wright (1867- 1959), Buckminster Fuller (1895-1983) and Charles Eames (1907–1978), to name only the grandfathers of the western aesthetic influence.

Froebel's Gifts, as his teaching tools are known, introduced a reductive graphic code based on a sparse grammar of straight lines, diagonals and curves to express the abstracted essence of form and space. The Gifts explains Brosterman (1997:50) encouraged physical experimentation with scale, balance, unity, perception, connection and divisibility. Froebel's gifts shifted successively from simple to complex and from two-dimensional to three dimensional, moving through point, line and plane to create inter-connected relationships with nature. It is worth noting, that the similar simple grammars and codified instructions for use, observed in Kirch's 1997 work, *The Lapita Peoples: Ancestors of the Oceanic World*, can also be found in the dentate stamping on the pottery produced by the Lapita peoples dating as far back as 1500BC. The Lapita peoples are the common ancestor of the Polynesians, Micronesians, and Austronesian-speaking Melanesians who colonized the islands of the Pacific, including New Zealand. This observation, I would assert illuminates the first correlation between traditional Indigenous practices and what ironically aesthetic education refers to as the inception of the modernist approach (fig 1). Jones, unlike Loos who had remained elitist in his aesthetic endeavours, would also look toward numerous ancient, although regrettably referred to as savage, cultures, for much of his inspiration when developing bold new theories on geometry and visual abstraction. Less than half a century later French reformist and inspiration to both Itten, and his Bauhaus colleagues, Eugene Grasset (1845-1917) also looked to Indigenous culture and asserted similar beliefs in reductive graphic codes and chronological connections, stating; "The return to the primitive sources of simple geometry is a certain guarantee of the soundness of our method." (Grasset 1905:115)



Fig 1, Clockwise from top right hand: Lapita decorative markings displaying reductive graphic codes and simple strategies for repetition that were also discussed by Jones as being fundamental to obtaining perfect balance and beauty in the reformist notions of true principles. Froebel, 1887 workbook: The Gifts experimented with scale, balance, unity, perception, connection and divisibility. Bauhaus Weaving, 1927, Gunta Stölzl, Owen Jones' "Savage Tribes" patterns recorded in his 1852 book Grammar and Ornament

Froebel also reasoned the existence of connections within space and the importance of nurturing these connections. Using the second Gift, Froebel employed spinning to show how form is perceived to change when treated differently within space. From static in space to spinning in space a sphere becomes a cylinder. Here Froebel had described appearance and illustrated perception. As a summation of this exercise, Brosterman (1997: 45-46) stated; “Froebel, in a sleight-of-hand worthy of a resourceful magician, created the ultimate gambit – a straightforward demonstration of cosmic mutuality and universal interconnectedness that even a child could understand. This simple demonstration illustrates how separate physical entities can be connected by lasting symbiotic, yet fluid relationships. Contrasting the western paradigm of space as a separator, the ideals embedded in the Pasifika constructs of *vā* and *ta-vā*, like Froebel’s, also place an emphasis on connectivity. Importantly this demonstrates the second correlation between traditional Indigenous practices and reformist aesthetic education. Froebel’s exercises expressed, as do *vā* and *ta-vā*, immaterial connections, sensory perception and shared understanding; all intangible yet present. Samoan born academic and author Albert Wendt (1939-) defined the relative space between entities as *vā*. Wendt explains *vā* as containing symbiotic relationships that through nurturing and respect, grow and change over time.

Vā is the space between, the in-betweenness, not empty space, not space that separates but, space that relates, that *vā* holds separate entities and things together in the Unity-in-All, the space that is context, giving meaning to things. (Wendt 1996:42)

Following on from Froebel’s educational reforms and motivated by twentieth century industrialisation, Itten and Moholy-Nagy, as two of the most influential Bauhaus masters, shaped a preliminary year (*Vorkurs*) pedagogy much of which continues to be central within the modernist educational approaches still delivered within Western, and many non-Western, aesthetic programmes. Itten’s methodology within the *Vorkurs*, understood to be the backbone of Bauhaus pedagogy, laid a pathway for individual exploration and analysis of one’s self, nature and the world of artistic creativity within the guidelines of a collective. This was done to produce not a common result or style, as wrongly interpreted within mid-twentieth century American architectural and design education, but a shared and universal understanding. Itten’s tenets, like *vā* and *ta-vā* had offered students the ability to see, synthesize emotion and senses, and expressively articulate the essence of form and space. Itten explained;

Walls with windows and doors form the house, but the emptiness in them establishes the essence of the house. Fundamentally, the material conceals utility; the immaterial establishes essence. The essence of a material is its effect of space, the immaterial. Space is the material of the immaterial. (Badura-Triska 1990:278)

Post Moholy-Nagy’s emigration from Germany and the Bauhaus, to the United States in 1933 due to Nazi pressure his ideals were further challenged within design pedagogy as he attempted to disseminate the holistic and inclusive tenets at the New Bauhaus in Chicago. At this time Bauhaus founder Walter Gropius, (1883–1969) now teaching at Harvard Graduate School of Design,

highlighted Moholy-Nagy's new conception of space saying (Lerner 2012:143) it, "opened design considerations to the problems of the fourth dimension and a modern conception of space." Moholy-Nagy (Bayer et al 1938:122) himself wrote: "Today spatial design is an interweaving of shapes: shapes which are ordered into certain well defined, if invisible, space relations; shapes which represent the fluctuating play of tension and force." Although Moholy-Nagy remained faithful to the ideals of socially responsible and interdisciplinary education it is well established (Thonet 2009) that in his American versions of the Bauhaus teachings Moholy-Nagy was constantly put under pressure to accommodate certain market demands within his student training. When the relevance of Moholy-Nagy's ethical, environmental and social credo was brought into question by the industrialists, Moholy-Nagy retorted: "the artist's work is not measured by the moral and intellectual influence which it exerts in a lifetime but in a lifetime of generations." In the face of capitalist agendas demanding immediacy and profit Moholy-Nagy asserted that, "creativity is not imposed from the outside but developed from the inside." (Findeli 199:13) For the most part, American industrialists of this period sought systematic makers of product and therefore, sadly for Moholy-Nagy, his ideology fell predominantly on deaf ears. As recorded by his wife Sibyl (Moholy-Nagy 1969:216) Moholy-Nagy agonised; "I shall keep on considering the process of education more important than the finished result." Peder Anker (2007:256) states that, "Moholy-Nagy believed the future held the possibility of a new harmony between humans and their earthly environment if forms of design followed biological functions." Although never aligned with one another, I would suggest a meeting of the minds between Moholy-Nagy's canons and the ideologies of Māhina in his development of the theory, *tā-vā*. Like Moholy-Nagy, Māhina argues (2010:33) that western-driven constructs have compromised education which in his opinion; "strictly engages in turning out doers rather than both thinkers and doers." Moholy-Nagy (1947:14) felt a similar frustration when he stated, "Production figures and balance sheets spoke for themselves, being sufficient justification of training for profit." Citing *tā-vā*, Mahina (2010:33) also charges the political and economic trends of this time for the loss of, "mutually holistic, symbiotic human-environment relationships." Findeli (2001:17) applauds Moholy-Nagy's assertion that "the key to our age is to be able to see everything in relationship," and I suggest with equal tribute that Māhina's *tā-vā*, time-space theory sits comfortably alongside Moholy-Nagy's 1947 work, and reveals further correlations to Froebel, Itten and the Bauhaus as a whole.

Sadly though, what actually remains of the Bauhaus pedagogy post the American translation is the reductive code, material-focused explorations as stylistic motivators in the perpetual desire to unite creative practice with advancing technologies and sciences, predominantly for financial reward. I posit that what has been diminished or completely lost within both Itten and Moholy-Nagy's teachings are the holistic applications, the humanist approach and the environmental concerns that connected design to the past, the present and the future, known within Pacific Island cultures as *teu la vā*, sacred connections. Within *tā-vā* these honoured connections are considered enduring legacies that are left through experience and importantly, hold the counterpoints from which the path forward is negotiated. *Tā-vā*, as Māhina explains, allows experience and memory to influence the future by negotiating it in the present. Mahina advocates, "People are thought to walk forward into the past and walk

backward into the future, both taking place in the present, where the past and the future are constantly mediated in the ever-transforming present.”(Mahina 1994:170)

One such sacred connection (*teu le vā*) tethering the past, present and future, (*ta-vā*) and also considered essential to both Froebel, Itten and Moholy-Nagy, was that of the educator and the student. Within Itten’s *Vorkurs* a Bauhäusler was seen not as instructor but as a guide in a student’s quest towards a unity of head, heart and hands. (Raleigh 1968) Wendt also outlines *teu le vā* as Froebel and the Bauhäusler had, considering the nourishment, cherishing and caring of this principle connection as both fundamentally structural and imperative to the creative process. Froebel’s practitioners were referred to as kindergarteners, the gardeners of children. For Froebel another approach to addressing an understanding of connectivity was encouraged through group work in which shared responsibility for motivation, collaboration and aesthetic sensibilities was addressed. Brosterman (1997:51) explains Froebel’s efforts in which simple geometric patterns were developed from two dimensional designs and manipulated into three dimensional forms that were then finally advanced into physical dance, “wherein, each individual is there on account of the whole and the whole on account of the individual.” Gift by gift, by asking his students to see, analyse, connect, disconnect, interlock, weave, abstract, construct, and deconstruct simple forms, Froebel challenged the manipulation and juxtaposition of multiple entities. The tasks although quite manifold, acknowledge that change and development are progressions; “the last one; therefore was brought about and prepared by the former.” (Krauss 1882:419)

Expanding for a moment, from a predominantly Pasifika comparison to European constructs Amiria Henare (2005:3) explains that within Māori ideology *taonga*, the relationship between subject and object and culture and nature also contrasts the western, excluding the Bauhaus, concept of space as separation stating; “that in the Māori world people and things have close relations that collapse spatial and temporal boundaries.” Together, the approaches within Indigenous strategies and the tenets of Itten and Moholy-Nagy aim to ensure the relationships formed between any entities, teacher and learner, student and peer, artefact and artist or object and environment are reflected upon, respected and communicated appropriately. By acknowledging this, the space, the relationship in-between the two entities can be expressed for example, as a dependence, independence, memory, tension, ease, balance, imbalance, symmetry or asymmetry. The nexus between Froebel, Itten, Moholy-Nagy and the Indigenous visual spatial languages and strategies of *vā*, *tā-vā*, and *taonga* is the appreciation of what space holds and offers physically, emotionally and perceptively. By addressing the diversity that characterizes the space in between current design pedagogical practice and the symbolic vehicles of meaning embedded in Indigenous cultures, new agency can emerge and ensure, as design theorist Fern Lerner (2012:148) has suggested, that the aesthetic language of the future does not become constricted or impeded. In order to augment the value of diversity within the creative process there is a need for a deeper and more meaningful understanding of culture, in particular as demonstrated in this paper, Indigenous culture. Again, with a focus on the cultural agency of the Pacific Islands, I reference Wendt (1982:202),

I belong to Oceania- or at least I am rooted in a fertile portion of it.....So vast, so fabulously varied a scatter of islands, nations, cultures, mythologies and myths, so dazzling a creature, Oceania deserves more than an attempt at mundane fact; only the imagination in free flight can hope – if not to contain her- to grasp some of her shape, plumage and pain.

In response to the diversity of Indigenous cultures present in New Zealand design education I have developed a project brief for first year design students to encourage both understanding and appreciation for culturally inspired visual languages and spatial strategies. At the outset, students are asked to identify a culture or cultures that they feel tethered to. Using Wendt's words to encapsulate the wealth of opportunity for innovation and creativity embedded in Indigenous culture the design challenge asks students to visually articulate the cultures that hold relevance in their lives. This project encourages students to consider what it is they intend to express or reveal about themselves and their connection to these cultures. They are asked to view the relationships and connections abstractly and critically. Using an understanding of *vā* each student is encouraged to visually interpret and express the space in between culture and themselves. Using *ta-vā* and *taonga* the student actively investigates historic or traditional meanings and methods attached to the symbolism or strategies they have identified in order to find relevant methods of expression in a contemporary and unique context. As Moholy-Nagy, Wendt and Māhina have all asserted the space in-between holds connections and encourages relationships.

Using simple elements and forms of the reductive aesthetic codes that I have asserted bind Indigenous visual languages to Froebel's gifts, the Bauhaus and the modernist aesthetic, accredited with influencing both visual and built environments of today, the students are asked to apply an understanding of *vā* and *ta-vā* in order to visually characterise the connection.



Fig 2, Screen grabs 1-3. From "Stork and Pukeko," by A. Bannwrath, 2013, Reprinted with permission. These images represent still images taken from the final animation from the afore-mentioned design challenge. <http://vimeo.com/65880130>

Having both Dutch and French ancestry but being brought up in New Zealand this student addressed both Māori and French cultures. By interpreting French artist M .C Escher's ideals as possessing similar intentions as Mahina's theory

of *ta-vā*, the student expresses a connection to the past that he is negotiating in the present. The student's first selection is a *Pukeko*, a native bird to New Zealand, reluctant to fly but that unlike many other native birds, has adapted well to new habitats. To address his French heritage the student chose the Stork, a migratory bird that during the warmer months, nests in the rooftops of the French township, Alsace. To reflect the emotional connections of the two cultures the student imitates the seamless shifts between multiple images emulating the visual ambiguity found in Esher's work. The student's intention is to demonstrate the fluid transition undertaken to negotiate his cultural heritage with where he is domiciled (fig 2). Using this example, I posit that by engaging with, appreciating and interpreting Indigenous culture and spatial strategies, a more comprehensive and meaningful use of indigenous culture can be engendered into design pedagogy. The results, I propose, include a diminished use of superficial cultural aesthetics and ignorant stylistic use of Indigenous symbols and visual narratives. As importantly, and demonstrated by the example provided, I posit that this approach will provoke empathetic and considered emersion of culture through relevant and inspirational visual spatial symbols and strategies that will both challenge and enhance design, pedagogy, thinking and practice moving forward.

I would posit that over half a century after Raleigh's plea, design is still in need of a pedagogy that engenders a design approach based on the quality and diversity of spatial connections and relationships. I have further argued that the acknowledgement, inclusion and reflection of Indigenous culture should be considered as essential to a shift away from the homogeny currently apparent with design expression. By identifying intersections between Indigenous spatial strategies and the holistic design pedagogy intended by Froebel, Bauhüasler Itten and Moholy-Nagy I have established a platform to demonstrate this compatibility. I have argued that by engaging fully with the graphic and ideological meanings embedded in the ornament expressed in Indigenous visual-spatial languages and strategies in combination with acknowledging their relevance and contribution to specific communities the assimilation of Indigenous culture within contemporary design education can be realised. In doing so, the attrition of more diverse and globally proficient design graduates is affirmed but as importantly these graduates will not only value, but they will be able to reveal, using an enriched visual-spatial vocabulary, the perpetual connectivity held in the space between humans and nature, humans and objects and humans with humans. As a Froebel alumni and a kindred spirit to Moholy-Nagy, and I would hope Mahina, had they ever met, Buckminster Fuller asserted (Fuller 1969:31) "Space is irrelevant. There is no space there are only relationships."

Bibliography

- Anker, P. 2007, Graphic Language: Herbert Bayer's Environmental Design. *Environmental History*, vol.12: pp.254 - 279.
- Badura-Triska, E. (ed.) 1990, *Diary no. 7, 27 May 1918*, Löcker Verlag, Weisbaden.
- Bayer, H, Gropius, W & Gropius, I. (eds.) 1938, *Bauhaus 1919 - 1928*, The Museum of Modern Art, New York.
- Blomer, K 2000, *The Nature of Ornament. Rhythm and Metamorphosis in Architecture*, W.W. Norton & Company, Inc, New York.
- Brosterman, N. 1997, *Inventing Kindergarten*, Harry.N.Abrams, Inc, New York.
- Dexel, W. 1993, The Bauhaus Style: A Myth. In *Bauhaus and Bauhaus People: Personal Opinions and Recollections of Former Bauhaus Members and their Contemporaries*, ed Neumann, E. Van Nostrand Reinhold, New York.
- Findeli, A. 1990, 'Moholy-Nagy's Design Pedagogy in Chicago (1937-46)'. *Design Issues*, vol.7 pp. 4 - 19.
- Findeli, A. 2001, 'Rethinking Design Education for the 21st Century: Theoretical, Methodological, and Ethical Discussion'. *Design Issues*, pp.17.
- Findeli, A. & BENTON, C. 1991, 'Design Education and Industry: The Laborious Beginnings of the Institute of Design in Chicago in 1944'. *Journal of Design History*, vol 4, pp.97 - 113.
- Foundation, T. M. C. E. 2013, *M.C.Escher*, Pixelday, LLC, Washington.
- Fuller, R. B. 1969, *Utopia or Oblivion: The Prospects for Humanity*, Lars Muller Publishers, Oslo.
- Grasset, E. 1905, *Method de Composition Ornementale par Eugene Grasset*, Librairie Central des Beaux Arts, Paris.
- Henare, A. 2005, *Museums, Anthropology and Imperial Exchange*, Cambridge University Press, Cambridge.
- Kirch, P. V. 1997, *The Lapita Peoples: Ancestors of the Oceanic World*, Blackwell Publishers, Cambridge, Mass.
- Kraus, M. K.-B. A. J. 1882, *The Kindergarten Guide. An Illustrated Hand-Book Designed for the Self-Instruction of Kindergarteners, Mothers and Nurses*, E. Steiger & Co, New York.
- Lerner, F. 2012, 'Liberating Foundations of Art and Design International'. *Journal of Art and Design Education* vol 31, pp. 140-152.
- Loos, A. 1997. *Ornament and Crime*, Ariadne Press, Riverside, California.
- Mahina, H. O. O. 1994, Our Sea of Islands. *The Contemporary Pacific*, 6: 148-161.
- Mahina, H. O. O. 2010, 'Tā, Vā and Moana: Temporality, Spatiality, and Indigeneity'. *Pacific Studies*, 33.
- Moholy-Nagy, L. 1947, *Vision in Motion*, Paul Theobald and Company, Chicago.
- Moholy-Nagy, S. 1969, *Moholy-Nagy: Experiment in Totality*, MIT Press, Cambridge
- Raleigh, H. P. 1968, 'Johannes Itten and the Background of Modern Art Education'. *Art Journal*, vol 27. pp. 284-302.
- Thoner, W. (ed.) 2009, *Bauhaus: A Conceptual Model*, Hajte Cantz Verlag, Ostfildern.
- Wendt, A. (ed.) 1982, *Towards Oceania*, Macmillian Press Ltd, Auckland.
- Wendt, A. 1996, 'Tatauing the Post-Colonial Body', *SPAN: Journal of the South Pacific Association for Commonwealth Literature and Language Studies*, vol.42.
- Whitford, F. 1984, *Bauhaus*, Thames and Hudson, London.

