

C.V. AND LIST OF PUBLICATIONS

(updated 09-09-09)

DR. PNINA G. ABIR-AM

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GENERAL DESCRIPTION OF RESEARCH AREAS:

1. **History, Philosophy, and Sociology** (hereafter HPS) of 20th Century Science, especially the interface between biology and chemistry, as in **Molecular Biology and Biotechnology**; transnational and comparative history of British, French, American, and Israeli research schools; philosophy of collective creativity; logic of discovery vs logic of justification; sociology of innovation; science policy and the funding strategies of private foundations and governmental agencies.
2. **HPS of Women and Gender in Science**; gender, race, and class in the allocation of credit for scientific discovery, including the Nobel Prize; disciplinary, national, and historical variations in women's under-representation in science; creativity and intimacy in collaborations of married and unmarried partners; gender and leadership of wo/men scientists as group leaders and mentors.
3. **Politics of Cultural, Public, and Collective Memory in/of Science and Society**; trans/national commemorative practices of great discoveries, scientists, and scientific institutions, including "DNA at 50", the Pasteur Centennials, and the Darwin bi/centennials, among other key anniversaries.

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RESEARCH EXPERIENCE:

- 1) **NLM-NIH, Project Director**, 2007-present, “How Scientists Remember: The public memory of DNA at 50, 40, 21”, (This is a multi-year book-writing award).
- 2) **Brandeis University, Project Director**, 2007-present: (2/a,b,c - sponsored by **HBI** (Hadassah-Brandeis Institute), **NSF-SES-STS**, (US National Science Foundation, Directorate for Social & Economic Sciences, Program in History, Philosophy and Sociology of Science) and **WSRC** (Women’s Studies Research Center)
 - 2/a) “A First Nobel to an Israeli Woman Scientist? Ada E. Yonath and the Ribosome”;
 - 2/b) “The Public Debate on the Under-representation of Women in Science in 2005-06: (the Summers debate) Why no Policy Lessons were drawn from Historical Case-Studies?”
 - 2/c) “Scientific credit in the 1958 Nobel Prize in Physiology/ Medicine”: The case-study of the collaborative couple of Esther & Joshua Lederberg. (1922-2008)
- 3) **NSF-SES-STS**, Principal Investigator, 2005-07, “The discovery of DNA Structure: History, Memory, and Moral Genealogy”. (500pp book completed in mid-2009; under review)
- 4) **Rockefeller University**, Scholar-in-Residence at Rockefeller Archive Center, 2001-03; 4-a: “The Rockefeller Foundation’s strategy in American & European biomolecular science”; 4-b: “The history of molecular biology at Rockefeller University”.
- 5) **CNRS-CSI-CRHST, Paris**, Directeur-de-recherche, 2000, 1993. “French and American research schools of molecular biology: A Comparative Study”. (the Phage Group and the Microbial Physiology Group at the Pasteur Institute)
- 6) **University of California at Berkeley & NSF-POWRE**, Principal Investigator, 1997-99, “Gender and Leadership: Dorothy Hodgkin’s school of biocrystallography at Oxford”;
- 7) **M.I.T./ Dibner Institute for the History of Science and Technology**, Senior Resident Fellow, 1995-96, “British and American research schools of protein structure in the 1930s”,
- 8) **The Johns Hopkins University & NSF-VPW**, Principal Investigator, 1991-93, “Suffragette versus Suffragist strategies in inter-war British science”,
- 9) **Harvard University**, Department of the History of Science, Post-doctoral Fellow, 1985-89. “Research schools of molecular biology in the US, UK, & France: National traditions or transnational strategies of innovation”. (Principal Investigator on NSF-HPS grants)

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TEACHING EXPERIENCE:

- 1) Introduction to history, philosophy and sociology of science;
- 2) Courses on the HPS of molecular biology & biotechnology;
- 3) Courses on the HPS of women and gender in science;

Both undergraduate and graduate teaching; medium size and large classes. Recommended by all the students who took 2) in the Oraculum at Johns Hopkins University; unless otherwise mentioned, (e.g. Hebrew and French) the teaching was conducted in English.

- **Brandeis University/ WSRC, Student-Scholar Partnership Program;** (hereafter SSP) as Visiting Scholar, 2007-present; taught diverse students (American, Chinese, Israeli, Turkish) how to conduct original research on “Women and gender in molecular biology”.
- **University of California at Berkeley,** Departments of History and Women's Studies, as NSF Visiting Associate Professor, 1997-1999; courses on 2) & 3)
- **University of Ottawa-the bilingual University of Canada & Carleton University,** Ottawa, Ontario, Canada, as Joint Chair of Women’s Studies, 1996-97; taught course 3) in a required bilingual – French & English - setting; guest teacher in large core courses of Introduction to Women’s Studies.
- **The Hebrew University in Jerusalem:**
 - Department of Philosophy - Program in History, Philosophy and Sociology of Science & Interdisciplinary Program in Women’s Studies, as Lady Davis Visiting Professor, 1996-97; taught courses on 2) & 3) in Hebrew;
 - Department of Philosophy & History of Science, as teaching assistant to Prof. Ze’ev Bechler, 1973-75, courses on 1) in Hebrew.
 - School of Agriculture in Rehovoth, Department of Science Teaching, as junior lecturer, 1982-83, course on 1) in Hebrew to a class of about 100.
- **The Johns Hopkins University,** Department of History of Science, Technology, and Medicine & Program in Women's Studies, as NSF Visiting Associate Professor, 1991-1993; courses on 2) and 3).

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EDUCATION:

- **Universite de Montreal**, Institut d'Histoire et de Sociopolitique des Sciences,
Ph.D. 1984. (Dissertation on *The Biotheoretical Gathering and the Origins of Molecular Biology in England, 1932-38*; Adviser: Camille Limoges; 1977-1984)
- **University of London** - The Wellcome Institute for the History of Medicine, Wellcome Research Fellow, 1983-84.
- **University of Pennsylvania in Philadelphia**, Department of History & Sociology of Science, Penn-Israel Exchange Graduate Student, 1975-1977.
- **The Hebrew University of Jerusalem:**
 - ◆ **M.Sc.** in History & Philosophy of Science. (1975, *summa cum laude*; 200p thesis on "The Double Helix: Scientific Change in a Transdisciplinary Discovery")
 - ◆ Diplome in Science Teaching, 1973. (Joint Program in Science and Education)
 - ◆ **B.Sc.** in Chemistry (major) & Biology. (minor) 1971.

Prizes and Awards: (selected)

- ◆ History of Science Society, for "outstanding research", 1988.
- ◆ CNRS, Paris; "Post rouge" award for foreign scholars, 1993;
- ◆ The Wellcome Trust, London, award for foreign scholars, 1984.

Invited lectures &/or keynote addresses: (most recent only)

- Science Museum, London, 09/21/09;
- University of Giessen, Germany, 06/29/2007;
- University of Maastricht, Holland, 02/08/07; (Keynote)
- Max Planck Institute, Berlin, 10/15/2005;
- Duke University, 02/09/05;
- Notre Dame University, 09/09/04;
- Georgia Tech, Atlanta, 01/23/04;
- University of Minnesota, MNPLS., 09/12/03
- Indiana University, Bloomington & UI-Indianapolis, 09/05/03 & 09/02/03.

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PROFESSIONAL ACTIVITIES:

- Member of the Editorial Board:

- *Spontaneous Generations: A Journal for the History and Philosophy of Science*, 2008-present. (open, online, peer-reviewed academic journal published by graduate students at the Institute for the Hist.& Phil. of Science at the University of Toronto).
- *OSIRIS*, official annual publication of the History of Science Society, 1995-2000;
- *Lives of Women in Science*, Rutgers University Press, Series Editor, 1989-91;

- Referee for books:

- Oxford University Press; Harvard University Press; Yale University Press;
- Rutgers University Press. (Founding Series Editor)

- Referee for journals:

- History & Philosophy of Life Sciences; - Journal of the History of Biology;
- *OSIRIS* & *ISIS*, (Official journals of the History of Science Society)
- *Science, Technology & Human Values*; - *Minerva*; - Electronic journals.

- Referee for research grants:

- (US) National Science Foundation. (HPS, STS, EVIST, Sociology; Anthropology)
- (US) National Endowment for the Humanities, Washington D.C.
- **(Israel; Holland; Norway) National Research Councils in Jerusalem, The Hague, and Oslo.**

Organizer of sessions and/or speaker at congresses, conferences: (most recent only)

- History of Science Society: Phoenix, Az, 2009; Washington DC, 2007; MNPLS.,2005;
- International Union for the History of Science, Budapest 2009; Mexico City/2001; Liege/ 1997; Zaragoza/ 1993. VP of the IU Cmte on Women in History of Science, 2009-13.
- American Association for the Advancement of Science, Denver, Colorado, 2003;
- British Society for the History of Science, Oxford, July 2008; London, Sept. 2006;
- Society for the History of Technology, Las Vegas, October 2006;

International experience: (as presenter at conferences and/or departmental colloquia held in)

- Belgium, Canada, Czech Republic, France, Germany, Greece, Holland, Hungary, Israel, Italy, Mexico, Portugal, Romania, Spain, Switzerland, UK, Venezuela.

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PUBLICATIONS: (Books, Collections of essays, articles, reviews)

BOOKS:

I) '*DNA at 50: History and the Ethics of Memory in Scientific Discovery*, vol. 1&2. (2010)

Collections of Essays, Edited or Co-edited:

II) - ***Commemorative Practices in Science: Historical Perspectives on the Politics of Collective Memory*** (Chicago: Chicago University Press, 2000), as vol. 14 of OSIRIS, an official publication of the History of Science Society; edited with C.A. Elliott.

Reviewed in: *British Journal for the History of Science*, 12/2001; - *ISIS*, 09/2001.

III) - ***La Mise en Memoire de la Science: Pour une Ethnographie Historique des Rites Commemoratifs***, sous la direction de Pnina G. Abir-Am, (Paris: Editions des Archives Contemporaines, 1998).

IV) - ***Creative Couples in the Sciences*** (New Brunswick/NJ and London: Rutgers University Press, edited with H.M. Pycior and N.G. Slack; reviewed in, among others: *American Historical Review*, 02/1998; *Science*; *Medical Technology*, *Nuncius* (Florence)

V) - ***Uneasy Careers and Intimate Lives, Women in Science, 1789-1979***, (Award Winner; New Brunswick/ NJ & London: Rutgers University Press, 1989 & 1987); edited with D. Outram; reviewed in: *History of Science*, *Science*, *Science and Society*; *Contemporary Sociology*; *In the Times*; *Nuncius*, among other journals.

Work-in-progress on single and multi-volume books:

VI) – *How Scientists Remember: The Public Memory of DNA at 50, 40, 21*. (NLM book award)

VII) - ***Research Schools of Molecular Biology in US, UK, and France: A History of Transnational Discoveries, Leadership, and Policy in the 20th Century***; Volume 1: *Comparative Studies of Transnational Research Schools: Theory and Methods*; Volume 2: *The Phage Group*; Volume 3: *The Pasteurien "Attic" of Microbial Physiology*; Volume 4: *"Pauling's Boys: Pride and Prejudice in California's Tech"*; Volume 5: *"Gender and leadership in British X-ray biocrystallography: From J.D. Bernal & W.T. Astbury to Dorothy Hodgkin & Rosalind Franklin"*.

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PUBLICATIONS: (Continuation)

ARTICLES: (22; for a full listing see the CV in pdf format at <http://pga.silg.org>)

- 1) "Double Identity: How did the Weizman Institute Scientists Relate to the Discovery of DNA Structure in the 1950s?" (on the first IUPAC meeting on macromolecules in then 8 year old State of Israel) *Galileo, A Magazine for Science and Thought*, issue 128, April 2009, 20-30. (in Hebrew)
- 2) "Life and Physical Sciences", *Palgrave Dictionary of Transnational History*, edited by Akira Iriye and Pierre-Yves Saunier. (London: Palgrave, 2008)
- 3) "Erwin Chargaff, 1905-2002", *New Dictionary of Scientific Biography*, edited by Noretta Koertge. (New York: Oxford University Press, 2007)
- 4) "Joseph Needham, 1900-1995"; *ibid.*
- 5) "Dorothy Moyle Needham, 1896-1989"; *ibid.*
- 6) "The Recent Historiography of Molecular Biology: A Transnational Quest for the Big Picture", *History of Science* (London) vol. 44, (2006), 96-218.
- 7) "DNA at 50: Institutional and Biographical Perspectives", *Minerva*, (London) 42 (2004) 191-213.
- 8) "The Rockefeller Foundation and the Rise of Molecular Biology", *Nature Reviews – Molecular Cell Biology*, 3 (January 2002), 65-70.
- 9a&b,c,d...) "Molecular biology in the context of British, French, and American cultures" in *Sciences and Cultures*, special issue, no. 168, of *International Social Science Journal*, edited by Hebe Vessuri, June 2001, 187-199. (Also in French, Spanish, Chinese)
- 10) "The strategy of large versus small scale investments: The Rockefeller Foundation's international network of protein research, 1930-1960" in *American Foundations and Large Scale Research*, edited by Giuliana Gemelli (Bologna: Clueb, 2001), 71-90.
- 11) "The first American and French commemorations in molecular biology: From collective memory to comparative history" in *Commemorative Practices in Science: Historical Perspectives on the Politics of Collective Memory*, edited by Pnina G. Abir-Am & Clark A. Elliott (Chicago: University of Chicago Press, 2000), 324-372.

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PUBLICATIONS: (continuation)

ARTICLES: (continuation; selected; for a full list see the website on p. 1)

12) "Introduction", *Commemorative Practices in Science...* 2000, op.cit., 1-34.

13) "The molecular revolution in 20th Century biology: Three post-war interdisciplinary consequences" in J. Krige and D. Pestre (eds.) *Science in the 20th Century* (London: Harwood, 1997), 495-520.

14) "Collaborative couples who strove to change the world: The social policies and personal tensions of the Russells, the Myrdals, & the Mead-Batesons" in *Collaborative Couples in the Sciences*, 1996, op.cit., 267-281.

15a&b) "Women in Modern Scientific Research: A historical Overview" in *World Science Report*, (Paris: UNESCO, 1996); also in French as "La place de femmes dans la science et la technologie" in *Rapport Mondial sur la Science*; also in other UNESCO official languages.

16) "Women in research schools; Approaching an analytical lacuna in the history of chemistry and allied sciences" in S. Mauskopf (ed). *Chemical Sciences in the Modern World* (Philadelphia: University of Pennsylvania Press, 1993) 375-92.

17) "From multi-disciplinary collaboration to transnational objectivity: International space as constitutive of molecular biology, 1930-1970", in E. Crawford, T. Shinn & S. Sorlin (eds.), *Denationalizing Science: The International Context of Scientific Practice*, (Dordrecht: Kluwer Academic Publishers, 1993), 153-186; translated into Spanish. (*Arbor*, 1997)

18) "A historical ethnography of a scientific anniversary in molecular biology: The first protein X-ray photo (1984, 1934)", *Social Epistemology*, vol. 6, 1992, 323-354; 363-364; 371-372; 380-387 (**Special issue** including Editor Steve Fuller's Preface, this paper, commentaries by Barbara Frankel, Joseph Gergen and Hugh Gusterson, and my replies.

19) "Noblesse oblige: Lives of molecular biologists", *ISIS*, 82 (June 1991), 326-343. (essay review of seven auto/biographies by/of Nobel Laureates including Francis Crick, Francois Jacob, Arthur Kornberg, Jacques Monod, Rita Levi-Montalcini, Linus Pauling & Max Perutz)

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PUBLICATIONS: (Continuation)

Articles: (continuation; selected; for a full list see the websites on p. 1)

- 20) "The Philosophical Background of Joseph Needham's work in Chemical Embryology, 1925-42" in *A Conceptual History of Modern Embryology*, (New York: Plenum, 1991) edited by Scott F. Gilbert, 159-180.

- 21) "Synergy or clash: Disciplinary and marital strategies in the career of the mathematical biologist Dorothy M. Wrinch (1894-1976)' in *Uneasy careers and intimate lives, Women in Science, 1789-1979* (New Brunswick/NJ & London: Rutgers University Press, 1987 & 1989), edited by Pnina G. Abir-Am & Dorinda Outram, 338-94. (**Award winner** of the History of Science Society, for "outstanding research", see www.hssonline.org)

- 22) "The Biotheoretical Gathering, transdisciplinary authority and the incipient legitimation of molecular biology in the 1930s: New perspective on the historical sociology of science", *History of Science*, (Editor: Roy Porter) 25 (March 1987), 1-70. (Miniature of my Ph.D. thesis)

For a dozen or so additional publications, especially from the 1980s, both before and after the awarding of the Ph.D. degree, see CV in pdf form at <http://pga.silg.org>

Work-in-progress:

- a) "Gender and Cultural Memory: Remembering Dorothy Hodgkin in England, India, and China" (read at the History of Science Society Annual Meeting, MNPLS. Nov. 2005; the Weizmann Institute for Science, January 2005; University of Maastricht, November 2002; Harvard University - Joint Study Groups in History of Biology and Medicine, October 2002; among other sites)

- b) "Origins of Biogen: A Historical Ethnography of Early Transatlantic Biotechnology". (based on papers read on July 2005 at the Oxford Brooks conference on The History of Pharmaceuticals in the 20th Century, organized by V. Quirke; and in October 2006 at the annual meeting of the Society for History of Technology, held in Las Vegas, in a session organized by T. Wieland)

- c) "Ada Yonath and the Discovery of Ribosome Structure and Function: The long road of international cooperation and competition for the 2009 Nobel Prize in Chemistry".

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PUBLICATIONS: (Continuation)

Book Reviews: (selected list of inviting journals in alphabetical order)

- *Ambix*;
- *American Scientist*;
- *British Journal for the History of Science*;
- *Historical Studies in the Physical and Biological Sciences*;
- *History and Philosophy of Life Sciences*;
- *Journal of the History of Biology*;
- *Journal of Interdisciplinary History*;
- *ISIS*;
- *Medical History*;
- *Metascience*;
- *Technology and Culture*;
- *The International History Review*;
- *Women's Studies International Forum*.

Most recent review: of *Inspiring Science: Jim Watson and the Age of DNA* in *American Scientist*. (www.americanscientist.org/reviews/32708)

Work-in-progress:

- Review of ***Gene Action, A Historical Account*** (Oxford University Press) by Werner Maas, for *Ambix*;
- ***Review of American Hegemony and the Postwar Reconstruction of Science in Europe***. (Cambridge/MA.: The MIT Press, 2006) by John Krige, for *Centaurus*.

PROFESSIONAL HIGHLIGHTS:

l) Special issues in refereed journals on new themes introduced by my research:

- *OSIRIS, 2000, Annual. (Historical Perspectives on the Politics of Collective Memory)*
- *Social Epistemology, 1992, #4. (Historical Ethnography of Scientific Anniversaries)*
- *Social Studies of Science, 1984, #2. (The Rockefeller Foundation and Molecular Biology)*

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PROFESSIONAL HIGHLIGHTS: (continuation)

II) Reviews in leading American and British journals; e.g. “**The most original and conceptually bold**” (*American Historical Review*, February 1998, 145); “**masterful**” and “**deliciously nuanced**” (*British Journal for History of Science*, December 2001, 454).

III) Acknowledgments from many authors in the history of molecular biology; widely cited.

IV) Translated and/or reviewed in several languages, including French, Spanish, Romanian, Portuguese, Arabic, Russian, and Chinese.

V) A dozen titles in print (if counting both hard and soft covers, as well as books prefaced by me as Series Editor).

VI) Recipient of research grants, from governmental agencies and/or private foundations and scientific societies in US, UK, and France.

VII) Interviews and/or coverage in the media: (selected)

- *US News and World Report*, August 2006;
- *Biomednet, an Elsevier electronic journal*, April 2003;
- *The New York Times*, September 1998;
- *University of Ottawa Gazette*, February 1997; (Downloadable from my website)
- *Diario di Lisboa*, January 1994;
- *The Atlanta Constitution*, May 1993;
- *The Baltimore Sun*, April 1992;
- *The Chronicle of Higher Education*, September 1991.

PERSONAL:

- Citizen of Israel and the USA; one time resident of Canada, UK, and France.
- Married; one child bound for Medical School.
- Languages: Hebrew, English, French. (read, write and speak fluently)
- Engaging personality: energetic, resourceful, widely travelled, internationally well connected or in the words of a critical colleague: «both creative and productive»
- References: To be sent upon request.