formules mathématiques connues et leurs applications. Celles et ceux d'entre nous qui s'intéressent à l'enseignement des mathématiques trouveront sans doute beaucoup de renseignements dans les résumés d'études qui sont présentes en fin de livre. Nous pourrions évidemment reprocher au livre de rester assez superficiel mais cette critique ne serait pas juste car il est destiné aux éducatrices et aux éducateurs qui essaient d'introduire des femmes qui font leurs premiers pas en mathématiques. Je pense cependant que les auteures auraient dû présenter des mathématiciennes contemporaines. Il y a beaucoup de femmes qui ont contribué aux mathématiques depuis Emmy Noether! Les femmes d'aujourd'hui aimeraient savoir ce qui se passe de nos jours dans les sciences ; elles pourraient ainsi s'identifier à des êtres vivants et non à des personnages historiques. Les stars du passé n'ont pas le même impact que Madonna!

THE OUTER CIRCLE: WOMEN IN THE SCIENTIFIC COMMUNITY

Harriet Zuckerman, Jonathan R. Cole and John T. Breuer, eds. New York: W.W. Norton and Company, 1991.

by Hannah Gay

The papers in this volume contain much interesting information. They have been selected from a series of four symposia held between 1983 and 1986, bringing together scholars and scientists from a number of different disciplines. Overall, the book has a sociological slant. This is likely because Zuckerman and Cole have studied women in science from a sociological aspect for many years. With few exceptions, the papers selected for inclusion here reflect their earlier interests. Most of the papers are comparative and explore how women and men fare in the competitive world of science. Does the reward system operate differently for men and women? Are there differences in research productivity and if so, why? How do women and men perceive their own contributions to science? Is the scientific milieu different for men and women? The volume contains both empirical and theoretical contributions to these and other questions. It also contains interesting interviews with three women scientists: Salome Waelsch, a professor of genetics at Albert Einstein College of Medicine, who began her research career in Germany in the 1930s and later fled to the United States; Andrea Dupree, thirty years younger than Waelsch and now the head of a research group at the Harvard Smithsonian Observatory; and Sandra Panem, whose career started in the early 1970s. A virologist, Panem moved in new and interesting directions (in industrial biotechnology) after a controversial negative tenure decision at the University of Chicago. Panem's case is revealing. Only some time after having left academic science was she able to see clearly her earlier situation. Distance clears the vision. Dupree and Waelsch tend to be less critically aware of their situation as women in a field dominated by men—understandable, given their priorities and scientific commitments.

The first section of the book sets the stage by presenting evidence on the recent situation of women in science, including the reminiscences of the three women scientists. Zuckerman's quantitative piece examines university scientists. She shows that though there are significant differences between male and female career success, there is no evidence for gender difference in basic ability, except perhaps in mathematics where girls tend to do less well than boys. Why (and if) this is so is still much debated, as are the reasons for the differential in career success. Interestingly, marriage and childbearing are eliminated as a differentiating factor in the latter, at least according to Zuckerman and Cole's research.

Sorting out all the structural inequalities of opportunity from basic gender difference, if any, as many authors in the second part of this volume attempt to do, is an almost impossible task. One can only hope that women scientists will have forced the removal of these inequalities long before the time needed to understand them as passed; perhaps events will overtake the sociological research and it will be left to historians to figure out what happened after the fact. According to Helen Astin, there is some evidence that the gap in male-female research production is narrowing and that some of the barriers are being breached. One has the intuitive feeling that here too events have outdistanced her research. As William Bielby points out in his paper, there is not yet any systematic research into the situation since equal opportunity laws and regulations have entered the scene. Will one see variations as the result of how enthusiastically or not these regulations have been applied? Mary Frank Fox is convinced that productivity in science is tied to the nature of the work environment and that a given work place does not necessarily operate uniformly with respect to the sexes. Women scientists who know this in their bones may perhaps draw some comfort in Fox's empirical backup.

These themes are followed up in the third section of the book which compares the situation of women in science with that of women in other careers. Nothing very clear comes out of this except that insider/outsider problems have been more easily resolved in some professions than in others. Law or medicine might provide some pointers for women seeking equality in the basic sciences and engineering.

The research I have discussed so far has a somewhat disturbing aspect. There is a basic assumption that the removal of institutional barriers will allow women to equal men in all respects. This is coupled with an emphasis on productivity and why women are to date less productive than men. It is therefore salutary to read Evelyn Fox Keller's contribution in which she questions whether, even if all the barriers to inequality are removed, women will want to do science in the same way as men. She discusses the problem of the likely social construction of gender and the political dilemma it poses for women scientists. Should we be arguing that women scientists are just like men and that they just need the same opportunities to succeed? Or should we be arguing for the equality of a different approach to doing science? Or of many different approaches? A telling example of Fox Keller's relates to working conditions. Suppose that for socio-historical, or for more fundamental, reasons women prefer

to lead small research groups. Counting numbers of publications in which the woman director is principal author will not tell us much about success in the broad sense. Why should success be defined in terms of leading large groups and having one's name on many papers? Quite aside from gender specificity, surely what is being measured here is not so much success in science as it is success in applying for grants.

However, it is probably best to leave aside the thorny question of gender difference for the moment—at least in this arena. We must seek equality of opportunity for women in science, if for no other reason than that equality in the economic rewards of science is desirable. If there are major gender differences, then having a critical mass of women scientists must lead, eventually, to changes in scientific practice. While it won't remove competition, it will surely modify it, since what counts as success in life will change.

NOT OF WOMAN BORN: REPRESENTATIONS OF CAESAREAN BIRTH IN MEDIEVAL AND RENAISSANCE CULTURE

Renate Blumenfeld-Kosinski. Ithaca and London: Cornell University Press, 1990.

by Joan Gibson

This study of the early history of Caesarean birth is interesting and readable. Blumenfeld-Kosinski uses her material to highlight issues and questions about the birth process and its cultural context, which emerge most clearly under the extreme conditions implied by Caesareans. The author locates her approach within the radical ambiguity which everywhere surrounds Caesareans—from its simultaneous participation in the realms of the natural, the unnatural and the supernatural, to the unnaturalness itself as a sign of the child's fate for either unusually good fortune or bad, to its simultaneous signaling of both death (the mother's) and life (the child's—at least briefly), to its location on the boundaries between areas of female expertise and male professional territory. The work extends considerably the analysis of a range of questions already current in the literature on pre-modern women and childbirth, on the origins of male involvement and domination in obstetrics and gynecology, and on the social role and vulnerability of the midwife. It draws on a wide range of sources, from medicine, law, religion and art, as well as gender studies: a correspondingly wide range of methodologies is required. Blumenfeld-Kosinski has sought "to give the most comprehensive picture possible of Caesarean birth" for the period, and this she has done. It is both the strength and the weakness of the book. It covers a wide range of both generalist and specialist material, in a diversity of disciplines, over an extended and formative period for her subject (mainly the fourteenth century through the sixteenth). No one with an interest in any of her fields can fail to be both enlightened and delighted by much of her material and analysis.

Chapter I addresses primarily the development of medical writing about Caesareans, highlighting the difficulties of extrapolating from written texts to practice, and setting the question within the context of religious and legal requirements to save the unborn child of women dead in childbirth. She argues convincingly that the role of midwives, as it pertained to Caesareans, was affected and devalued by the resulting pressures long before midwives were marginalized in other areas of obstetrics or gynecology. Questions of maternal and infant survival of the Caesarean are also raised.

Chapter II mines the iconographic evidence for Caesareans with considerable sensitivity to the context of the image, and the relation of text and image. She concludes that women were displaced early as the main practitioners of Caesareans, and in Chapter III attempts to explain this in terms of the professionalization of medicine and status distinctions within the medical guilds—developments simultaneous with attacks on midwives as healers from both medicine and religion, which left them vulnerable to charges of witchcraft. The handling of difficult and problematic evidence is deft in these central chapters, but the arguments remain at best probable, and it is unfortunate that Blumenfeld-Kosinski occasionally slides from what "may" or "must" have been the case to what "is" or "was."

Chapter IV is a fascinating exploration of the ways in which the popular imagination lent supernatural elements to Caesareans, with such births becoming the proving ground of both the miraculous and the demonic. The benign influence of the Virgin or female saints concerned restoring the health of the mother, while satanic intervention focused on claiming the infant as an anti-christ. A final appendix traces the confusion and controversies about the origin of the term "Caesarean birth" from the first century BC to the period under consideration.

While all of the material is extremely interesting, such a compendium inevitably lacks a certain unity, which makes it hard to know the intended audience. It seems perhaps a bit too challenging and scholarly for the truly general reader, and too diffuse for the specialized researcher or for course material. It is most likely to be useful as a teaching text at the graduate level, and even there probably as background reading.

UN PIANO DANS LE NOIR

Simone Chaput. Saint-Boniface (Manitoba): Les Éditions du Blé, 1991.

par Elizabeth Aubé

Andrée Bougard savait ce qu'elle voulait dans la vie. Pendant quinze ans, elle s'était vouée à la perfection de son talent de musicienne. Disciplinée et cérébrale, elle s'était entourée de personnes qui lui ressemblaient, en particulier Sheila, qui se donnait corps et âme à l'étude du chinois, et son amoureux Daniel, musicien de jazz consommé. Mais voilà qu'une série d'événements—un frère défroque, l'autre divorce, et une amie meurt, victime d'un acte de terrorisme—vient bousculer l'ordre qui régnait dans le monde et l'esprit