

UC Irvine

UC Irvine Previously Published Works

Title

Science in the Arab world: Vision of glories beyond

Permalink

<https://escholarship.org/uc/item/64v7n8pd>

Journal

SCIENCE, 309(5741)

ISSN

0036-8075

Authors

Broumand, V
Keyhani, S
Broumand, B

Publication Date

2005

Copyright Information

This work is made available under the terms of a Creative Commons Attribution License, available at <https://creativecommons.org/licenses/by/4.0/>

Peer reviewed

Women Making Strides in Big Pharma

AS FEMALE SCIENTISTS IN LEADERSHIP POSITIONS at a large pharmaceutical company, we disagree with the conclusion that “It’s still a man’s world at the top of big pharma research” (J. Mervis, Special Section on Drug Discovery, News, 29 July, p. 724). There are numerous examples suggesting that this notion is more than a bit outdated. Of additional concern is the superficial analysis that led to the conclusion that childcare issues hold women back in the field of discovery research.

Certainly, we would all like to see more women at the heads of research organizations, but we have observed significant progress over the past 10 years and believe that the future looks bright. There are now many women leading the science and influencing research directions in pharmaceutical R&D organizations. They and, increasingly, their male colleagues manage the demands of child-rearing while achieving significant career growth in this profession.

Women across professions—law, academic, science, and corporate—and their families continue to successfully manage the challenges presented by raising children and growing careers at the same time. Women with careers in discovery research are no exception. We believe that pharmaceutical companies, large and small, are great places for women to pursue careers as research scientists and regret that *Science* did not look at this area more broadly before drawing the unfortunate conclusion to the contrary.

CATHERINE D. STRADER,¹ SATWANT K. NARULA,²
JEAN E. LACHOWICZ³

¹Executive Vice President, Drug Discovery Research, ²Vice President, Inflammation and Infection Discovery Research, ³Director, Cardiovascular & Metabolic Diseases Discovery Research, Schering-Plough Research Institute, Kenilworth, NJ 07033, USA.

The Importance of Origins?

IN HIS ESSAY “SCIENCE IN THE ARAB WORLD: vision of glories beyond” (3 June, p. 1416), W. Maziak states that “[o]ne [of the knowledge shocks that ignited the Renaissance] was delivered by Ibn-Sina (Avicenna, 980 to 1037), whose *Kitab Al-Shifa* (“The Book of Healing”) introduced medieval Europe to the principles of logic and their use to gain knowledge, and placed science and religion on equal terms as sources of knowledge and understanding of the universe.” However,

Avicenna was not an Arab. He was a Persian scientist who spoke the Persian language as his mother tongue and who wrote in both Persian and in Arabic. Maziak also implies that the well-known Persian scientists and philosophers (Al-) Razi’s (Rhazes) (1, 2) and (Al-) Khwarizmi (Kharazmi) (3) in the 9th and 10th centuries were also Arabs. Although the genuinely sincere attempts by Maziak to offset contemporary ignorance of and/or bias against the important role played by Asian and Middle-Eastern scientists is to be commended, his misrepresentation of the history and science does not help.

KAMYAR KALANTAR-ZADEH AND
MOHAMMAD NAVAB

David Geffen School of Medicine at UCLA, Los Angeles, CA 90095, USA.

References

1. L. Richter-Bernburg, *Med. Secoli* 6, 377 (1994).
2. L. F. Haas, *J. Neurol. Neurosurg. Psychiatry* 54, 483 (1991).
3. K. C. Ryding, *Ambix* 41, 121 (1994).

IN HIS ESSAY “SCIENCE IN THE ARAB WORLD: vision of glories beyond” (3 June, p. 1416), W. Maziak describes the challenges facing the Arab world in their quest to realize scientific prosperity. Maziak makes an error: Razi, Ibn-Sina, and Khwarizmi were Iranian scientists—not Arab scientists.

The “Arab-Islamic” label is also misleading because not all of the scientists of the era were even Muslim (1). For example, Khwarizmi was also known as Al-Majusi (the Magus), which suggests that he was Zoroastrian.

One could appropriately argue that ethnicity is unimportant and what matters is the contribution of any scientist to the advancement of knowledge for humankind. However, wouldn’t any reader have had a similar reaction while reading an article that described Sir Isaac Newton as a Frenchman and Marie Curie as a Spaniard?

Lumping these scientists into the culturally narrow label of “Arab-Islamic” is historically inaccurate. This label does not recognize the rich diversity of Eastern scholars that contributed to science in an era where science was essentially nonexistent in the Western world and was later invaluable to its Renaissance.

VARSHASB BROUMAND,¹ SALOMEH KEYHANI,²
BERHOZ BROUMAND³

Nephrology Associates of Northern Virginia, 3700 Joseph Siewick Drive, #305, Fairfax, VA 22033, USA.

²Mount Sinai School of Medicine, New York, NY 10029, USA. ³Iran University of Medical Sciences, Tehran 19549, Iran.

Reference

1. B. Broumand, K. Zandinejad, *Am. J. Nephrol.* 16 (no. 6), 550 (1996).

Response

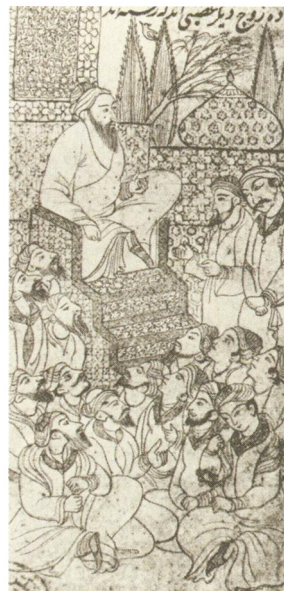
THE LETTER WRITERS DWELL ON THE NATIONALITY and religion of scholars of the golden era of Arab-Islamic civilization. I did not indicate or mean to imply that early scholars of the golden era were all Arabs or Muslims. The figure legend referring to Avicenna as an Arab scientist and philosopher was inserted by the editorial staff, and I did not pay attention to this mistake when I revised the final version.

This Essay, if read as a whole, is a critical account of the current status of science in the Arab world. History was used briefly as a background to show that when tolerance and embracement of science prevailed, science moved forward. The fact that some of the great figures of the golden period were not Arabs or Muslims or worked in other languages such as Syriac, Hebrew, or Persian is a clear demonstration of this notion. I wrote that “scholars of

every color and creed traveled to Damascus and Baghdad to study and work.” The sociopolitical environment of the state, or for that matter the Abbasid Caliphate, provided the required catalyst for people of every background to investigate and excel. It was within that nourishing and tolerant melting pot that ancient knowledge was preserved and new knowledge was produced, a dynamic that proved instrumental to the European Renaissance. This is the context most relevant, in my opinion, to the prospects of science advancement in any society today, and this is the context I tried to reflect.

When we see what blind politics, business,

and ideologies have made of our world today, it becomes clear that cross-national and cross-cultural relations between people of science, arts, and reason have become an urgent need to reduce tension, avert conflicts, and lobby for a more humane world. Sacrificing some of our group-pride, no matter along what lines the group is defined, seems to be the price we ought to pay for a more peaceful and prosper-



Scientist and philosopher Ibn-Sina (Avicenna) surrounded by his students.

ous coexistence. Carl Sagan wrote, "Whenever our ethnic or national prejudices are aroused, in times of scarcity, during challenges to national self-esteem or nerve, when we agonize about our diminished cosmic place and purpose, or when fanaticism is bubbling up around us, habits of thought familiar from ages past reach for the controls. The candle flame gutters. Its little pool of light trembles. Darkness gathers. The demons begin to stir." [(1), pp. 26–27].

WASIM MAZIAK

Syrian Center for Tobacco Studies, Post Office Box 16542, Aleppo, Syria.

Reference

1. C. Sagan, *The Demon Haunted World* (Ballentine Books, New York, 1996).

Firearms, Violence, and Self-Protection

THE ASSOCIATION THAT J. B. BINGENHEIMER *et al.* have found between exposure to firearm violence and subsequent perpetration of violence ("Firearm violence exposure and serious violent behavior," Reports, 27 May, p. 1323) may well reflect a causal effect of prior victimization, but I believe they have misread what is being caused. They classified a subject as a "perpetrator of serious violence" if she or he reported being threatened or attacked by another or had "been in" a gang fight, but also if the subject had "carried a hidden weapon." Their dependent or outcome variable is problematic partly because it makes no distinction between defensive, even lawful, violence and offensive violence. More importantly, this variable probably reflects just one type of behavior, carrying weapons for self-protection, which should not be described as violent behavior.

The authors report that 12.6% of their sample of (roughly high school age) youth were classified as perpetrators of serious violence, but do not say what share of these were so classified solely because the person had carried weapons for self-protection. But there is strong reason to believe that this share is over half and could approach 100%. A survey of Chicago high school students conducted by the U.S. Centers for Disease Control and

Letters to the Editor

Letters (~300 words) discuss material published in *Science* in the previous 6 months or issues of general interest. They can be submitted through the Web (www.submit2science.org) or by regular mail (1200 New York Ave., NW, Washington, DC 20005, USA). Letters are not acknowledged upon receipt, nor are authors generally consulted before publication. Whether published in full or in part, letters are subject to editing for clarity and space.

Prevention [(1), p. 26] in the same year as the present study, 2001, revealed that 21.2% had carried weapons (6.3% had carried guns) in the previous 30 days. Thus, one would expect that at least 21% of the present study's sample would report defensive weapon carrying alone, easily enough to account for all of the 12.6% classified as "violent perpetrators."

If most of the variation in the outcome variable is really variation in defensive weapon carrying, it means that all the authors have really discovered, or rediscovered, is the rather banal fact that people who have reasons to believe they are likely to be victimized in the future are more likely to carry guns for defensive purposes (2).

GARY D. KLECK

College of Criminology and Criminal Justice, Florida State University, Tallahassee, FL 32306, USA.

References

1. Centers for Disease Control and Prevention, "Youth risk behavior surveillance—United States, 2001," *Morbidity and Mortality Weekly* 51, 1 (28 June 2002).
2. G. Kleck, M. Gertz, *J. Res. Crime Delinquency* 35 (no. 2), 193 (1998).

Response

WE APPRECIATE KLECK'S THOUGHTFUL LETTER.

It is true that carrying a concealed weapon was the most commonly reported of the behaviors that make up our measure of violent behavior. Nearly 10% of adolescents in our sample reported carrying a concealed weapon in the year prior to their Assessment 3 interview, compared with 4% who reported participating in a gang fight, 2% who reported attacking someone with a weapon, 1% who reported shooting at someone, and less than 1% who reported shooting someone.

Contrary to Kleck's conjecture, however, we believe that it is reasonable to include carrying a concealed weapon in our index of serious violent behavior. Weapon carrying is a logical prerequisite to several explicitly violent acts and is indicative of a certain degree of willingness or intent to engage in violence. Moreover, carrying a hidden weapon is strongly associated with all of the other behaviors included in our measure. Compared with those who denied carrying a hidden weapon, subjects who reported doing so were over 23 times as likely to report attacking someone with a weapon, some 27 times as likely to report shooting at someone, and nearly 10 times as likely to report being in a gang fight. Although almost 70% of those who reported carrying a concealed weapon also reported another violent behavior, less than 3% of those who denied carrying a concealed weapon reported other forms of violence.

Furthermore, the relationships we found between exposure to firearm violence and our index of violent behavior are also evident when

LETTERS

eppendorf
advantage ✓



Upgrade your pipetting!

Great Eppendorf liquid handling specials* are now available from your local Eppendorf Partner.



Promotion
September 1 –
December 31,
2005

Current Eppendorf Advantage promotions include:

- Multipette® plus/Repeater Plus: ideal for easy processing of long series
- Eppendorf pipettes: for any application, for any budget. With up to ten times more ep-points.**
- Liquid handling consumables in various quality and purity levels

Upgrade your pipetting now! Use Eppendorf premium liquid handling products.

For more information visit:
www.eppendorf.com/advantage

eppendorf
In touch with life