Pacific Ethnomathematics endeavors to walk the unintended bibliographic trail throughout the largely European literatures on indigenous cultures and practices of Oceania in order to wean out references and, at times, attempted interpretations of mathematical and environmental space and time concepts of indigenous Pacific peoples. These references—and my attempts to adequately describe them—are divided into three vast geographic areas of Oceania: Polynesia, Melanesia, and Micronesia. While certainly not all of this literature is unintentional in its references to these concepts, much of this material does not couch them as ethnomathematical practices, although at the same time their cumulative expressions nevertheless place them in the intellectual culture of the field of ethnomathematics from around the world.

While showing the European, historically determined boundaries of these three vast regions of Oceania, this book’s map of the culture areas of the Pacific cannot of course do justice to their thousands of specificities of islands, atolls, and settlements, villages, cities, and towns. For this, the recently published second edition of the Reference Map of Oceania by James A. Bier (University of Hawai’i Press, 2006) would be a good reference companion for readers wanting more geographic detail to correspond with ethnomathematical concepts described in Pacific Ethnomathematics. The National Geographic Atlas of the World, eighth edition (National Geographic, 2004) also comes to mind. And while the culture areas Pacific map indicates the specific archipelagoes and islands that exist in these three verbally labeled regions, British colonial history and thus scholarly organized discussions have persuaded me to place Nauru and Kiribati in the Polynesian section. All geographic names and locations, no matter how specific, have been placed in the book’s Geographic Index for easy access, along with a detailed Subject Index, both of which refer to the entries (not page numbers) in this book.
Interpretations of mathematically related ideas in the Pacific often reflect historical issues of Western dominance, confront the idea of universal and culturally free mathematics, and underline the problematic idealization of ethnomathematics as representing deep ideas of culture and reality. But unless obstacles to situating Pacific ethnomathematics in the contexts of their origins, use, diffusion, and change are removed—and removed as a part of a larger program of decolonizing history—such ideas remain relegated to the marginal positions in which consequences of colonialism have placed them.

Bishop (1990) writes that the predominant belief in mathematics as being universal and culture free reflects a larger agenda in the use of Western mathematics “as one of the most powerful weapons in the imposition of western culture.” He stresses that the predetermination of the sum of the angles of a perfect triangle as 180 degrees by this dominant culture supports this argument and denies the “humanly constructed” nature of mathematics. The term “ethnomathematics” itself, according to Bishop, remains somewhat nebulous given the role of cultural values in its construction. Bishop suggests that “perhaps it would be better not to use that term but rather to be more precise about which, and whose, mathematics one is referring to in any context.” The most appropriate and reality-based approach is one in which these ideas are taken as they are in the functional nature of society and the environment. A survey of the appearance of ethnomathematical concepts in literature on the Pacific, Africa, and elsewhere reveals a struggle, however, between indigenous and external contexts. Notions of linear design, space, astronomical delineations, enumeration, relationships, and manipulation of numbers and exchanges are best appreciated on their own terms and understood apart from issues of historiography and colonialism, the phenomenon of acculturation notwithstanding.

Diverse approaches to an environment of the sea, phases of the moon, movements of the stars, and meeting material cultural needs are encapsulated in cultural heritages that maintain either their strength, a contemporary respect for a changed past, or in many cases both. Works on enumeration systems in Papua New Guinea (dominated in depth and diversity by a 17-volume study by Glendon Lean) represent the most concentrated effort by scholars to document base and body-part counting systems in provinces of a country with at least 700 languages and dialects. These writings, however, are not particularly coordinated or responsive to one another. But the bibliographical trail that each leaves behind can lead one to a deeper arena of thought from which one might understand ethnomathematical concepts of Papua New Guinea and nearby island groups as a whole. The problem with doing so lies in the piecemeal fashion in which much of the study of Pacific enumeration concepts and systems (by chance or intention) has been pursued in the nineteenth and twentieth centuries.
Some exceptions can be found in writings that contrast and compliment practices in exchanges. These texts range from focused papers to paragraphs, sentences, and passing illustrations that have to be drawn from larger ethnographical works in an even greater piecemeal fashion. Some of these references to ethnomathematical practices are actually unintended as ethnomathematical-based observations. The literature on Papua New Guinea ethnomathematical concepts with an emphasis on enumeration systems is actually more focused than any of the literature on ethnomathematical concepts in Polynesia or Micronesia. In these latter two giant regions of the Pacific, discussions on lunar elements for calendar constructions (with an interesting collage of late-nineteenth- and early-twentieth-century literature existing for Hawai‘i) and stellar concepts for navigation (particularly in the Caroline Islands) are relatively complementary and responsive to each other chronologically. A survey of piecemeal paragraphs, however, reveals a much greater array of ethnomathematical practices in culture and society than would be possible to discover simply through works intentionally focused on ethnomathematical concepts and practices.

Representative examples are easier to find for Papua New Guinea and surrounding island groups than is the case for Fiji or New Caledonia, where Western influences appear to have moved into historical contexts that might otherwise have revealed distinct indigenous concepts of enumeration. Such examples from passing paragraphs on Papua New Guinea could include the idea of identifying an offending enemy by the length of the arrow (the length of area is based upon individual preferences for distinctive points between the fingertips and the shoulder [Blackwood 1978]) and expressions of great numbers among the people of New Britain (kami: a nest of ants; or pidut: a nest of white ants) (Brown 1910). As a marker of garden plots, the Tangu people used a spindle of string and hurled it through the air across the garden. “The unreeled string marked the borders of a plot, the landing points of the spindle marked the corners.” Such a string was then recorded and used to illustrate narratives told and retold before the harvest of taros (Burridge 1969).

Campbell (2002) discusses how people in the Massim area of Papua New Guinea break their environment down “into simple line and shape to capture the formal properties of a shared cultural code in a meaningful world.” She describes this linear conceptualization of the world in carved art, where an egret’s head and mouth are distorted using a curved linear representation, when the egret actually has a long, straight beak with only a very slight curve. James and Achsah Carrier (1989) describe individuals with “net rights” (determined by lineages) whose function is to divide fish catches into equal shares. In initially arraying catches in a communal gathering, common species of fish are laid in piles of 10 on leaves. The rest of the fish are heaped at one end of the leaves. Among value concepts of shell money
in New Britain is Danks’ description (1888) of the measuring of lengths of shell money (composed of shells broken down into circular forms of glass beads) from “the nipple of one breast to the nipple of the other,” with a particular length having a fixed value. Firth (1967) notes the lunar progression of a Tikopian woman’s pregnancy: “When the child’s second moon stands (in the sky) it has moved; in its third it has moved heartily; in its fourth it has picked up at the belly of the mother; in its fifth it has turned over and sought a path to be born.” All of these are examples from passing paragraphs that are meant to contribute to a larger thematic whole and not specifically to ethnomathematical concepts of Pacific peoples.

As in relatively broad studies of the Hawaiian people (see, for example, Beckwith 1932; Bryan 1932 and 1999; Culin 1899; Fornander 1969; Greiner 1923; Heyerdahl 1953; and Kamakau 1976), studies on Melanesian societies almost inevitably come to some discussion or description of the application of lunar phrases to calendared calculations. In many cases, these constructions are also related to time calculations for the occurrence of feasts and the execution of obligations on time, as well as for the integral relationships between agricultural benchmarks and seasonal lunar calculations. (See, for example, Deacon 1934; Johnson 1997; and Joseph 2000.) These broad treatments and the appearance of relevant ethnomathematical paragraphs and sentences within are nevertheless substantially supplemented by other more direct focuses, not only on time and season calculations (as is much more the case in Papua New Guinea, somewhat less for Polynesia [with an emphasis upon Hawai’i], and much less in Micronesia) but also upon methods of counting, use of monetary standards, enumeration systems, and educationally based studies of conservation abilities among Papua New Guinea students.

Of these studies, works on conservation abilities among these students in relation to Piaget’s theories on cognitive development are more organized and responsive to previous studies than are the kinds of general studies noted above. Several of these studies were derived from the Indigenous Mathematics Project based at the Mathematics Education Centre at the University of Technology in Lae, Papua New Guinea. These papers originated from a concern for the low mathematics scores in Papua New Guinea schools. David F. Lancy, Geoffrey B. Saxe, J. R. Prince (specifically his 1969 book *Science Concepts in a Pacific Culture*—i.e., Manus Island and the Southern Highlands and Central Districts of Papua New Guinea), Gilbert Lewis, and Max Kelly engaged in research that was typically tied to Piaget’s ideas of the universality of stages in cognitive development. Most consider the implications of cultural environment in relation to these stages, with some writers giving them more significance than others.

In a summary of work produced under the Indigenous Mathematics Project, Lancy (1979) noted an important finding in these studies: Papua New
Guinea children who demonstrated the least evidence of abstract thinking “are raised in societies where the degree of abstraction in traditional counting and classification systems is very low.” This led Lancy to conjecture on a possible “relationship between the traditional logical/mathematics system of the culture, the cognitive development of children raised in that culture and the probable success of those children in primary school mathematics” (pp. 45–46). Kelly (1977) applied Piaget task models in his school-based tests on converting quantity (using local rice), converting length (using sticks of the pit-pit reed), and a matrix test that examined concepts of length and thickness in various dimensions. While Kelly observed that the difficulties students had in these tasks reflected those “found in other cultures,” a lack of a cultural need to make one-to-one correspondences between numbers and objects and the apparent use among the Tawaudi people of only “one,” “one plus,” and “many” (a practice prominent in issues of understanding Australian Aboriginal student responses to Western mathematics) made the concept of “hierarchilization” important for school curriculum planning. “The power to construct lattices of increasing class inclusiveness,” Kelly noted, and “the presence or absence of these lattices... seems to correlate with success in the current Western-style school system” (p. 200). Low math test scores among Papua New Guinea students has encouraged considerations of cultural and societal contexts as ongoing realities that mirror a larger dichotomy of tradition, functional values, and the wide sweep of acculturative consequences across the Pacific span.

Of those pockets of ethnomathematical literature—or at least references in Pacific anthropological literature that provide a semblance of scholarly response,—perhaps the most notable (besides those concerned with mathematically related concepts and performances of Papua New Guinea students and, to a somewhat lesser extent, works on Papua New Guinea body-counting systems) are those that occurred between a suggestion of a Babylonian influence (Price and Pospisil 1966) and a torrid rejection of such an influence by focusing on the origins and existence of Papua New Guinea enumeration systems in and of themselves (Bowers 1977). Also included in these pockets is a brief debate on the possible presence of two counting systems on Easter Island via possible outside influence in pre-European contact times (Ross 1936; Métraux 1936; Heyerdahl 1961), possible solstice-oriented coordinates on Easter Island ahu structures (Ferdon 1961; González 1984; Liller 1898, 2000; Liller and Duarte 1986; Smith 1961), astronomical orientations on Hawaiian structures (Da Silva 1982; Johnson 1983; Kurth 1983), and the alleged existence of a “sacred calabash” used by voyagers from south Polynesia to find the latitude of Hawai‘i (Rodman 1928; Stokes 1928; Buck 1957; and other references in Goetzfridt 1992). Rodman believed that four holes “bored on a circle, 90° apart, whose plane was at right angles to the longitudinal axis” enabled voyagers from
Tahiti to Hawai‘i to mark the latitude of Hawai‘i once the calabash was filled with water by looking for the North Star through any of the four holes until this star “became tangent to the upper rim” at a 19° angle, whereupon the voyager turned due west to eventually hit Hawai‘i. Stokes, however, rejected this concept, arguing that the greatest angle achievable was 11°, that filling the calabash with water and then using it at sea was impracticable, and that the calabash Rodman referred to was probably a “traveling trunk” of Hawaiian royalty held at the Bernice P. Bishop Museum in Honolulu.

Ross drew upon significant discrepancies in the short Easter Island vocabulary list (including numbers) obtained by Captain James Cook in 1774 and those contained in the 1770 journal of Don Francisco Antonio de Agüera y Infanzon to conjecture that Aguëra’s terms may represent “relics of a pre-Rapanui language” on Easter Island that may have still been in use on the island in the late eighteenth century. Heyerdahl (1961) also referred to this discrepancy as another element of support for a South American presence in the Pacific. Métraux, however, rejected this idea, maintaining that the terms obtained during the 1770 Gonzalez expedition occurred without a “translator” (Cook had a Tahitian “translator” on board in 1774) and that “the aberrant names must be taken as local variations, the origins of which we cannot understand.”

Ferdon’s observations in 1961 of a “ranging device” of four holes on a stone at the Orongo site on Easter Island and the possible insertion of a pole in one of the holes to determine the summer solstice, equinox, and other solar observations served as a foundational work for other studies on possible intentional astronomical alignments on Easter Island. Gonzalez’s M.A. thesis (1984) on “The Archaeoastronomy and Ethnoastronomy of Easter Island” provides support for a relationship between stone landmarks and certain astronomical phenomena, including solstice and equinoctial occurrences. Liller (1989, 2000) rejected the idea of “sun stones” at Orongo functioning as an astronomical pointing device but believed that between 15 and 20 inland ahu very likely were aligned within a 3° range of important sunrise or sunset directions. Besides describing numerous geometrical elements in a comprehensive archaeological survey and restoration effort of Easter Island structures, Mulloy (1975) also supported the intentional alignments of ahu to determine the azimuth of the rising and setting sun at solstice and equinox periods—an alignment that required the establishment of a line at right angles to a previously established range, although no evidence remains as to the extent and design of a geometrical method for doing so.

Some responsive discussion on evidences of intentional astronomical alignments on Hawaiian heiau (temple) structural elements (Da Silva and Johnson 1982; Johnson 1983; Kurth 1983) exists within a larger literature on Hawaiian astronomical practices (see Chauvin 2000 for a useful over-
view), leading to particular focus on such practices in noninstrumental navigation as they also relate to indigenous heritages and identity. Such a literature has had a particularly strong impact not only on minimizing Andrew Sharp’s arguments that early voyagers were unable to control their voyages of exploration and settlement but also on addressing historical, anthropological, and archaeological issues on the original discovery and settlement of islands and atolls throughout the Pacific. Its place in Pacific ethnomathematics is both linear and spatial, reflecting the much larger scientific context of ethnomathematics than an uninformed association of ethnomathematics primarily with numbers and counting would allow.

Andrew Sharp’s dismissive theories, however, served to at least spark a more intensive concern with practical demonstration of the possibilities of stellar navigation when actually at sea, led initially by Ben Finney and David Lewis. Navigator Mau Piailug from Satawal in the central Caroline Islands, became involved with these voyages on the Hawaiian canoe Hokule’a beginning in 1976 and eventually became a mentor to Hawaiian navigator Naioa Thompson. Thompson in turn influenced the development of other indigenous navigators through the Hokule’a’s “Voyage of Rediscovery” and other voyaging endeavors. Indigenous astronomical applications are usually approached as being part of a larger endeavor of land finding as it is concerned with the determination of drift, interpreting currents, estimating latitude, indicators of approaching land, determining one’s position (particularly using the Micronesian etak approach that is usually conceptualized as aligning an out-of-sight island with stars to mark voyage segments), and the cognitive processes that noninstrumental navigation involves (see Goetzfriedt 1992). Particularly relevant examples of the role of understanding cognitive processes to linear and spatial frameworks of astronomy and navigation include Gladwin’s East is a Big Bird (1970), which drew upon cognitive issues of such navigation on Puluwat Atoll in an attempt to highlight similarities in thought processes between students of low economic backgrounds and problem solving approaches used by navigators; Finney’s chapter on nautical cartography and noninstrumental navigation (1998); and Davidson’s work on “Cognitive Mapping Features of Micronesian Navigational Systems” (1983).

While there is no association drawn between previously mentioned studies on the cognitive and classification processes of Papua New Guinea students and the cognitive complexities of indigenous navigation, both touch upon the wider contexts of Pacific ethnomathematical practices and traditions that allow an expansion of inquiry beyond numbers, symbols, and shapes. When such inquiry is allowed to do so, these practices and cognitive processes are empowered to function and be considered in their own contexts and rights, thus moving serious studies away from Western standards or expectations of universality in mathematical application. Davidson
considers the “spatial knowledge-systems” found in Satawalese navigational practices to represent “cognitive transformations of environmental information”—a practice that one could justifiably apply to Pacific ethnomathematics in general.

An interesting conjunctive thread that could also be drawn between this context-enriching allowance for expansive spatial, linear, and cognitive application of mathematics in Pacific environments is one connecting these “cognitive transformations” and “spatial knowledge-systems” to Raiatean navigator Tupaia’s apparently broad knowledge of islands stretching from Tahiti—where he conveyed his knowledge to Captain James Cook in 1769—to all cardinal directions, even beyond Fiji. An additional thread could be drawn between Tupaia’s knowledge and ethnomathematical issues related to controlled voyages and the early settlement of the Pacific. Lewthwaite (1970) examines the extent to which the interjection of European concepts of direction and cartography—which were not necessarily conducive to those of Tupaia and other Polynesians—led to sometimes extensive “cartographic confusions,” as Cook’s map was redrawn and reinterpreted up through the nineteenth century. Lewthwaite notes that it was quite possible that these European interpretations reversed Tupaia’s concepts of north and south and thus the islands themselves. (See also Finney 1998.)

The inclusion of Pacific navigational issues and principles in this book is meant to be a response to basic principles of context and the expressive empowering of ethnomathematical concepts in the environments from which they originated and are practiced. Astronomical concepts and projected practices of the past involve linear alignment ideas and manipulations that not only come through the doors of this context but that also lie at the heart of what this book attempts to follow. The Subject Index is meant to reflect this inclusiveness, with each entry tightly indexed with typically 5 to 10 subject terms, or more, associated with it. The Geographic Index is similarly designed to encompass the full range of geographic regions and peoples (particularly in Papua New Guinea), with the intent of representing the expansiveness of ethnomathematical practices throughout Oceania.

This book follows a bibliographic trail defined by the presence of ethnomathematical appearances in literatures that are largely ethnographic in nature, English in print, and concerned with the vast ocean worlds of Polynesia, Melanesia, and Micronesia. Some important Japanese and German documents have, however, been drawn upon via my earlier book on indigenous Pacific navigation for the sake of supporting ideas of navigation as ethnomathematical concepts. Early “field reports” from past British posts throughout Papua New Guinea have occasional references to numerical words and expressions. Kathryn L. Creely’s guide to microfilmed versions of these reports—Files of Correspondence, Journals and Patron Reports from Outstations of British New Guinea and Papua, 1890–1941: An Indexed Guide to
the Microfilms (Melanesian Studies Resource Center, University of California, San Diego, 1996)—is an important resource for accessing these files. Ethnomathematical references may also be found through documents of the 1908–1910 German Südsee-Expedition (Ergebnisse der Südsee-Expedition, 1908–1910, Hamburg: L. Friederichsen, 1914 [13 volumes]).

Given the need to approach ethnomathematics in the functional, cultural, and societal approaches to environments, it is important to note for the sake of inclusiveness that references to triangles, circles, rectangles, and angles in various physical contexts occur frequently in ethnographic literature, as well as in less academic depictions. There are also frequent references to objects—particularly canoes and, to a lesser extent, housing structures—that are asymmetrical or symmetrical in nature. (See Canoes of Oceania by A.C. Haddon and James Hornell, 1975, Bishop Museum Press, for a good overview of canoe symmetric principles.) An attempt to isolate and describe each of these references would have been an excruciating endeavor that would also have distracted from references and more detailed texts on ethnomathematical practices, and thus it was not pursued.

Bishop (1990) wrote the following in relation to measurement concepts and the revealing of Western dominance by the promotion of a universality of mathematical concepts: “If there was any knowledge of indigenous measure systems at all, or even currency units, there is little reference made to them in the literature.” While this is often true in terms of direct focuses on measurements or any other ethnomathematically related idea, a glance at “Measuring and measurements, concepts of and calculations for” or “Linear concepts” or “Cardinal points, concepts and determination of” in the Subject Index to this book reveals that these concepts are in fact there in the literature if one tenaciously follows the bibliographic trail, particularly down its unintentional footpaths.

The search for these fragments in Pacific texts always involves a process of expectations but—ultimately—rejections because of a clarified absence of relevant thoughts. Articles such as H.H. Brindley’s (1926) “Early Pictures of Lateen Sails” (Mariner’s Mirror 12:9–22), E.H. Bryan Jr.’s chapter on canoes and navigation in his Life in the Marshall Islands (Bernice P. Bishop Museum, 1972), and any number of other texts on canoe construction in material culture or comparative contexts with their passing references to triangular or rectangular sails or outrigger dynamics were generally not included. On the other hand, a study such as Frank M. LeBar’s The Material Culture of Truk (Yale University, 1964) was included because its focused and repeated use of geometric concepts formed the basis of many of LeBar’s descriptions of the principles of Chuukese material culture.

A similar although certainly different context could be applied to the inclusion of descriptions of Māori and other Polynesian weaving practices. While works that deal with genealogical calculations were included if formulated
by indigenous concepts of enumeration, others were not if genealogies are
discussed from the standpoint of European conceptualizations of indige-
nous genealogies for the purpose of interpreting some segment or concept
of history. (D. R. Simmon’s *The Great New Zealand Myth: A Study of the Discovery
and Origin Traditions of the Maori*, A. H. & A. W. Reed, 1976, provides a good
example.) Other texts referring to or discussing subjects such as measure-
ments or distance primarily on the basis of European conceptualizations
and/or standardizations were also not included unless (as is often the case
in references to indigenous counting systems) these conceptualizations are
referred in relation to indigenous Pacific concepts and practices.

There is also no shortage of titles that one might reasonably think rel-
vant to a compilation of Pacific ethnomathematical practices but which in
the end fail to directly discuss their presences. This is certainly true of many
works on string figures. For example, volume 10 (2003) of the *Bulletin of
the International String Figure Association* is characterized as “mathematical”
in a bibliography on world string figures, although the mathematics are in
the resulting images of different shapes, particularly triangles of various
degrees of lucidity. Like the canoes and houses with their triangular shapes
and angles in construction, the articles on string figures require inferences
from images and beyond what is apparent in the text. And while papers by
prominent scholars of indigenous navigational concepts entitled “‘Expand-
ing’ the Target in Indigenous Navigation” (David Lewis, 1971, *Journal of
Pacific History* 6:83–95) or “The Colonisation of the Pacific Plate: Chrono-
logical, Navigational and Social Issues (Geoffrey Irwin, 1998, *Journal of the
Polynesian Society* 107 (2): 111–143) imply the presence of astronomical
concepts that an inquiry into Pacific ethnomathematics should include,
a closer reading finds them wanting in this regard as well. These are but
examples meant to offer a sense of the direct expression of the description
of mathematical principles (listed also in this book’s Subject Index) that
was necessary for a text’s inclusion and description in this book.

Of course, there is the Internet, but a Google search for “Pacific eth-
nomathematics” at the time of this writing renders only a few “hits.” This
will, one hopes, eventually change. Deleting those quotation marks will pro-
vide a greater number, although they are of questionable relevance, and a
great many others refer back to the Ethnomathematics Digital Library at
www.ethnomath.org. On a more global scale, an electronic bibliography
such as Robert Lawless’ “The Bibliography of Anthropology of Quantifica-
tion” (http://coombs.anu.edu.au/Biblio/biblio_numbers.html) represents
sources that contain some Pacific references but are more useful for com-
parative purposes with the expression and study of ethnomathematics out-
side Oceania. (The seminal book *Ethnomathematics: Challenging Eurocentrism
in Mathematics Education*, Arthur B. Powell and Marilyn Frankenstein, eds.,
State University of New York Press, 1997, also provides a larger survey of
thoughts on the eurocentric applications of mathematics—and not necessarily always in education—although offering only marginal references to the Pacific.) Searching with specific terms such as “stick charts” or konane provides more specific results (such as Dirk H. R. Spennemann’s select bibliography on “Marshallese Canoes, Navigation and Stickcharts”), although whether or not the Hawaiian context is central to a discussion of konane is entirely another matter. Other references include links to the Glendon Lean Ethnomathematics Centre in Papua New Guinea, “Geometry in Hawaiian Quilt Patterns,” and various resources that serve to complement the contents of this book.

Pacific bibliography, if done right, ultimately becomes a hopeless endeavor. Pacific ethnomathematics—perhaps somewhat like indigenous navigation and voyaging in the Pacific or even indigenous Pacific literature—provides particularly strong support for this hopelessness in the sense that bibliography’s grand attempt to gather relevant publications about some subject together also implies that by doing so, a subject becomes controllable. It implies that if the brave tread through the literatures cited and described, the end result will be a picture of a subject that cannot be comprehensively acquired in any other way. But fortunately this subject is always moving beyond our grasp—not as a reaction to the decolonization of Pacific scholarship but rather moving in itself without our interpretations in the context of history. As scholars—both indigenous and otherwise—we may find positive value in this action of grasping, for it enables one to engage in the pleasure of interpretation. But a subject of numbers and lines and unseen angles nevertheless lives on its own terms without a consciousness of control, of interpretation, or of librarianship’s attempts to at least do the first.

As for interpretation itself, my profession of librarianship long ago questioned or failed to recognize that privilege in the wider context of its place in the world of scholarship. Our socialization to the perennially noble cause of providing “access” to “information” has an underlying history also of socialization to an institution that, while central in the ways that we think of community and academic institutions, has let the theories and theorists for its place in society become practically irrelevant and for the most part unconsidered. While some library scholars have endeavored to change this way of looking at the profession, overriding concerns with technological advances to access information have overshadowed the humanistic dimensions of what constitutes “information” and “knowledge” for specific peoples—indigenous or otherwise—to the extent that a relatively recent library theorist’s in-depth examination of the information worlds of minorities and women became “groundbreaking,” when other professions of the social sciences long ago tilled such rows. This speaks to a confinement to this institution and its goals in a way that continues perhaps an unconscious
allegiance to the early schools of librarianship that valued ideas not only of skills but of a character and service values willing to accept, much less think about, the determinant role that other professions have had in determining its origins of authority. And so it is that when a bibliography such as this book fails to cooperate with a profession’s values of uncomplicated “access” to a subject such as Pacific ethnomathematics—for which, in cultural environments, no means exist to control it in service to scholars—readers may be disturbed at my trespassing through roles and expectations. For this I make no apologies, but I nevertheless hope that the following terms for engaging this subject make the hopelessness of good Pacific bibliography all the more useful to those who consult it.

Notes

2. Ibid., 60.
4. Ibid.
5. Ibid.