

Emotionology

Anger. The Struggle for Emotional Control in America's History. CAROL ZISOWITZ STEARNS and PETER N. STEARNS. University of Chicago Press, Chicago, 1986. viii, 295 pp. \$24.95.

Do emotions have a history? Does anger, in particular, have a past? If so, how does one recover it, and what would be the purpose of telling it? These questions are raised and answered in this book by two professional historians, one of whom is also a physician-psychiatrist. Their book, as they put it, is a first probe into the history of emotions, which they identify as the study of changes in "emotionology." That neologism stands not for the field itself, as its etymology might suggest, but for the standard a given social order sets for the expression and acceptance of an emotion. In sum, the book is a study of how Americans over the last 300 years or so have perceived, expressed, and reacted to anger.

The thesis of the book is quite simple, though presented, unfortunately, in a dense prose that sometimes becomes clotted and even confusing because of the frequent efforts at qualifying or balancing the interpretations along the way. Prior to the 18th century, the argument runs, anger was an emotion easily expressed. No one felt especially hesitant about letting it out, even though recipients of angry outbursts might themselves become angry in turn. Toward the middle of the 18th century, however, for reasons not spelled out, anger came into disrepute, being perceived as an emotion to be controlled rather than expressed. (This, incidentally, is a fairly standard interpretation of the emotional norm of the 18th-century Enlightenment.) Control of anger, Stearns and Stearns contend, became most obvious and effective in the 19th century, when, within the workplace and the family, anger was increasingly seen as detrimental and therefore in need of repression. This interpretation is congruent with current historical conceptions of the Victorian family as a "haven in a heartless world" of economic competition and political combat. The third alteration in the history of anger took place at the beginning of the 20th century, when anger came to be seen as having a useful function, so long as it was properly channeled. One social consequence of this new view on anger, in the authors' scheme, was the reform activities of Progressives during the first decade of the 20th century. The next stage in the history of anger began around 1940 and continues with minor modifications into our own day. In this period anger is still a matter of social anxiety, but rather than being channeled and

used, it is closely managed and repressed in both family and workplace, the areas to which Stearns and Stearns have confined their investigations. The central point is that anger has been repressed, in varying degrees, ever since the mid-18th century. In short, anger does have a history, which deserves the attention of historians because it helps explain certain social and political developments in the past.

But what about the means for uncovering that history? Here serious doubts arise. The history of emotions is not a difficult concept in itself to integrate into the modern conception of history. All sorts of things that once lay outside the study of the past—sexuality, childhood, punishment, insanity, and so on—now rest comfortably in Clío's embrace. The sine qua non of good history, however, is that sources adequate for the task be identified and closely analyzed. That Stearns and Stearns have not done. For most of their study they rely almost entirely upon advice books to ascertain how their prime subjects—ordinary citizens—felt about anger. Yet we have no reason to suppose that the advice literature mirrored the feelings of the citizenry. ("May have been," for that reason, seems to be the authors' most frequently used predicate.) The sources Stearns and Stearns draw upon to show that Americans prior to the 18th century cared little about controlling anger are so few as to be negligible. At times their generalities are almost ludicrous, as in the careless remark that "Western people before the eighteenth century," that is, in the age of Shakespeare and Donne, "were not particularly conscious of emotions, among other things lacking a vocabulary to discuss emotional experience articulately" (p. 22). Personally, I would have welcomed the substantiation of their case through a close analysis of relevant sources. Yet even when they do have documents to draw on, such as the marriage and child-rearing manuals from later periods, they rarely quote anything directly to substantiate their interpretations. They assert, rather than persuade. In short, a work of historical analysis this is not.

What is it then? Essentially it is two things. The first is a plea to find a place for anger in the historical experience of human beings. The authors' venture into the writing of the history of anger in America is merely a device to allow them to discuss anger; the prime object is to encourage historians to include emotions in their recreations of the past. Anger, to Stearns and Stearns, is "an emotion, biologically related to a 'fight' response" yet always socially

conditioned (p. 15). Its historical effect is not unlike that which Freud defined for sex in history, though Stearns and Stearns do not make that analogy. Like Freud with sex, they see anger popping out in the form of tears or of illnesses among those Victorian women who professed to feel none. Repressed anger is also identified as an engine driving female reform movements such as anti-slavery, temperance, and feminism. In sum, the book advances a novel way of using psychological phenomena in writing the history of social groups. Psychoanalysis, which has been the most commonly used theory in psychohistorical investigations, has always been problematical in that role since it is essentially an individualistic and internal mode of analysis and thus difficult to apply on a broad historical scale. Anger, on the contrary, has the advantage of not being dependent upon internal analysis for uncovering motives; anger can easily be discerned in large groups. On that score, this book will have something to say to psychohistorians.

The authors' second purpose is to send an urgent message to present-day Americans. "Anger can be dangerous," they admit, and so it must be contained, "but it cannot and should not be eliminated" (p. 238). Modern commentators, Stearns and Stearns observe, praise our rejection of Victorian repression and encourage our expression of love, sadness, and even fear, yet "serious anger" may not be so expressed. As a result, they contend, since 1940 the American capacity for moral indignation has reached a low point. Some of us who have lived through the post-1940 years, however, think, with some justice, that the attacks on racism, sexism, and the Vietnamese war reflected a good deal of moral indignation. Stearns and Stearns's quite different interpretation, I fear, stems from their having drawn their view of social reality from popular books on marriage, child-rearing, and the workplace, that is, works in which anger is advised against. Other signs of anger in contemporary society they similarly do not take seriously. "Evidence of child abuse," they explain, "suggests that we have not managed to spread parental inhibitions about displaying or inducing anger widely enough." The true problem for Americans, in their view, is that "the dangers of the [200-year] campaign against anger are real. Civilization can be carried too far. Mao Tse-tung recognized this in China . . . when he argued for the legitimacy of expression of anger" (p. 234).

The authors well recognize that persuading Americans to let up, at long last, on the repression of anger, which is the book's central message, will be neither quick nor

easy. And they ought to, for nowhere in this sober extolling of anger is an angry expression or word to be found.

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Modern Cell Biology

Molecular Cell Biology. JAMES DARNELL, HARVEY LODISH, and DAVID BALTIMORE. Scientific American Books, New York, 1986 (distributor, Freeman, New York). xxxvi, 1187 pp., illus. \$42.95.

Only a few years ago cell biology was a discipline dominated by the use of electron microscopy and biochemistry to unravel the structure and function of subcellular organelles. Today, with the infusion of techniques from molecular biology, genetics, and immunology, cell biology emerges as a broad, unifying discipline that permeates many disciplines and draws its experimental material from many species and cell types. It is difficult nowadays to approach a problem strictly from a molecular, genetic, or immunological perspective without simultaneously considering its cell biological consequences, or *vice versa*.

To educate a student in such a broad spectrum of disciplines while simultaneously emphasizing cell biological principles is no mean feat. It is a formidable task to write an authoritative textbook on the subject that is both deep in experimental detail and principle and broad enough to educate the reader from first principles. In many respects this book is one of the boldest and most successful undertakings of its kind to date. It stands above many of its predecessors in the extent to which it presents biological facts through the experiments that made them such. It also has the attribute of pointing out where knowledge is lacking and where experimental results are equivocal. It thus gives the student an appreciation of how modern experimental cell biology has emerged, where it stands, and where it is going and invites him or her to participate in the process of unraveling the mechanisms that make cells function.

Molecular Cell Biology begins by taking the reader on a short journey through the history of modern cell and molecular biology. The fundamentals of biochemical structure, function, and energetics and the principles of cell structure and function are then developed. This approach renders the book self-contained, but more advanced students may wish to use these chapters only for reference.

The book then introduces current and now standard techniques in cell and molecular biology before it embarks on the experimental evolution of modern molecular cell biology. The diversity of eukaryotic organisms is brought to reality by the programmed expression of genes during differentiation. From this philosophical and realistic perspective the book develops the process of RNA biosynthesis and regulation of gene expression before it turns to describe how proteins are made and how they work. The student will be fascinated by the wealth of knowledge that has been amassed on this subject over the past few years and will be quickly made aware that what regulates the expression of genes in specific cells during development is a fundamental concern of modern cell biology. The book then concentrates on describing how proteins work together to make a living cell. It emphasizes that it is the integration of structural detail with molecular function that allows a cell to function as an entity and develops in depth the experimental approaches that have led to this realization. Finally the book turns to the molecular description of growth control and its relation to cancer, the immunological response, and evolution, areas in cell biology that have profited immensely from recent advances in molecular biology. Overall the themes the book touches on are superbly integrated, which speaks highly of the care that went into its execution. Without oversimplifying complicated issues, the book is remarkably accurate and up to date in its facts, and it includes an excellent bibliography at the end of each chapter to back them up.

Undoubtedly aficionados of certain disciplines may wish their particular subjects had been developed in more detail. This seems inescapable in a book with such a broad mandate. What is remarkable is that the authors have succeeded in highlighting a vast array of subjects, species, and cell types, emphasizing their encounter with modern molecular biology but also pointing to areas for future investigation.

It would be impossible to review this book without comparing it with the equally excellent *Molecular Biology of the Cell* by Alberts, Bray, Lewis, Raff, Roberts and Watson (Garland, 1983). Similarities between the two books are many. Among the most obvious are in their covers, both of which depict the distribution of major cytoskeletal elements in a cell as revealed by immunofluorescence, and in the way the material is organized. More important, both books are superbly illustrated, making extensive use of diagrams to guide the user through the massive amount of information they contain. There are also some notable

differences. *Molecular Biology of the Cell* treats plant biology as a distinct subject and devotes a chapter to it, whereas the treatment of plants is scattered through the pages of *Molecular Cell Biology*. *Molecular Cell Biology*, being published three years later, is more up to date in certain subjects such as RNA processing and oncogenes. It also contains an excellent historical account of major experimental accomplishments in molecular genetics that provides a good introduction to modern molecular biology, and it has the added attribute of relating a lot of the recent advances in molecular biology to human pathobiology. Overall both textbooks do a superb job in summarizing the import of modern molecular biology to cell biology, providing the student and the teacher with a timely chance to participate in the making of modern molecular cell biology and setting the standard for the way the subject should be taught. Now that there is competition in this regard, the respective sets of authors may feel compelled to undertake frequent revisions, thus guaranteeing us an up-to-date textbook in molecular cell biology.

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Astronomical Distance Scales

Galaxy Distances and Deviations from Universal Expansion. BARRY F. MADORE and R. BRENT TULLY, Eds. Reidel, Dordrecht, 1986 (U.S. distributor, Kluwer, Norwell, MA). xviii, 301 pp., illus. \$64. NATO Advanced Science Institutes Series C, vol. 180. From a workshop, Kona, HI, Jan. 1986.

The universe is still expanding. It would not be fair to say that this is the only issue upon which participants in the workshop whose proceedings are reviewed here agreed, but there are still substantial disagreements about the rate of the expansion (Hubble constant, H_0), the scale on which it becomes smooth, and the relationship between non-smoothness and the processes that form galaxies and larger structures in the universe. The proceedings address many of these questions, and J. P. Ostriker provides a thoughtful summary of the issues in his concluding remarks.

Of the 49 contributions, about three-eighths deal directly with distance indicators (from RR Lyrae stars to line widths and surface brightnesses of galaxies) and the scales implied by them. Different indicators (or at least different astronomers) continue to give scales differing by a factor of two,