

NATIONAL ACADEMY OF SCIENCES

JOHN WESLEY MAYHEW WHITING
1908–1999

A Biographical Memoir by
ROBERT L. MUNROE AND ROBERT A. LEVINE

*Any opinions expressed in this memoir are those of the authors
and do not necessarily reflect the views of the
National Academy of Sciences.*

Biographical Memoir

2010

NATIONAL ACADEMY OF SCIENCES
WASHINGTON, D.C.

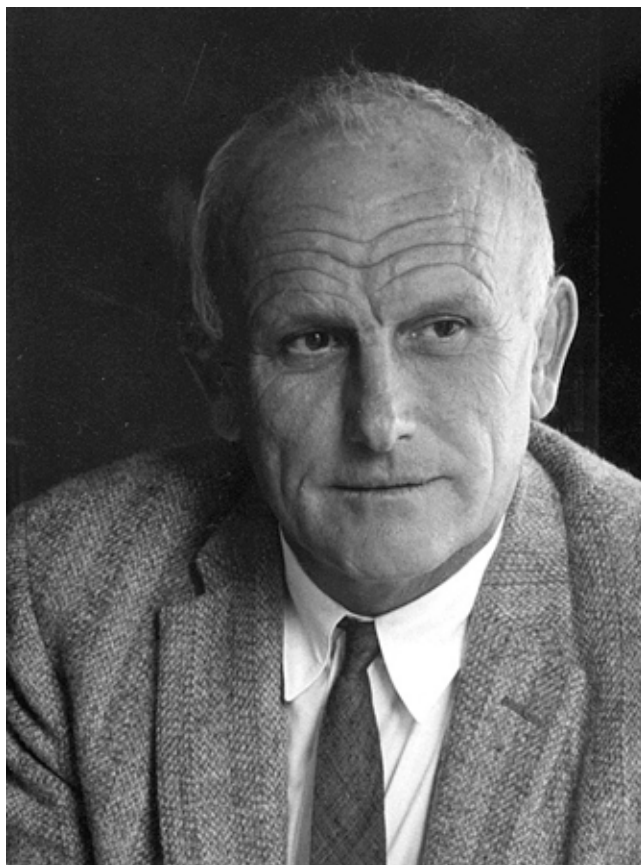


Photo Courtesy of Harvard University.

John W. M. Whiting

JOHN WESLEY MAYHEW WHITING

June 12, 1908–May 13, 1999

BY ROBERT L. MUNROE AND ROBERT A. LEVINE

JOHN W. M. WHITING WAS A CENTRAL FIGURE in the interdisciplinary behavioral science of mid-20th century America, bringing together cultural anthropology, child development research, and psychoanalytic ideas in innovative research—quantitative and qualitative—that continues to be influential. He participated in the two major interdisciplinary experiments of the period, the Yale Institute of Human Relations and the Harvard Department of Social Relations, and played a pioneering role in original studies that systematically compared child and adolescent development across human societies. Whiting was a founding father of post-World War II psychological anthropology and the teacher and mentor of many leading contributors in that field and in psychology. With his wife, Beatrice Blyth Whiting (1914-2003), also a distinguished psychological anthropologist, Whiting ran a legendary research seminar at Harvard for about 30 years (1954-1985). His selected papers were published in 1994 in a volume that includes an autobiographical article and other historical material (Chasdi, 1994).

In this essay we provide an overview of John Whiting's career and his major research contributions, with some glimpses of his personal and intellectual style. Whiting was born on a farm on Martha's Vineyard in Massachusetts,

where he grew up, then attended Phillips Academy Andover, and Yale (class of 1931), where he played football and was captain of the wrestling team. After a few years, he followed his college roommate, Clellan S. Ford, into the new anthropology doctoral program at Yale, where he studied with George Peter Murdock, Edward Sapir, John Dollard, and as a postdoctoral fellow in the Institute of Human Relations with Clark L. Hull, Neal Miller, and Bronislaw Malinowski.

John Whiting coauthored *Outline of Cultural Materials* (Murdock et al., 1938), which provided the conceptual outline for the archive of ethnographic data that became known as the Human Relations Area Files, was psychoanalyzed, ran a rat experiment (Whiting and Mowrer, 1943), did a field study of child socialization among the Kwoma of New Guinea (Whiting, 1941) for his dissertation, and developed (with Irvin Child) a theoretical model of child training and personality that they tested with cross-cultural data and published after World War II (Whiting and Child, 1953).

In 1947 he moved with the psychologist Robert R. Sears from Yale to the Iowa Child Welfare Research Station (Whiting was an assistant professor of anthropology at the State University of Iowa). Two years later they both moved to Harvard to found the Laboratory of Human Development at the Graduate School of Education and (in Whiting's case) to participate in the Harvard Values Project and teach in the Department of Social Relations. When Sears left in 1953, Whiting became the director of the laboratory and later Bigelow Professor of Education, and in 1962 he moved to the Anthropology Department as a professor and stayed there until his retirement in 1978. He continued to work at Harvard until 1985. Further productive inquiry ensued during invited visits to the University of California, Irvine (Burton et al., 1996).

Whiting's research contributions were many, but we shall focus on some main lines of his research: (a) cross-cultural methodology for developmental and psychocultural generalizations; (b) effects of climate and socioeconomic patterns on child care and childhood experience; and (c) effects of culturally varying parental practices and childhood experience on belief and ritual patterns (including sorcery and initiation ceremonies), psychological dispositions (including gender identity and altruism), and biological outcomes (including stature and sex ratios).

Some general comments about John Whiting as a scientist may be helpful in advance. He was an empiricist dedicated to the testing of theoretical ideas through research, always engaged in substantive projects and in looking for new and better ways of measuring behavioral, cultural, and psychological characteristics. At the same time, he was a theorist deeply interested in a wide range of sociocultural, psychological, and biobehavioral processes, particularly those that had implications for the explanation of cultural variations. John Whiting's way of putting theory together with empirical research owed a good deal to the Vienna positivists (i.e., the logical positivist concept of the hypothetico-deductive method that his mentor Hull embraced) and Whiting's own modification of that, something closer to Karl Popper's falsificationism, using a conjecture-and-refutation model of scientific work. He did not talk epistemology or philosophy of science; instead he put his own view into practice at the seminar by encouraging everyone to formulate conjectures that could be refuted in the friendly combat of the discussion or in a research project participants might design.

He was open to new theories that could be tested through empirical research. (His view of what was testable was much broader than Popper's, since Whiting, following another of his mentors, John Dollard, considered Freudian theory

testable, whereas Popper did not.) Through the conjecture-and-refutation model, Whiting was able to be broadly ecumenical in theoretical orientation—and even occasionally speculative to a degree others might consider “wild”—while adhering to a strict empiricism. He was also fiercely democratic and egalitarian, believing that anyone’s ideas were as good as any others before they were put to the test. Though holding strong theoretical preferences, he always goaded his students to challenge him and propose how they could replace his suppositions with more valid ones. He believed (implicitly) with Popper that scientific knowledge consisted of the hypotheses that had survived serious attempts at falsification, yet his emphasis was more on the forging of new and powerful insights than on simply falsifying or confirming extant hypotheses. The process of building knowledge through debating with evidence made the Whiting seminar and research group a locus of unique scientific creativity in psychocultural studies during the 1950s and 1960s.

CROSS-CULTURAL METHODOLOGY

In 1954 when he published the chapter “The Cross-Cultural Method” in Gardner Lindzey’s *Handbook of Social Psychology*, John Whiting emerged as the leading spokesperson of the movement to place cross-cultural comparison in the center of the behavioral sciences, particularly psychology. Margaret Mead had of course preceded him in the cultural critique of developmental theories, but Whiting proposed a quantitative research strategy using correlational statistics within and across societies to arrive at firm conclusions concerning the validity of developmental hypotheses.

Whiting’s systematic approach was grounded in the long-term effort at Yale (begun by William Graham Sumner [1907]) to aggregate ethnographic data for comparative generalization. This effort produced the data archive called

the Human Relations Area Files (of which Whiting was a founder), the comparative study of kinship by his teacher G. P. Murdock (1949) and the cross-cultural study of child training and its effects by Whiting and Child (1953). His approach was also grounded in the research he had carried out with Robert Sears in Iowa on individual differences in preschool children (Sears et al., 1953), and in the cross-ethnic field study in New Mexico carried out as part of the Harvard Values Project (Whiting et al., 1966).

In the social and developmental psychology of the 1950s John Whiting was seen as representing the most promising approach to cross-cultural research on child rearing and development, for which he and his collaborators, with support from the Social Science Research Council, produced a field manual (Whiting et al., 1953). Shortly thereafter the Ford Foundation funded the ambitious project that would become the Six Cultures Study of Socialization. Meanwhile, Whiting established the Laboratory of Human Development at Harvard as a research and training unit dedicated to conducting cross-cultural studies, through analysis of available data as well as original fieldwork.

EFFECTS OF CLIMATE AND SOCIAL-STRUCTURAL PATTERNS ON
CHILDHOOD ENVIRONMENTS AND EXPERIENCE

Whiting's interest in the worldwide frequency and distribution of customs led him to a consideration of climate's role in constraining various practices. He made the bold claim that due to a complex set of factors revolving around child care and social structure, male circumcision ceremonies (treated in the following section) appeared almost exclusively in tropical regions rather than in temperate climates (Whiting, 1964). One such inducing factor was a long postpartum sex taboo, which prolongs mother's lactation. According to Whiting's hypothesis, a long nursing period delays infants' exposure

to the low-protein diets typical of the tropics and thereby lowers the risk of kwashiorkor, a protein-deficiency disease. (His analysis was still being discussed in African demography 25 years later [Lesthaeghe, 1989]). The one large tropical area in which low-protein diets were not accompanied by long postpartum taboos (or by circumcision rites) was equatorial South America, and Whiting pointed out the high incidence of kwashiorkor and child mortality in that region.

Whiting's further research into climate and child care revealed that where winters are hot or even mild, mothers and infants sleep in the same bed or on the same mat, whereas if the temperature drops below the freezing point in the winter months, infants sleep separately in a crib or cradle (Whiting, 1981). Similarly, in warm climates the infant in daylight hours is in close contact with the body of the mother, who carries the child in her arms or in a sling, while in cold areas the infant is carried in a cradle. Since the mother cannot be with an infant at all times, in cold climates the cradle—along with clothing or swaddling—seems to have been an adaptive solution for child survival. These regularities were found to hold in three major sections of the world—the Americas, Africa/Circum-Mediterranean, and East Eurasia/Insular Pacific.

Whiting additionally expanded his view of the influence of climate to include the argument—supported by a good deal of evidence—that the migration of preindustrial peoples had seldom crossed a critical winter temperature isotherm of average 10°C (50°F) during the coldest month (Whiting et al., 1982). Ever careful to consider exceptional cases (there were only 18 in a sample of 315 societies), he noted that peoples of the Indo-European language phylum had spread from Iceland to India, that no other phylum among the many in the world had crossed the winter isotherm limit in such a fashion, and that these Indo-European outliers were all

members of the Indic family of that phylum. Ethnological research seldom results in findings with as few as the 6 percent of negative instances recorded in this study.

The Six Cultures Study of Socialization, undertaken in the mid-1950s, was a uniquely ambitious comparative field study of child rearing and child behavior. With research teams spread over four continents and a clearinghouse at Harvard led by Beatrice Whiting, the project eventually was to publish a methodological field guide for developmental inquiry, monographs on each culture with detailed descriptions of socialization practices, an analysis of standardized mother interviews, and a volume on the relations between sociocultural contexts and children's behavior in daily settings. Taken together the publications led the way in illuminating the broader institutional contexts within which human development occurs and concomitantly the effects of those contexts.

We outline just one of the major contributions of the study (B. Whiting and Whiting, 1975). Western developmental psychology takes the Euro-American context as a "natural" set of phenomena impinging upon children. This perspective treats other systems—whether ethnic, cross-cultural, or class-based—as relatively minor variations on Western norms. In the Six Cultures Study, however, the American community studied was at the extreme end on a scale of cultural complexity involving factors like occupational specialization and centralized political and legal systems. Such specialization effectively removes children from any practical contribution to socioeconomic or subsistence practices in their community and, as the study found, the American children were by far the lowest in their chore or task involvement among the six samples. In contrast, children in the communities with less complexity were frequently assigned tasks like firewood collection, water hauling, and infant care. Regular contribution

to the family welfare appears to have exerted strong effects on social behavior because, in daily interaction, children in the less complex societies were frequently observed to offer support and help to others, and to make responsible suggestions to peers and adults. But among the U.S. children, these behavioral patterns were manifested less frequently than in any other community, and the interaction was instead highly self-centered and often featured behavior intended to gain attention. (The specific act of “seeks attention” showed up in the United States between two and four times as often as in each of the other groups.) The U.S. pattern is thus not universal, but instead one that looks unusual when cast in broader perspective. As the study showed, the background for development, and its implications for children’s behavior, cannot be assumed but must be specified for each sociocultural context.

EFFECTS OF CHILDHOOD ENVIRONMENTS ON BELIEFS, IDENTITY, AND
BIOLOGY

Whiting carried out numerous studies showing how childhood environments could affect later behavior in unsuspected ways, including institutional phenomena, and how early experience might even influence the biological profiles of adults. Some of this innovative work made tentative claims which, though controversial, have not been effectively refuted in subsequent research. We briefly discuss three of the major contributions along these lines.

The first of these (Chapter 6 in Chasdi, 1994), an archivally based study of mechanisms of social control, posited that neither positive reinforcement nor punishment can by themselves maintain a complex sociocultural system, and that beliefs and internalized moral values operate to control individual deviations. John Whiting (and Beatrice Whiting) showed that sorcery and witchcraft—that is, belief

in and fear of these practices—seem to be a means of deterring crime in societies that do not possess formal judiciary systems. Another widespread form of control is the belief that ghosts, gods, and spirits are concerned with the moral behavior of the living and will punish them for wrongdoing. And an internalized moral system (i.e., the superego or conscience) constitutes one more important mechanism of control. Using samples of preindustrial societies, Whiting found that each of these types of anxiety-producing mechanisms was essentially independent, so that societies tended to emphasize one motivational system more strongly than the others. Going further, Whiting discovered that each of these particular types of social control was associated with certain child-rearing conditions, such as the degree of indulgence during infancy. This great leap from early socialization to institutionalized practices was a feature of several of Whiting's cross-cultural inquiries.

A second set of studies investigated early female salience and its psychological impact on young boys. The program began with data-archived studies of male initiation rites (Burton and Whiting, 1961; Whiting et al., 1958). Customs surrounding specific forms of child care, including father absence, exclusive mother-infant sleeping arrangements, long postpartum sex taboos, and polygynous mother-child households, imply intimate contact between mothers and male children and concomitantly a lack of close contact between adult males (especially fathers) and young boys. Whiting and colleagues assumed that these conditions would be associated with effects indicative of a problematic male identity for young boys. Moreover, if boys who had undergone experiences of this type then entered a social world in which males were highly salient (as in patrilineal, patrilocal cultures), the discrepancy, according to Whiting, would augur for resolution of conflicting impulses in favor of a secure

sense of maleness. Whiting's findings pointed to male initiation-circumcision rites as a common way for such societies to aid adolescent males in resolving the conflict, thereby reducing any tendencies toward female-like behavior.

Subsequently, in fieldwork-based research Whiting's collaborators found that in traditional societies where males' intrapsychic conflicts about gender identity would putatively *not* have been resolved, symbolic ways of acting out the female role appeared, sometimes in the form of men's involuntary, pregnancy-like symptoms (e.g., lassitude, morning sickness), and sometimes in institutionalized expression in the form of *couvade* (a postnatal ritual in which fathers—like mothers—abstain from normal routines and observe taboos).

Based on the results of work in four contiguous societies in Kenya, we briefly describe here some of the evidence consistent with Whiting's gender-identity hypothesis. All four of these East African societies manifested appropriate preconditions for the practice of male circumcision ceremonies (i.e., patrilineal, patrilocal social structures following on early experiences such as father absence and exclusive mother-infant sleeping arrangements) (Munroe and Munroe, 1973). If as Whiting proposed, the rites during adolescence did serve the purpose of reducing sex-identity conflict, then symbolic envy of the female role, as expressed later in men's pregnancy symptomatology during marriage, should have been at a low level. This was true in three of the societies. But in the fourth society, there were no male rites, so the theoretical expectation was that, in the absence of an intrapsychic "resolution," men's pregnancy symptoms would be very high in number. They were in fact at one of the highest levels ever noted in the ethnographic literature, and many of the men also reported experiencing something akin to labor pains, such as stomach troubles or pain in the ribs during wife's parturition. (The phenomenon of men's "labor pains"

was reported by informants in three different communities in this culture group.)

Other related inquiry by Whiting and his students yielded results supportive of his basic assumptions about male-adult models and boys' consequent sex-role identity (Munroe et al., 1981). In some studies, however, the results were ambiguous, especially under conditions of rapid culture change. For example, in further East African research, Whiting and his colleagues concluded that at least in one group, success in examinations (at the end of primary school) had become so important that schooling had taken the place of the traditional rite of passage (Herzog, 1973; Worthman and Whiting, 1987). But overall, the sex-identity project constituted an evidence-based interpretation of the psychological functions served by male circumcision rites, an institutional-level practice.

In the third set of studies we describe, Whiting's methodological versatility was evident as he and his students and colleagues ranged over a variety of techniques in investigating the relation between early stressful experience and height in adulthood. The stress-height studies were prompted by the observation that exposure of immature animals, particularly rats, to physiological stressors resulted in tamer, less emotional, and larger adults (Levine, 1960). The interpretation was that acute, stress-inducing stimuli in early life "inoculated" animals to later stress. Whiting and others (Landauer and Whiting, 1964, 1981) set out to determine whether or not evidence could be found for this effect in humans as well. In some places infants were carefully protected from all strong stimulation; in others they were subjected to putatively stressful procedures like scarification, circumcision, ear piercing, and vaccination. Whiting's group demonstrated, in a series of investigations, that in societies with high infant stress, adult male stature exceeded men's height in the low-stress societies by as much as two to three inches, a not

inconsiderable difference. (Information on females was too scanty for proper statistical treatment.) Follow-up studies showed that the association occurred independently in four widely different historical-geographic-genetic groupings of the world's cultures, and it was not dependent on climate or diet.

Whiting and colleagues then proceeded to reexamine data from two large U.S. longitudinal studies (the Fels Institute study and the Berkeley Guidance Study), and they found that early vaccination—another stressor, as indicated in the cross-cultural work—was again associated with terminal stature, this time for both men and women. The data on early stress and its effects on women remain spotty, and the mechanisms by which stress appears to affect stature continue to be unknown. Diet has also been shown to play a definite part in accelerated growth and stature. Still, Whiting's emphasis on the value of scanning a broad range of variation, and on developing theory applicable beyond the bounds of Western culture, is well illustrated in this research.

John Whiting maintained his interest in incorporating biology into the comparative study of human development, showing how cultural variables might influence such factors as fertility rates and the age of menarche (Whiting et al., 1986). In one of his final articles he based his inquiry on earlier research showing that the human sex ratio at birth favors girls if conception occurs during the periovulation period (Whiting, 1993). He provided ethnographic evidence that in each of seven East African communities, polygynously married women produced a lower at-birth sex ratio—favoring females—than did monogamously married women. His thesis was that polygynous women were better able to influence the timing and frequency of coitus and were, accordingly, more likely to have engaged in intercourse at an optimal time for the favoring of girls.

TRAINING AFRICANS AND AMERICANS IN COMPARATIVE RESEARCH

Whiting's devotion to collaboration led to a series of training programs at Harvard and overseas during the last 20 years of his career. The most innovative program emerged from a meeting on cross-national studies on childhood and adolescence held in Chicago by the U.S. Office of Education in 1964. At that meeting Whiting argued that the child development field could only become truly international if American researchers trained students from the Third World who returned to their countries and became members of a worldwide collaborating network who shared data on an equal basis with each other. His metaphor for this was bullfrogs exchanging positions as they jumped from one lily pad to another in a pond. This "lily pond" model of research cooperation interested an official of the Carnegie Corporation of New York, who later offered to fund a version of it for Anglophone countries in sub-Saharan Africa. John and Beatrice Whiting developed this in East Africa from 1966 to 1975, with Euro-American researchers setting up 13 rural or peri-urban research sites while collecting basic data and employing East African college students as research assistants. The most promising of the students were selected for academic training overseas (mostly at Harvard), earned advanced degrees, and then returned home to take up responsible academic and governmental positions. Varied research projects undertaken during the decadelong program yielded a large number of individually valuable studies and collected a wealth of demographic information on the various groups that had been studied. The latter material should provide background material for future scholars as they grapple with understanding the very rapid change currently seen in sub-Saharan societies (Edwards and Whiting, 2004; LeVine et al., 1994; Weisner et al., 1997).

Whiting's last major collaborative effort, also carried out with Beatrice Whiting, was the Harvard Adolescence Project (funded by the National Institute of Mental Health), in which they brought together a group of anthropologists as postdoctoral fellows to collaborate in planning field studies of adolescence in Morocco, Nigeria, Thailand, Romania, and among the Inuit and Australian Aborigines. (An early adolescent study had been done in Kenya.) A series of four ethnographic monographs and numerous articles were published from this project in the late 1980s. Thus at the end of his long academic career Whiting was pursuing new fields of comparative research, trying to relate biology with psychocultural development and ethnographic with behavioral methods.

PERSONAL STYLE

John Whiting productively and effortlessly worked with others in his research endeavors. Close to 50 different individuals—a great many of them his own graduate students and postdoctoral fellows—appeared as coauthors in his varied books, articles, and papers. This proclivity, seldom found in lone-wolf cultural anthropology, can be explained in part by the appeal to others of Whiting's highly creative mind and his personal enthusiasm. But he had also shown, playing football and wrestling as an undergraduate at Yale, an early inclination to participate in activities that were competitive yet simultaneously team oriented and cooperative. Certainly his subsequent graduate and postdoctoral training in the Institute of Human Relations at Yale heightened any such tendencies. The institute's program was the first major attempt anywhere to integrate the behavioral sciences, and cooperative enterprise seemed inherent in such a scheme. One salient part of this experience was a mutual-education style, where during famed Monday Night Group meetings,

point making was tabooed and no one was allowed to claim that his or her discipline had an exclusive path to the truth. When Whiting subsequently moved to Harvard, the Department of Social Relations was trying to introduce graduate students to cultural anthropology, sociology, and clinical and social psychology, with hopes that these separate fields might be unified or at least could productively cross-fertilize each other. Along with Whiting, such figures as George Homans, Clyde Kluckhohn, David McClelland, and Talcott Parsons were thinking through similarly integrative formulations. Whiting's own emphases on comparative research and the importance of socialization in the formation of personality and institutional structures fit well as a major contribution to these interdisciplinary endeavors.

At his Laboratory for Human Development (in Education), and later in the Department of Anthropology, Whiting ran seminars, lunches, and informal gatherings in a high-spirited fashion. Usually relying on his students and invited speakers to provide the latest research findings across the spectrum of the behavioral sciences, Whiting would frequently see a fresh and exciting way to link up those results with a new, testable hypothesis. Standard critiques were present but they were secondary to a process of looking for insights; the primary response to a set of findings was essentially to say, "If this is right, then what else might follow from it?" This approach allowed thought to flow and was a boon to creative inquiry for all in regular attendance. The experience was once summed up in the following way:

Without any explicit ideology to sanctify it, student participation on an equal basis was taken for granted...Students were encouraged to develop their own ideas into hypotheses that could be tested ("jeopardized," in John's favorite expression) with cross-cultural data and presented to the group for criticism and suggestions...[I]t was an unparalleled experience in science as conjecture-and-refutation, conducted in a playful context that

permitted controversy without the inhibiting fear of narcissistic injury which haunts most seminar rooms; the stimulation was enormous. Training in John Whiting's lab, like his major research publications, embodied and practiced his principles rather than preaching them. (LeVine, 1973, p. 561)

The Whitings together produced students who went into not only anthropology departments but also programs in human development, education, psychiatry, psychology, cognitive science, and sociology. And well before the internationalization of U.S. graduate education, they trained students and fellows from Canada, England, Ethiopia, Ghana, Japan, New Zealand, Nigeria, and the Philippines.

Whiting's ancestral home on Martha's Vineyard remained important to him throughout his life, and he spent all but a single one of his summers there. His collaborative style and practical background were manifest there in his partnership in an oyster hatchery and coinvention of a clam-digging mechanism. And those tutored in Cambridge by the Whitings were likely to be invited for a stay at the Vineyard homestead, where a wonderful mix of work and pleasure ensued, the routine of the day typically involving both gardening and intellectual work, followed by evenings of partying and discussion of ideas for the next research project. The loyalty and enduring closeness felt by John Whiting's students were clearly the product of an uncommon attentiveness and care on the part of their teacher.

REFERENCES

- Burton, M. L., C. C. Moore, J. W. M. Whiting, and A. K. Romney. 1996. Regions based on social structure. *Curr. Anthropol.* 37:87-123.
- Burton, R. V, and J. W. M. Whiting. 1961. The absent father and cross-sex identity. *Merrill-Palmer Q. Beh.* 7:82-95.
- Chasdi, E. H. 1994. *Culture and Development: The Selected Papers of John Whiting*. Cambridge, Eng.: Cambridge University Press.
- Edwards, C. P. and B. B. Whiting (eds.) 2004. *Ngecha: A Kenyan Village in a Time of Rapid Social Change*. Lincoln, Nebraska: University of Nebraska Press.
- Herzog, J. D. 1973. Initiation and high school in the development of Kikuyu youths' self-concept. *Ethos* 1:478-489.
- Landauer, T. K., and J. W. M. Whiting. 1964. Infantile stimulation and adult stature of human males. *Am. Anthropol.* 66:1007-1028.
- Landauer, T. K., and J. W. M. Whiting. 1981. Correlates and consequences of stress in infancy. In *Handbook of Cross-Cultural Human Development*, eds. R. H. Munroe, R. L. Munroe, and B. B. Whiting, pp. 355-375. New York: Garland.
- Lesthaeghe, R. J. (ed.) 1989. *Reproduction and Social Organization in Sub-Saharan Africa*. Berkeley: University of California Press.
- LeVine, R. A. 1973. Retrospect. *Ethos* 1:560-562.
- LeVine, R. A., S. Dixon, S. LeVine, A. Richman, P. H. Leiderman, C. H. Keefer, and T. B. Brazelton. 1994. *Child Care and Culture: Lessons from Africa*. Cambridge, Eng.: Cambridge University Press.
- Levine, S. J. 1960. Stimulation in infancy. *Sci. Am.* 202:80-86.
- Munroe, R. L., and R. H. Munroe. 1973. Psychological interpretation of male initiation rites: The case of male pregnancy symptoms. *Ethos* 1:490-498.
- Munroe, R. L., R. H. Munroe, and J. W. M. Whiting. 1981. Male sex-role resolutions. In *Handbook of Cross-Cultural Human Development*, eds. R. H. Munroe, R. L. Munroe, and B. B. Whiting, pp. 611-632. New York: Garland.
- Murdock, G. P. 1949. *Social Structure*. New York: Macmillan.
- Murdock, G. P., C. S. Ford, A. E. Hudson, R. Kennedy, L. W. Simmons, and J. W. M. Whiting. 1938. *Outline of Cultural Materials*. New Haven, Conn.: Human Relations Area Files.
- Sears, R. R., J. W. M. Whiting, V. Nowlis, and P. Sears. 1953. Some child rearing antecedents of aggression and dependency in young children. *Genet. Psychol. Monogr.* 47:135-234.

- Sumner, W. G. 1907. *Folkways*. New York: Ginn & Co.
- Weisner, T. S., C. Bradley, and P. L. Kilbride. (eds.) 1997. *African Families and the Crisis of Social Change*. Westport, Conn.: Bergin & Garvey.
- Whiting, B. B., and J. W. M. Whiting. 1975. *Children of Six Cultures: A Psycho-Cultural Analysis*. Cambridge, Mass.: Harvard University Press.
- Whiting, J. W. M. 1941. *Becoming a Kwoma*. New Haven, Conn.: Yale University Press.
- Whiting, J. W. M. 1954. The cross-cultural method. In *Handbook of Social Psychology*, vol. 2, ed. G. Lindzey, pp. 523-531. Cambridge, Mass.: Addison-Wesley.
- Whiting, J. W. M. 1964. Effects of climate on certain cultural practices. In *Explorations in Cultural Anthropology: Essays in Honor of George Peter Murdock*, ed. W. H. Goodenough, pp. 511-544. New York: McGraw-Hill.
- Whiting, J. W. M. 1981. Environmental constraints on infant care practices: In *Handbook of Cross-Cultural Human Development*, eds. R. H. Munroe, R. L. Munroe, and B. B. Whiting, pp. 155-179. New York: Garland.
- Whiting, J. W. M. 1993. The effect of polygyny on sex ratio at birth. *Am. Anthropol.* 95:435-442.
- Whiting, J. W. M., and I. L. Child. 1953. *Child Training and Personality*. New Haven, Conn.: Yale University Press.
- Whiting, J. W. M., and O. H. Mowrer. 1943. Habit progression and regression: A laboratory study of some factors relevant to human socialization. *J. Comp. Psychol.* 36:229-253.
- Whiting, J. W. M., V. K. Burbank, and M. S. Ratner. 1986. The duration of maidenhood across cultures. In *School Age Pregnancy and Parenthood*, eds. J. B. Lancaster and B. A. Hamburg, pp. 273-302. New York: Aldine.
- Whiting, J. W. M., R. Kluckhohn, and A. Anthony. 1958. The function of male initiation ceremonies at puberty. In *Readings in Social Psychology* (3rd ed.), eds. E. E. Maccoby, T. M. Newcomb, and E. L. Hartley, pp. 359-370. New York: Holt, Rinehart and Winston.
- Whiting, J. W. M., E. H. Chasdi, H. F. Antonovsky, and B. C. Ayres. 1966. The learning of values. In *People of Rimrock: A Study of Values in Five Cultures*, eds. E. Z. Vogt and E. Albert, pp. 83-125. Cambridge, Mass.: Harvard University Press.

- Whiting, J. W. M., J. A. Sodergren, and S. M. Stigler. 1982. Winter temperature as a constraint to the migration of preindustrial peoples. *Am. Anthropol.* 84:279-298.
- Whiting, J. W. M., et al. 1953. *Field Manual for the Cross-Cultural Study of Child Rearing*. New York: Social Science Research Council.
- Worthman, C. M., and J. W. M. Whiting. 1987. Social change in adolescent sexual behavior, mate selection, and premarital pregnancy rates in a Kikuyu community. *Ethos* 15:145-165.

SELECTED BIBLIOGRAPHY

A complete bibliography of John Whiting's work can be found in Chasdi, E. H. 1994. *Culture and Development: The Selected Papers of John Whiting*. Cambridge, Eng.: Cambridge University Press (pp. 340-345).

1938

With G. P. Murdock, C. S. Ford, A. E. Hudson, R. Kennedy, and L. W. Simmons. *Outline of Cultural Materials*. New Haven, Conn.: Human Relations Area Files.

1941

Becoming a Kwoma. New Haven, Conn.: Yale University Press.

1943

With O. H. Mowrer. Habit progression and regression: A laboratory study of some factors relevant to human socialization. *J. Comp. Psychol.* 36:229-253.

1953

With R. R. Sears, V. Nowlis, and P. Sears. Some child rearing antecedents of aggression and dependency in young children. *Genet. Psychol. Monogr.* 47:135-234.

With I. L. Child. 1953. *Child Training and Personality*. New Haven, Conn.: Yale University Press.

With others. 1953. *Field Manual for the Cross-Cultural Study of Child Rearing*. New York: Social Science Research Council.

1954

The cross-cultural method. In *Handbook of Social Psychology*, vol. 2, ed. G. Lindzey, pp. 523-531. Cambridge, Mass.: Addison-Wesley.

1958

With R. Kluckhohn and A. Anthony. The function of male initiation ceremonies at puberty. In *Readings in Social Psychology* (3rd ed.), eds. E. E. Maccoby, T. M. Newcomb, and E. L. Hartley, pp. 359-370. New York: Holt, Rinehart and Winston.

1961

With R. V. Burton. The absent father and cross-sex identity. *Merrill-Palmer Q. Beh.* 7:82-95.

1964

With T. K. Landauer. Infantile stimulation and adult stature of human males. *Am. Anthropol.* 66:1007-1028.

Effects of climate on certain cultural practices. In *Explorations in Cultural Anthropology: Essays in Honor of George Peter Murdock*, ed. W. H. Goodenough, pp. 511-544. New York: McGraw-Hill.

1966

With E. H. Chasdi, H. F. Antonovsky, and B. C. Ayres. The learning of values. In *People of Rimrock: A Study of Values in Five Cultures*, eds. E. Z. Vogt and E. Albert, pp. 83-125. Cambridge, Mass.: Harvard University Press.

1975

With B. B. Whiting. *Children of Six Cultures: A Psycho-Cultural Analysis*. Cambridge, Mass.: Harvard University Press.

1981

With R. L. Munroe and R. H. Munroe. Male sex-role resolutions. In *Handbook of Cross-Cultural Human Development*, eds. R. H. Munroe, R. L. Munroe, and B. B. Whiting, pp. 611-632. New York: Garland.

Environmental constraints on infant care practices: In *Handbook of Cross-Cultural Human Development*, eds. R. H. Munroe, R. L. Munroe, and B. B. Whiting, pp. 155-179. New York: Garland.

With T. K. Landauer. Correlates and consequences of stress in infancy. In *Handbook of Cross-Cultural Human Development*, eds. R. H. Munroe, R. L. Munroe, and B. B. Whiting, pp. 355-375. New York: Garland.

1982

With J. A. Sodergren and S. M. Stigler. Winter temperature as a constraint to the migration of preindustrial peoples. *Am. Anthropol.* 84:279-298.

1986

With V. K. Burbank and M. S. Ratner. The duration of maidenhood across cultures. In *School Age Pregnancy and Parenthood*, eds. J. B. Lancaster and B. A. Hamburg, pp. 273-302. New York: Aldine.

1993

The effect of polygyny on sex ratio at birth. *Am. Anthropol.* 95:435-442.

1996

With M. L. Burton, C. C. Moore, and A. K. Romney. Regions based on social structure. *Curr. Anthropol.* 37:87-123.