

Techne as a Cultural and Environmental Mediator

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INTRODUCTION: THE ROLE OF TECHNOLOGY AS A MEDIATOR

A conflict of values currently exists between globalization and local cultures. The coexistence of the two is fundamental to further advancement of civilization while still allowing for the expression of individual cultures. One means to find common ground for globalization and cultural particularity is through technology. Technology is an essential part of local culture and is the means by which universalization is implemented. Unfortunately, global technology had often led to the marginalization of local cultures. Not only have global technologies often been used in place of traditional practices, they have been applied with a universalizing attitude. While technology is critical to global progress, it is also essential to local cultures. Using an anthropological model of cultural analysis, Richard Critchfield states one "...can't separate the ideas from the tools; all culture has a technological basis."¹ These tools, whether global or local, traditional or contemporary, passive or active, technics or high tech, are the means by which human beings create their relationship with the earth and express cultural ideas.

Often, there is a misconception that technological choices are predetermined by quantitative logic, thereby becoming reductive in character. There is no single correct solution to a technical problem. In fact, any choice that is made concerning the use of technology, is a cultural choice and thereby, a choice about values. According to the nineteenth century architectural theoretician, Gottfried Semper, "to the tool belongs, in the first place, the hand that leads it and a will that guides the hand."² In this scenario, the tool, as such, is not willful, but rather the individual who uses it imposes a value by the choices made concerning its development and implementation. The philosopher, Paul Ricoeur, defines culture as "a complex of values" that relates to attitudes concerning tradition, change, social behavior

and the use of available tools.³ Integration of cultural values with technology not only sustains the culture but strengthens it within the global perspective of progress and modernization. An understanding of a culture's relationship with the earth creates a rational and value-oriented filter for the application of technology. Technology is inseparable from values and culture. It can never be neutral.

In looking to the root definition of technology, *techne* has often been defined as simultaneously meaning both art and craft. However, in examining the Greek origins of the word *techne*, the twentieth century philosopher, Martin Heidegger states,

techne signifies neither craft nor art, and not at all the technical in our present-day sense; it never means a kind of practical performance...The word techne denotes rather a mode of knowing. To know means to have seen, in the widest sense of seeing, which means to apprehend what is present, as such...Techne, as knowledge experienced in the Greek manner, is a bringing forth of beings in that it brings forth present beings as such beings out of concealedness and specifically into the unconcealedness of their appearance...⁴

As such, the essence of a place is only truly comprehended through this knowledge system or "techne." In this way, technology becomes a method to comprehend the site environmentally, as well as enhance the legibility of its essence and culture. Thus, it has the ability to transcribe the land's history. This means of comprehending phenomenologically connects culture to place. In contrast, because of the emphasis on the universal and disconnection from the senses, global technology has tended towards abstraction and placelessness. However, contemporary technology can take on the values of the local culture and reveal those values. In fact, the nature of the place can inspire technology systems as

well as maximize the efficiency of energy systems. This reflects the approach used by many indigenous and vernacular cultures. Their technology is a comprehension of the land.

Another important aspect in Heidegger's early writings is his attempt to re-establish the nature of the human condition without resorting to dualities, i.e. man versus nature or mind versus body. As a result of this, he turns away from the anthropocentric attitude of placing man as the master in a dichotomy of master-slave positioning held in Western philosophy. There is the suggestion that knowledge exists, it is a matter of uncovering it, not creating it. This thought process dispossess humans of a hierarchal position. It allows for technology to become part of the ecological system to be revealed. The contemporary German philosopher, Peter Sloterdijk, furthers this concept of the obsolescence of the master-slave, subject-object, and culture-nature dualities in the twenty-first century, thus developing an idea of anthropo-technology.⁵

However, Heidegger does make a distinction between modern technology and the technics that precede it. According to Heidegger, modern technology "puts to nature the unreasonable demand that it supply energy which can be extracted and stored as needed."⁶ In opposition to vernacular technics, instead of working with nature in terms of renewable resources, modern technology expends the resources of nature, thus disrupting the innate rhythm of nature. Due to an issue of "enframing" as identified by Heidegger, all existing entities, including human beings become resources to be used to maximum efficiency, thus denying man's essence.⁷ However, he is very specific that technology itself is not dangerous.⁸ He also suggests that a return to the previous way of life is impossible, but that the answer to the danger of technology is to be found in the essence of technology rather than the mechanics of technology. Technology and poiesis should not be two separate elements, but rather coincidental characteristics.

According to the philosopher, Carl Mitcham, the philosophy of technology can be defined in three phases. Pre-modern technology or technics does not require a separate area of philosophy because it is inextricably interlocked with the world view as such.⁹ In terms of building, this can be seen in the vernacular tradition. However, modern technology has been part of a "decontextualizing process," which has occurred throughout the realm of the study of knowledge, resulting in separate fields of science, sociology, politics, art, theology, et al, with each becoming an "autonomous pursuit."¹⁰ There has been a tendency towards a

separatist means of inquiry. The third phase is our current phase, a "virtual re-contextualization that is not a return to the pre-modern."¹¹ This framework is based on an evolving and fluid sense of time, with a re-evaluation of the current condition.

The last twenty years in the philosophy of technology has been an attempt to think technology as something we do. The next twenty years must be an attempt to think of meta-technology as something that we are a part of.¹²

Mitcham is obviously referring to Marshall McLuhan's notion that the medium is a prosthetic device, with technology an extension of both the body and mind. What is to be revealed here is the *techne* itself. As political theorist, George Kateb, has written, "...modern technology is not applied science, it is philosophy or theology enacted."¹³ Existing within a certain cultural paradigm, technology develops within that paradigm and reflects it. Humans establish the level of meaning with which to imbue technology, and thereby determine its essence as well.

CASE STUDY: TJIBAOU CULTURAL CENTER

As the twentieth century moves to a close, there has been a gathering awareness nearly everywhere of the lines between cultures, the divisions and differences that not only allow us to discriminate one culture from another, but also enable us to see the extent to which cultures are humanly made structures of both authority and participation, benevolent in what they exclude and demote.¹⁴ — Edward W. Said

In the French territory of New Caledonia in the South Pacific, tensions still exist as the result of colonialism, ensuing globalization, modernity and continued French rule. These stresses that exist as a qualitative issue in the midst of daily discourse are the result of the overlay of a sometimes repressive, colonialist culture upon an indigenous society within a region. The recently completed Jean-Marie Tjibaou Cultural Center in New Caledonia can be examined through technological terms as a hybrid of indigenous and global technologies. The issue of certain dualities, i.e. settlers and indigenous people, globalism and local culture, modernity and tradition, has helped to create internalized physical and virtual boundaries, communally and individually, between cultures that physically co-exist.

The twentieth century witnessed an emphasis on universalization, resulting in globalism, as a stride forward

for civilization. Globalization is primarily based in the Western tradition. According to the philosopher, Paul Ricoeur, universal civilization has been positive because it has made available to the masses "the freedom from want,...access ... to certain values of dignity and autonomy" and "the fight against illiteracy and the development of means of consuming."¹⁵ Ricoeur also examines the unfortunate tendency of globalization towards a culture of mediocrity and responds with the need for people to take part in modernity while still maintaining a sense of their own culture. Typically inherent in local cultures is the tension between the aspiration to modernity and the preservation of culture.

Colonial Relationship

In 1774, James Cook, a British explorer, discovered New Caledonia. Acquired by France in 1853, it became a penal colony in 1864, thus providing inexpensive labor for settler farmers and the ensuing nickel industry. From the beginning, the European settlers saw the native Melanesians (or Kanaks¹⁶) as the "other" and had little regard for their inherent culture and rights to their own land. This resulted in exclusion, differentiation, subjugation, containment and conflict. In this way, they were disallowed the opportunity to take part in progress.

The indigenous New Caledonians, the Kanaks, have intermittently expressed a desire for independence, with a great effort and ensuing conflict occurring particularly since the 1980s. Adding to the complexity of the situation, within their own homeland the Kanaks are in the minority, composing forty-four percent of the population of approximately 200,000 people. Thirty-seven percent of the population are European settlers with the remainder being migrant groups of Indonesians, Vietnamese, New Hebrideans, Tahitians, Wallis and French Polynesians, along with others.¹⁷ Although the United Nations has called for a decolonization of the territory, the question has become not whether New Caledonia should have autonomy, but which group has the right to self-determination.¹⁸ Prior to 1998, in referendum votes that included the entire population, independence from France has not been the winning count.

Kanak Culture

The Kanaks believe that they are made of the same material as all other phenomena. Thereby, there is an equivalency between all things, including humans and nature, the visible and the invisible, as well as life and death.¹⁹ The anthropologist, James Clifford describes this as "cosmomorphism," a belief that the same essence flows through all things with no perceived

distinction between the subject and object.²⁰ In this way, the Kanak "grasps his or her own being as a series of natural events identical to organic rhythms and substances."²¹ This is in direct contrast to the often typical Western disconnection between self, body and the cosmos.

For the Kanaks, a sense of cultural identity is directly connected to the landscape in which they live. The Kanaks "believed in a mythic origin, a time and place occupied by spirits, which gave birth to the first man, also considered a mythic figure. The identity of the clan is based on their territory, totems and traditions. Through the physical marking of the land with mythic and historic events, they are able to read their social identity relating to their place within their community, as well as their geographical identity relating to their place of origin."²² Due to its mythic time-space characteristics, the terrain of the land contains the identity of the individual. By living in the landscape, history and ancestry becomes an animated part of daily life.

Because the natural surroundings are an important, dynamic part of the cultural heritage, the priorities relative to the land are different than the typical globalist approach. The Kanak relationship to the land is not based on the earth as a commodity. Land is neither property nor a means of production.²³ In fact, because of its importance as the "incarnation of myth" and that myth's importance to identity, the Kanak culture does not allow the alteration of the land's physical nature without the permission of the ancestor in order to not disrupt the myths residing in the land.²⁴ Landscape becomes the mediator between the invisible and visible worlds, providing a "dynamic interweaving of nature, society, myth and technology."²⁵ The individual's association with the universe is ordered by myth, particularly that of the individual's own clan.

Culture Reflected in Building

The technology of the Kanaks is integrally linked to their value system. The traditional construction of the village and house (or case) developed relative to both climatic and cultural conditions. The basic layout of the village is based on the origins of the clan. The main spine of the village is the ceremonial alley with trees, secondary paths and cases on either side. This alley is a public space. While the trees provide shade, the alley allows for breezes. At the end of the alley is the hut of the big chief. The enclosed case with a top, central opening and flexible structure responds to the natural elements. (Fig. 1) All the materials are local, perishable and renewable. There is a contrast between the ethereal fragility of the materials and the strength of the

means of construction. This also allows for a community ritual of re-cladding of the cases. Huts are not passed on from generation to generation, but the *techné* or knowledge of building them is. In the construction of the cases, the initial step is to create a circle of stones. In response to the humidity, the ground is covered in sand. Resting on top of a cylindrical, earthen base, the case has an outer ring of vertical, thin structural ribs made from palm saplings that curve together towards the top where they connect to the center pole. These totems are essential both structurally and mythically. This main post is symbolic of the big chief and often has natural imagery that has been passed down from the main ancestor. Sometimes these totems are adorned with shells that represent the sea, where the spirit goes when the body dies. The outer ring of posts symbolizes the small chiefs protecting the big chief. Representing their relationship through spirit, horizontal crosspieces are strapped between the vertical posts. This allows for the attachment of either a thick layer of thatch or a thinner weave depending on the desire for permeability. The women are responsible for the rope of coconut fiber that holds together the structures, and thus, symbolically the men, as well as the men and the spirits.²⁶ The traditional case can be up to nine meters in diameter and twelve meters tall.²⁷ The interiors are relatively bare and unadorned. Once again, the cultural priorities of the group as a collective and the land as animated suggest that there isn't an emphasis on the interior as a place for living. In fact, the landscape is home. Unfortunately, the colonial power maligned the huts as "unsanitary" and efforts were made to replace them with ideas about construction that had nothing to do with the climate or culture.²⁸ However, there has been renewed appreciation of the cases' character.

Means Towards Cultural Identity: Tradition and Modernity

a confused and limiting notion of priority allows that only the original proponents of an idea can understand and use it. But the history of all cultures is the history of cultural borrowings. Cultures are not impermeable; ...Culture is never a matter of ownership, of borrowing and lending with absolute debtors and creditors, but rather of appropriations, common experiences, and interdependencies of all kinds among different cultures. This is a universal norm. Who has yet to determine how much the domination of others contributed to the enormous wealth of the English and French states?²⁹ — Edward W. Said

Tradition and modernity need to be embraced for cultural identity. According to the late Kanak leader,



Fig. 1. Traditional Kanak Case. From Kankaé: The Melanesian Way.

Jean-Marie Tjibaou, "the return to tradition is a myth... No people has ever achieved that. The search for identity, for a model, I believe lies before us... Our identity is before us."³⁰ Also, according to Tjibaou, "We want to resume the dialogue to rebuild to tell the world we are not escapees from prehistory; still less are we archaeological fossils."³¹ Having been disallowed and bounded for so long, this expresses the desire of the Kanak people to take part in the contemporary world on their terms. A culture needs to evolve in order to continue to survive. Inherently, there is a cultural component to any political struggle, in which a strong sense of identity needs to exist. Culturally, the Kanaks have a non-linear or cyclical understanding of time. In the same way that the past, present and future reside in their landscape forming a concurrence of time and space, their approach to an engagement with the contemporary world can take the same character. Their modernity has the opportunity to develop differently from the Western conception. In a positive interpreta-

tion, boundaries can be seen as the point from which something begins.

Jean-Marie Tjibaou Cultural Center

In the Jean-Marie Tjibaou Cultural Center in Nouméa, New Caledonia, Renzo Piano Building Workshop integrates global technologies with local traditions and nature. (Fig. 2) The sociopolitical background for this project exemplifies the tension that can exist between the local and the global, especially when exacerbated by the issue of colonialism. For this project to be successful, it was essential that the design not be a form of colonialism. In the design of the cultural center, Piano uses a similar valorization system towards technology as the Kanaks in their indigenous buildings.

I can share with a non-Kanak of this country what I have of French culture, it is impossible for him to share with me the universal part contained in my own culture.³² — Jean-Marie Tjibaou

Spurred by the death of the Kanak leader, Jean-Marie Tjibaou, the French government agreed to funding of the project during the negotiations for independence as a means of subduing internal tensions resulting from years of colonialism in return for the Kanaks postponing independence.³³ In an international competition, the Agence de Developpement de la Culture Kanak, which is composed primarily of Kanaks, chose the proposal of an international architect, Renzo Piano, who had turned to the native culture for inspiration. (Fig. 3) In doing so, he elevated the perceived value of the local culture and its *techne* beyond their borders to the global level. According to Piano,

a mistaken concept of universality would have led me to apply my mental categories of history and progress outside the context in which they developed, a grave error. True universality in architecture can be attained only through connection with the roots, gratitude for the past, and respect for the *genius loci*.³⁴

As an international architect, Piano brought knowledge of advanced technologies, as well as a process for understanding place rather than a method of cultural imposition. Working with the anthropologist, Alban Bensa, Piano studied the culture, the site, and the corresponding relationships. Piano attempts to understand the existing culture to a degree deeper than a cursory replication of forms. Because of the level of detail, the final building is not a pastiche of ideas, but an attempt to understand the depth of logic of the

Kanak people. The building is the result of *techne* revealing the logic of the place.

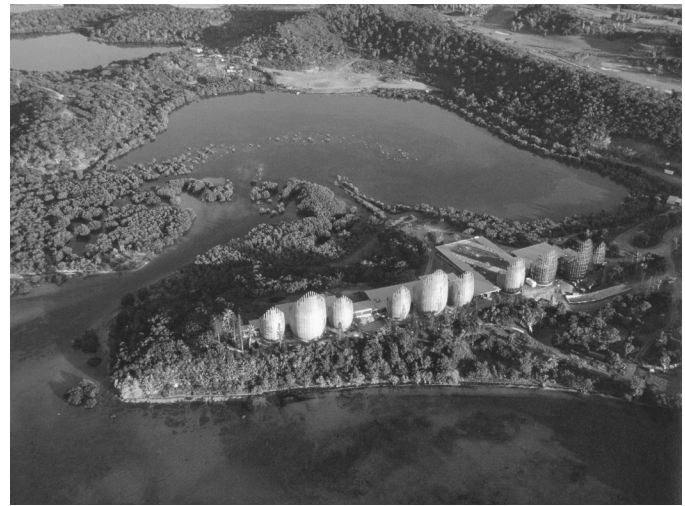


Fig. 2. Aerial view of Tjibaou Cultural Center. Courtesy of Renzo Piano Building Workshop.

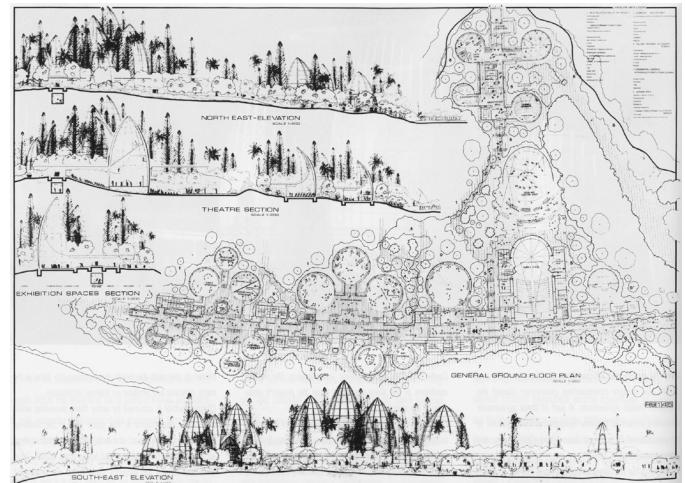


Fig. 3. Competition entry by Renzo Piano Building Workshop. Courtesy of Renzo Piano Building Workshop.

In examining the three finalists' competition entries, they reflected on the existing border conditions in various ways: either as a continuation of the colonialist situation or as an engagement of the issues. Interestingly, the other two competition finalists, Henri Ciriani and Aurelio Galfetti, approached the project in a less culturally relevant manner than Renzo Piano. The jury responded to Ciriani's project as economical and functional, but the complexity of the articulations as difficult to read.³⁵ The project correlated positively with the landscape by interacting with the slope, taking advantage of the breezes, using projections to optimize views, and using pilotis to raise the building above the ground. However, there was no reference to the indigenous culture. The entry by Galfetti did not

respond to either the culture or the site, and in this way was deemed inappropriate.³⁶ It is an example of a universalist and colonialist attitude. The design was extremely monumental and had little hierarchy to the pieces. The project was based on the notion of the Western precedents of the Acropolis and Greek stoa, which have connotations of power associated with them. This has little meaning to the native people. This basic premise assumes many Western values that are not a part of the Kanak culture. In fact, it is an expression of the Western paradigm that subjugated them.

Of course, although Piano's project looks to the region for inspiration, he cannot deny his previous experience. For example, the same logic that he used for developing the details of the IBM Traveling Pavilion, he uses here as well. The structure of a leaf inspired the aluminum connector and wood strut joint. Piano finds the expression of the organic in the exploration of nature and current technology. This is similar to the detailing logic used in the cultural center. (Figs. 4 and 5)

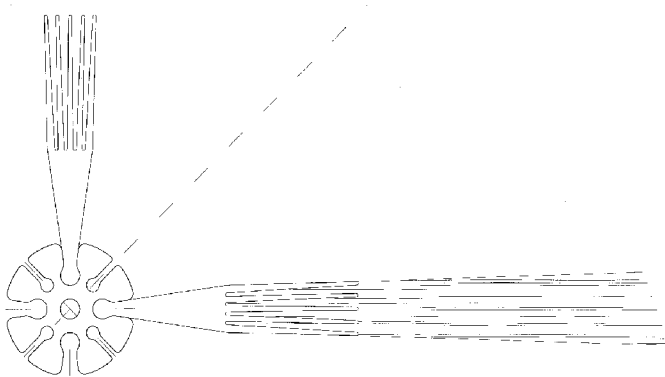


Fig. 4. Detail of IBM Traveling Pavilion, by Renzo Piano Building Workshop. Drawing by author.

In general, the Kanak people are not builders other than of the ephemeral huts. In their culture, "Eternity is not the building itself, but the way of building it."³⁷ For the Kanaks, the continued life of a village depends not on the permanence of the physical building, but rather the sustained preservation of the topology and the understanding of the process of construction.³⁸ This ephemeral character is resonant in many aspects of their culture with action being culturally more significant than artifacts. This prominence of action signifies a mode of communication that is interactive with their environment. Appropriate as a means to represent their culture, the typology of the cultural center allows for a combination of the archiving capabilities of the museum with the real time event character of the festival.



Fig. 5. Case Detail of Jean-Marie Tjibaou Cultural Center. Courtesy of Renzo Piano Building Workshop.

The building evolves from the nature of the site (existing location of trees, the ridge, the climatic elements), as well as the essence of the culture. Inspired by the Kanak culture, the form and organization of the building looks to the logic of traditional construction as well as the socio-cultural origins. The project examines the logic of traditional construction, but still allows for adaptation. This permits for an interaction that enhances the vitality of both the local and the universal. The cases of the cultural center rise out of a forest of Norfolk pines, which was not originally part of the site, but adds to the drama of the building and relates to the trees that surround a typical village.

Derived from the Kanak means of endowing the landscape with meaning, the main path from the parking lot to the Center is referred to as the "path of history."³⁹ Because it is impolite to directly approach one's host, the path meanders towards the entry. The path tells the story of human evolution with the five sequences of life — creation, agriculture, habitat, death and rebirth — represented through the vegetation and the terrain. Rebirth is followed by entry into the building.

The building is laid out along an enclosed, ceremonial alley resembling the native village. The functions are to each side of this path, with forms resembling the cases to one side and modernist boxes to the other. Each side attempts to respond differently to either the trade winds of the lagoon or the calmer laguna. In a sense, by walking the corridor, one straddles the line between tradition and modernity, as well as the local and global without it ever being truly clear which is which. In some ways, the visitor is concurrently immersed in both.

Heightening the indigenous understanding of the wind and sun, the curving facades of the case-like buildings are formed by the winds off the lagoon allowing for airflow, lighting and shading. Piano uses his experience from designing other double skin walls, but completely allows the culture and site to determine the form. Because of the characteristics of the materials and construction, the interaction between the natural elements and the structure can be heard, which is similar to the action of the native huts. At a certain point in the design process, the resemblance to the local huts was relaxed (due to wind tunnel testing) resulting in a greater effect of wind ventilation through the building.⁴⁰ This form is closer to the initial sketch by Piano that was inspired by site conditions. In this way, the cases maintain a balance between tradition and modernity. However, unlike the vernacular huts, construction of the cultural center was not a delicate operation. Because the building section goes relatively deeply into the ground at certain points, the initial excavation must have been similar to the razing of the native landscape by the settlers for the nickel mines, although on a much smaller scale. Yet, in this instance, instead of destroying the landscape and the accompanying myths, the project almost becomes built topography and does not degrade the environment, but rather, creates a symbiotic relationship.

The cases of the cultural center were originally meant to be clad in natural vegetation, thus allowing for community participation in the re-cladding of the building.⁴¹ However, in the final rendition, the architect is obsessed with the opposite condition: how to make it last forever. From a series of published memos, Piano is concerned about the availability of funds for future maintenance.⁴² The choice is a non-local wood, iroko, from Guyana. The wood will gray as it ages, require little maintenance, and remain resistant to the ever-present termites and white ants.

CONCLUSION

This project is filled with paradoxes. The building is meant to be a vehicle for historical, as well as contemporary, Kanak Culture. However, the architect is Italian, the client is French, the manufacturer is French, the wood is from Guyana, and the physical labor is Kanak. Ultimately, it is emblematic of our global condition. However, it also shows an attempt to modify behavior on all sides and find an inspiring direction. In 1998, the year that the Jean-Marie Tjibaou Cultural Center opened, as a step towards independence, a referendum vote passed by seventy percent to grant New Caledonia more autonomy from France. This is in direct contrast to

prior votes. Some have attributed this to the Jean-Marie Tjibaou Cultural Center and its ability to increase solidarity between the Kanaks and educate the non-Kanaks concerning the territory's history.⁴³ The building capitalizes on the local understanding of place while still implementing global technologies and construction practices, as well as non-local materials. It acknowledges the attributes of the modern day world while still celebrating tradition and the aspects of the local. Piano's design begins to reveal the complexity and substance of the Kanak culture, as well as exposes its dignity, vitality and readability. In this way, the culture is elevated to its proper status within the global perspective and allows for interaction at that level. In opposition to a violent solution, the building helps the process of decolonization by employing a possible method that includes a response to the various colonial conditions. There have been many criticisms of the building including the alleged disregard for the desire of many Kanaks for the environmental path to be primary to the choice of non-native architect. However, a certain hybridity occurs that is mutually enriching, as the global and the indigenous look to each other's *techne* for inspiration.

NOTES

¹ Richard Critchfield, *The Villagers: Changed Values, Altered Lives: The Closing of the Urban-Rural Gap* (New York: An Anchor book, 1994), p. 12. Critchfield was a journalist and war correspondent who began studying and writing about villagers using an anthropology model of participant-observer. The theoretician, William T. Mitchell also suggests a similar idea in his book *The Reconfigured Eye: Visual Truth in the Post-photographic Era* (Cambridge, Mass. MIT Press, 1994), on page 59: "Tools are made to accomplish our purposes, and in this sense they represent desires and intentions. We make our tools and our tools make us: by taking up particular tools we accede to desires and we manifest intentions."

² Gottfried Semper, *The Four Elements of Architecture and Other Writings* (Cambridge: Cambridge University Press, 1989), p. 269. This statement also suggests a dualistic master-slave relationship inherent in much of Western thinking, which will be discussed later in the paper.

³ Paul Ricoeur, *History and Truth* (Evanston: Northwestern University Press, 1965), pp. 278-9.

⁴ Martin Heidegger, "The Origin of the Work of Art," in Albert Hofstadter, translator, *Poetry, Language, Thought* (New York: Harper & Row, Publishers, 1971), p. 59.

⁵ Peter Sloterdijk, "Anthropo-Technology," *New Perspectives Quarterly*, volume 17, No. 3, (Summer 2000), pp. 17-20.

⁶ Martin Heidegger, "The Question Concerning Technology," in David Farrell Krell, editor, *Basic Writings* (San Francisco: Harper Collins, Publishers, 1977), p. 320.

⁷ *Ibid.*, p. 326.

⁸ *Ibid.*, p. 333-4.

⁹ Carl Mitcham, "Notes Towards a Philosophy of Meta-Technology," *Techné: Journal of the Society for Philosophy and Technology*, Volume 1, No. 1-3, (Fall 1995), pp. 3-4.

¹⁰ *Ibid.*

- ¹¹ Ibid.
- ¹² Ibid., p. 6.
- ¹³ George Kateb, "Technology and Philosophy," *Social Research*, Volume 64, (Fall 1997), p. 4.
- ¹⁴ Edward W. Said, *Culture and Imperialism* (New York: Random House, 1994), p. 15.
- ¹⁵ Ricoeur, *History and Truth*, pp. 275-6.
- ¹⁶ Nic Maclellan and Jean Cheasneaux, *After Mourua: France in the South Pacific* (Melbourne: Ocean Press, 1998), p. 151-4. The term Kanak has several derivations. First, it refers to the Oceanic word for human being. It also derives from the French term, Canaques, which often was used in a derogatory manner to refer to the exploited and dispossessed indigenous labor force. The indigenous New Caledonians themselves initiated the spelling "Kanak" as a means of taking control. Caldoches is the term for European settlers and their descendants.
- ¹⁷ Bank of Hawaii, *New Caledonia Economic Report*, June 1999, pp. 4-5.
- ¹⁸ S.K.N. Blay, "Self-Determination and the Crisis in New Caledonia: The Search for the Legitimate Self," *Asian Survey*, Volume 28, No. 8, (August, 1988), p. 864.
- ¹⁹ Virginia Thompson and Richard Adloff, *The French Pacific Islands: French Polynesia and New Caledonia* (Berkeley: University of California Press, 1971), pp. 236-7.
- ²⁰ James Clifford, *Person and Myth: Maurice Leenhardt in the Melanesian World* (Berkeley: University of California Press, 1982), p. 173.
- ²¹ Ibid., p. 174.
- ²² Leah Sophie Horowitz, "Perceptions of Nature and Responses to Environmental Degradation in New Caledonia," *Ethnology*, Pittsburgh, Volume 40, Issue 3, (Summer, 2001), pp. 238-9.
- ²³ Robert Aldrich, *The French Presence in the South Pacific, 1842-1940* (Honolulu: University of Hawaii Press, 1990), p. 173-4.
- ²⁴ Ibid.
- ²⁵ Clifford, *Person and Myth: Maurice Leenhardt in the Melanesian World*, p. 40.
- ²⁶ Riichi Miyake, "From Vernacular to Universal," *A+U: Architecture and Urbanism*, no. 8, (August, 1998), p. 108.
- ²⁷ Arthur Lyon Dahl, "Traditional Environmental Knowledge and Resource Management in New Caledonia" in *Traditional Ecological Knowledge: A Collection of Essays*, ed. R.E. Johannes (Gland and Cambridge: IUCN, The World Conservation Union, 1989), pp. 48-9.
- ²⁸ Ibid.
- ²⁹ Said, *Culture and Imperialism*, p. 217.
- ³⁰ Sheila McInstry, "Sea and Sky," *The Architectural Review*, Volume 204, Issue 1222, (December, 1998), p. 30. Jean-Marie Tjibaou left his village to train as a Catholic priest. He continued his studies as an anthropologist. Later, he became the leader of a moderate independence group. An extremist Kanak assassinated him after his involvement in negotiating the Matignon Accords with the French to avoid civil war.
- ³¹ J.M. Tjibaou and Ph. Missote, *Kankaé: The Melanesian Way*, (Papeete: Les Editions du Pacifique, 1978), p. 5. In many passages in this book, reading Franz Fanon's *Wretched of the Earth*, which describes the issues encountered in Algeria before and after independence was gained from France, evidently influences Tjibaou. While Fanon's book establishes a somewhat hopelessly violent situation, Tjibaou appears to be searching for a non-violent means towards independence.
- ³² Alban Bensa, "Entre Deux Mondes," *Architecture d'Aujourd'hui*, no. 308 (December, 1996), p. 45.
- ³³ Miyake, "From Vernacular to Universal," p. 82. In addition, this was the last of Mitterand's "grand projects."
- ³⁴ Renzo Piano, *The Renzo Piano Logbook* (London: Thames and Hudson, 1997), p. 180.
- ³⁵ Centre Culturel Kanak a Nouméa, *Architecture d'Aujourd'hui*, no. 277 (Oct, 1991), p. 12.
- ³⁶ Ibid.
- ³⁷ Miyake, "From Vernacular to Universal," p. 107. Perhaps the ultimate question concerning the cultural center's success rests on this issue concerning "eternity." Do the Kanaks now have the technological knowledge, or have they merely been left with the artifact?
- ³⁸ Ibid.
- ³⁹ Werner Blaser, *Renzo Piano Centre Kanak: Cultural Center of the Kanak People* (Basel: Birkhauser, 2001), p. 68-9.
- ⁴⁰ Piano, *The Renzo Piano Logbook*, p. 180. The engineers, Ove Arup, participated in the wind tunnel testing and were instrumental in the design work.
- ⁴¹ Peter Buchanan, *Renzo Piano Building Workshop, Complete Works, Volume Two* (London: Phaidon Press, 1995), p. 192.
- ⁴² Miyake, "From Vernacular to Universal," p. 107-8.
- ⁴³ Christopher Zinn, "Striking cultural centre is symbol of island rebirth," *The Guardian*, Manchester, November 10, 1998, p. 18.

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