

- Care, N. S. (1996). *Living with one's past: Personal fates and moral pain*. Lanham, MD: Rowman & Littlefield.
- Darwall, S., Gibbard, A., & Railton, P. (Eds.). (1997). *Moral discourse and practice*. New York: Oxford University Press. A collection of essays reviewing the problems under discussion in contemporary ethics; the editors' introduction is comprehensive and detailed.
- Deigh, J. (Ed.). (1992). *Ethics and personality*. Chicago: University of Chicago Press. A collection of essays in moral psychology from *Ethics*, a leading philosophy journal in moral theory and social and political philosophy.
- Feinberg, J. (1986). *Harm to self*. New York: Oxford University Press. The third volume in a series of four dealing with morality and criminal law; this volume addresses the problem of legal paternalism.
- Flanagan, O. (1991). *Varieties of moral personality*. Cambridge, MA: Harvard University Press. Detailed discussion of connections between philosophy and psychology.
- Frankfurt, H. G. (1988). *The importance of what we care about*. Cambridge, UK: Cambridge University Press.
- Morris, H. (1976). *On guilt and innocence*. Berkeley: University of California Press. Includes detailed discussions of the negative moral emotions of guilt and shame.
- Murdoch, I. (1985). *The sovereignty of the good*. London: Ark.
- Nagel, T. (1979). *Mortal questions*. Cambridge, UK: Cambridge University Press.
- Rawls, J. (1971). *A theory of justice*. Cambridge, MA: Harvard University Press.
- Stocker, M., & Hegeman, E. (1996). *Valuing emotions*. Cambridge, UK: Cambridge University Press.
- Thomas, L. (1989). *Living morally*. Philadelphia: Temple University Press.
- Williams, B. (1981). *Moral luck*. Cambridge, UK: Cambridge University Press.
- Wollheim, R. (1984). *The thread of life*. Cambridge, MA: Harvard University Press.

Norman S. Care

**MORGAN, CLIFFORD THOMAS** (1915-1976), American physiological psychologist and science administrator. Morgan received the Ph.D. degree in 1939 at the University of Rochester. He was an instructor at Harvard University from 1939 to 1943, where he worked closely with Karl Lashley. [See the biography of Lashley.] Morgan accepted a position in the biology department at Johns Hopkins in 1943, although he did not begin his duties there until 1946. Meanwhile, he continued affiliation with Harvard while also serving with the government's (U.S. Navy) Systems Research Laboratory in Rhode Island. At Johns Hopkins, he helped reestablish the psychology department and served as its chair (1949-1954). During this time he brought the Systems Research Laboratory to Hopkins. By 1959 Morgan's textbook successes enabled him to seek academic appoint-

ments more on his terms (which now meant less involvement in governance and academic minutia). He relocated to the Universities of Wisconsin (1959-1962) and California, Santa Barbara (1962-1964) before resigning to fulfill some textbook commitments. Family matters led to his moving to Austin, Texas, in 1967. An adjunct faculty position with the University of Texas enabled him to teach while avoiding other academic involvement.

Morgan's laboratory research career appears to have spanned the years from about 1943 to 1951, but he gained significant recognition in three areas: the study of audiogenic seizure with its implications for epilepsy, biological motivation, and auditory processing. Essentially, he began to thrive as a textbook author and as a science organizer and administrator. His textbook, *Physiological Psychology* (1943, 1950, 1965; 2nd edition with Eliot Stellar) systematized the field and was highly influential. His *Introduction to Psychology* (1956; with several subsequent editions, some with coauthors such as R. A. King) represented a new approach. Morgan used multiple expert authors (fourteen for the first edition) but retained the cohesion of a single "voice" via his editorial control. He coauthored other textbooks including *Applied Experimental Psychology* (with Alphonse Chapanis and W. R. Garner, 1949). The textbooks gave him financial independence, and he was a generous benefactor at the Universities of Wisconsin and California, Santa Barbara as well as to the Psychonomic Society.

Morgan was an active participant in the meetings in which the Psychonomic Society (originally, tentatively named American Federation of Experimental Psychologists) was conceived (December 1958) and founded (31 December 1959). He wrote the by-laws, which largely set the strong proscience, antiprofessional tone of the society, and he was elected first chair of the Governing Board.

Morgan's experiences as member and subsequently as chair of the American Psychological Association's Publications Board and his experience as the editor who rescued the troubled *Psychological Abstracts* enabled him to found the journals, *Psychonomic Science* (1964), *Psychonomic Monograph Supplements* (1965), *Perception and Psychophysics* (1966), and *Behavior Research Methods & Instrumentation* (1969). He offered these journals to the Psychonomic Society in 1968 together with the managerial establishment and sufficient funds to sustain their operations through the transition years. Until his death, he continued to manage the journals, and during this period, *Animal Learning and Behavior*, *Memory and Cognition*, and *Physiological Psychology* were founded.

### Bibliography

- Dewsbury, D. A. (1996). History of the Psychonomic Society II: The journal publishing program. *Psychonomic*

*Bulletin and Review*, 3, 322-338. The two preceding references include additional information about Morgan's role in the founding of the Psychonomic Society and its journals.

Dewsbury, D. A., & Bolles, R. C. (1995). The founding of the Psychonomic Society. *Psychonomic Bulletin & Review*, 2, 216-233.

Garner, W. R. (1976). Clifford Thomas Morgan: Psychonomic Society's first chairman. *Bulletin of the Psychonomic Society*, 8, 409-415. Informative and insightful address to the Psychonomic Society by a longstanding friend and colleague honoring Morgan after his death.

Stellar, E., & Lindzey, G. (1978). Clifford T. Morgan: 1915-1976. *American Journal of Psychology*, 91, 343-348. Informative and unusually candid reminiscences about Morgan's career divided into the earlier (Stellar) and later (Lindzey) years.

**Roger K. Thomas**

**MORGAN, CONWY LLOYD** (1852-1936), British zoologist and comparative psychologist. Born in London, England, Morgan received a doctorate in science. He lectured at the Diocesan College in Rondebosh, South Africa. He returned to England as professor at the University College of Bristol, where he was briefly the first vice chancellor of Bristol University and then professor of psychology and ethics. Morgan also lectured at Clark University in the United States. He became a Fellow of the Royal Society.

In *An Introduction to Comparative Psychology* (London, 1894), Morgan stated that "in no case may we interpret an action as the outcome of the exercise of a higher psychological faculty, if it can be interpreted as the outcome of the exercise of one which stands lower in the psychological scale." This canon was often erroneously identified as the law of parsimony; however, Morgan discussed the function of his canon as one of interpretation (p. 287).

Morgan was a strong advocate of studying comparative psychology using well-controlled experiments. He emphasized the need to observe and accurately record the procedure and the results in order to interpret the findings without bias. He proposed operational definitions in order to prevent misinterpretations, misconceptions, or misunderstandings, as well as replications of experiments for confirmation of the results.

Recordings of a dog's behavior during an experiment gave rise to such terms as "trial and practice" and "trial and failure"; yet it was "trial and error" that was widely accepted (Morgan, *Animal Life and Intelligence*, London, 1889-1890; *Animal Behaviour*, London, 1900; and *The Animal Mind*, London, 1930). Observation on newly hatched chicks pecking at good- and nasty-tasting kernels led to the awareness of differential effects on results.

Nature/nurture, another important topic, was discussed by Morgan. He suggested that instinctive behavior was to a greater or lesser degree congenitally determined. (Currently, it is generally referred to as species-specific behavior.) Morgan felt that nothing was known about the basis of the evolution of behavior from direct observation. And in addition he was an advocate of Pavlovian conditioning to study behavior; and so he focused on conditioning and conditional behavior.

Other areas of Morgan's attention included social situations, such as imitation or observational learning. He also experimented with orphaned chicks and reported on the effects on another hen's social distance.

Among the unresolved topics was migration and its seasonal changes, which he mentioned in several books. Morgan speculated that the underlying basis of behavior might be instinctive (species-specific).

The topics of interest mentioned here represent only a small number of many issues discussed by Morgan. His ideas and contributions to comparative psychology stimulated and inspired young scientists to work in the field of animal behavior.

### Bibliography

Adler, L. L. (1973). Contributions of C. Lloyd Morgan to comparative psychology. In E. Tobach, H. E. Adler, & L. L. Adler (Eds.), *Comparative psychology at issue* (Vol. 223, pp. 41-48). New York: The New York Academy of Sciences.

Morgan, C. L. (1896). *Habit and instinct*. London, England: Edward Arnold.

Morgan, C. L. (1912). *Instinct and experience*. New York: Macmillan.

Warden, C. J., Jenkins, T. N., & Warner, L. H. (1935). *Comparative psychology* (Vol. 1). New York: Ronald Press.

*Leonore Loeb Adler*

**MORPHEMES.** See Morphology.

**MORPHOLOGY** refers to the internal structure of complex words, or sublexical structure. The study of morphology is centrally concerned with how language users store and understand complex words and how they create new ones. Compare the two English words *marry* and *remarry*. There is no way to break the word *marry* down further into meaningful parts, but *remarry* consists of two atomic meaningful parts (each termed a morpheme), and therefore the study of its structure lies within the domain of morphology. It is important to stress that we are talking of meaningful elements of