

What women can do –
The future is really up to us..

**ACS Award for Encouraging Women into
Careers in the Chemical Sciences:
Symposium in Honor of E. Ann Nalley**

Judith Giordan

Managing Director - ecosVC, Inc

Co-Founder – Chemical Angel Network

ACS Annual Meeting – Denver March 2015

Thank you...



- **Advocate for ALL.. to reach their highest levels of success!!**
- Staunch supporter of women
- Noted chemist
- Admired academic
- Untiring ACS volunteer and leader...

21st-Century New Contact Sport Career Development



- The rules *are* and *must change...and*
- *We must help change them.*
- **Requires knowledge of the rapidly evolving landscape *and* full commitment and skill**

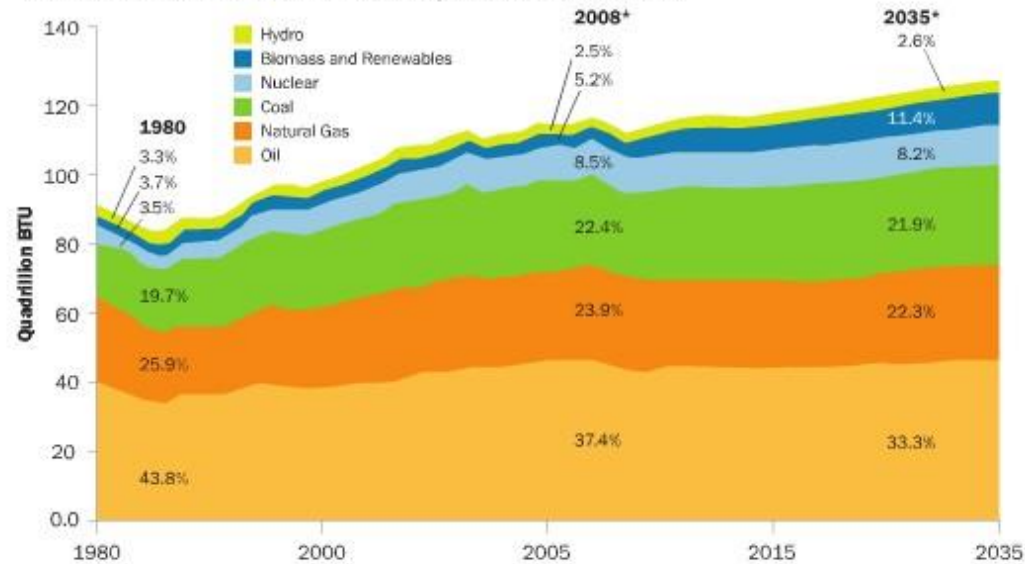
THE PROBLEMS ARE COMPELLING...

And all skills are needed with solutions....



Future U.S. Energy Demand

The U.S. will require 14 percent more energy in 2035 than in 2008.



*Excludes non-biogenic municipal waste and net electricity imports. Source: EIA, AEO 2009 Tables A1 and A17.

MEN CAN NOT do it alone!

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Empowering Women - a CORE IMPERATIVE



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ICPD Global Review Report
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WOMEN IN THE WORLD

Hillary Clinton: Empowering Women is a 'core imperative'

By Holly Bailey, Yahoo! Staff | Women In The World - 4 hours ago

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Marc Bryan Brown for Women in the World

NEW YORK—Hillary Clinton delivered a rousing speech on women's rights Friday, insisting that empowering women is a "core imperative" for society if the United States is to enjoy economic success and remain a global leader.

Speaking at the Women in the World Summit organized by Tina Brown, editor-in-chief of Newsweek The Daily Beast, Clinton acknowledged women "have come so far" in areas including politics and in the workplace. But she called gender equality the "unfinished business of the 21st century"—not just in developing countries, but in the U.S., where women continue to be "marginalized" when it comes to access to education and their ability to receive a salary equal to their male peers.

follow women in

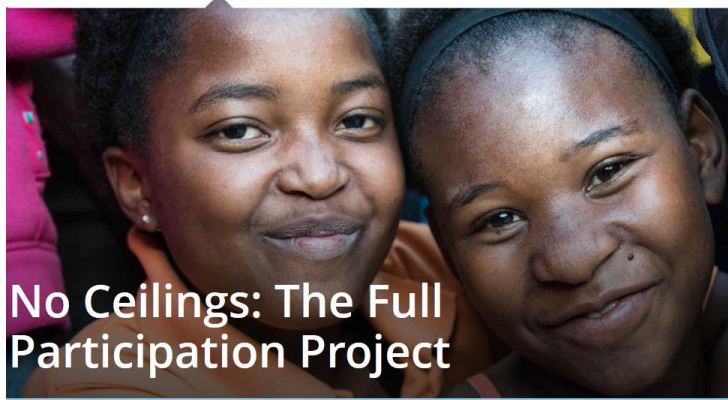
Like 20,088 people like your Friends like.

Tweets

Women in the World @WomenInWorld
"We as businesses need to government at all levels to t it's all about these linkages #wiw13

DVF @DVF
Waiting for Diane to speak! @LaraSpencer at @WomenInWorld instagram.com/p/Xu_wB0g Retweeted by Women in Expand

Tweet to @WomenInWorld



Women are the most **valuable** and **underutilized** resource
in the **GLOBAL** economy

By 2011 women
controlled 1% of
global wealth

Women are the most **valuable** and **UTILIZED** resource in the US and DEVELOPED WORLD economies

MODERN DONOR MY NICHOLS' WORTH
UNDERSTANDING THE INCREASING AFFLUENCE OF WOMEN
Judith E. Nichols, Ph.D., CFRE

The American Association of Fundraising Council Trust for Philanthropy estimates that women's charitable giving has increased by more than \$15 billion since 1996. Yet, most organizations still focus their fundraising efforts more heavily on men.

Globally, women's economic power is soaring. Women make 80 percent of all buying decisions around the world. In the United States women are, in effect, (one of the) largest national economies on earth, larger than the entire (!) Japanese economy.

•Women control most of the spending in the household - about 80 percent.

Still not convinced? In *The Power of the Purse: How Smart Businesses Are Adapting to the World's Most Important Consumer -- Women*, (Pearson/Prentice Hall 2006), author Fara Warner asserts that:

- Women account for more than 50 percent of all stock ownership in the United States. By 2010, women will account for half the private wealth in the country, or about \$14 trillion. By 2020, you can expect that number to reach \$22 trillion as wealth continues to

Women account for >50% of US stock ownership and when women of equal education, abilities and similar social status are compared *pay disparity disappears!*

- Women control or influence 67 percent of household investment decisions. Forty-three percent of Americans with \$500,000 or more in investable assets are women.
- Women control 48 percent of estates worth more than \$5 million.

http://www.supportingadvancement.com/vendors/canadian_fundraiser/articles/womens_affluence.htm

Women are the most **valuable** and **UTILIZED** resource in the US and DEVELOPED WORLD economies

Women control more than half of the investment wealth in the U.S., according to [Mary Quist-Newins](#) author of *Women and Money: Matters of Trust*.

The number of wealthy women in the U.S. is growing twice as fast as the number of wealthy men.

- Women represent more than 40% of all Americans with gross investable assets above \$600,000.
- 45% of American millionaires are women.
- 48% of estates worth more than \$5 million are controlled by women, compared with 35% controlled by men.
- 60% of high-net-worth women have earned their own fortunes.

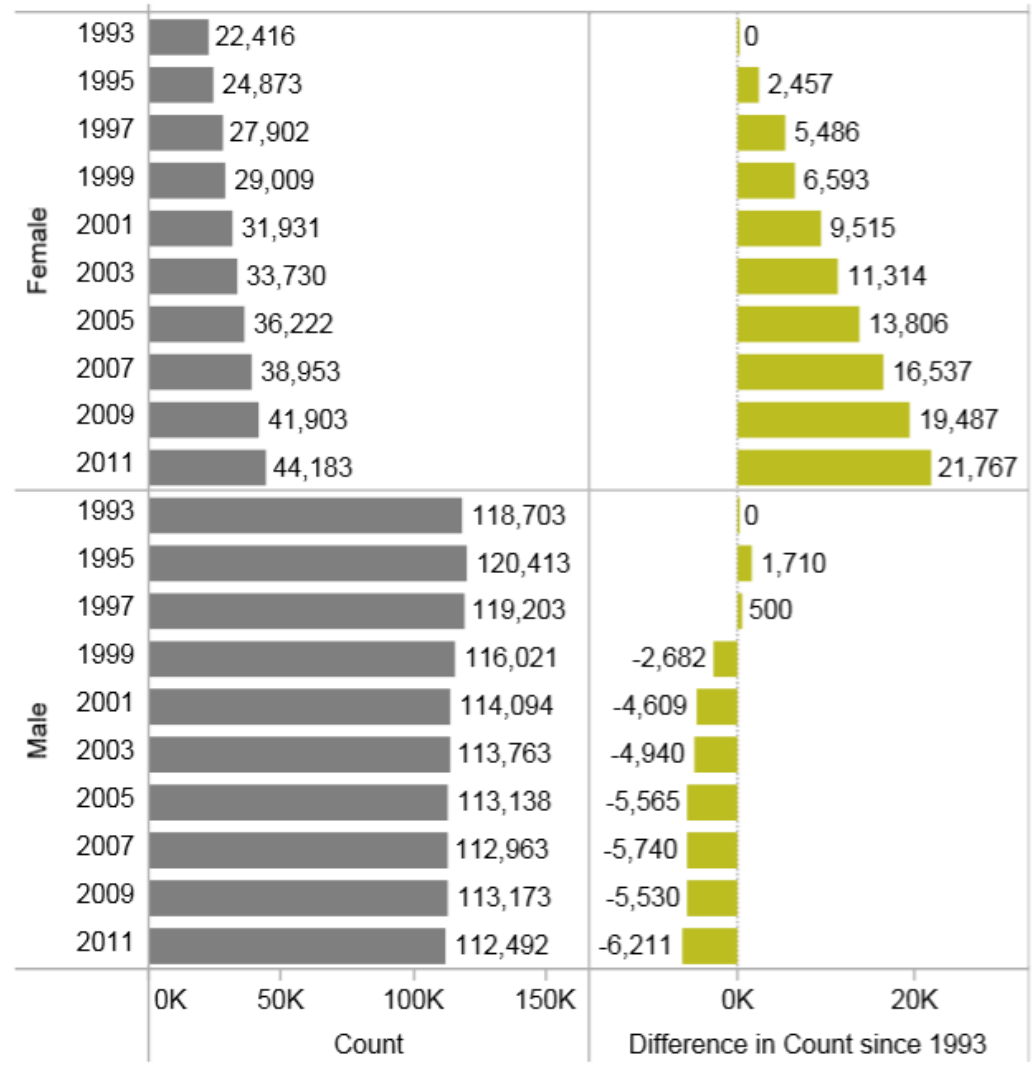
Some estimate that by 2030, women will control as much as two-thirds of the nation's wealth.

The past and *present* are prologue....

Women in the Academic Pipeline for Science, Technology, Engineering and Math: Nationally and at AAUDE Institutions April 2013

<http://aaude.org/system/files/documents/public/reports/report-2013-pipeline.pdf>

Figure 4. Number and cumulative change in number of full professors by gender



What Women Can *and are* Doing: Start ups

The number of \$10-million-plus women-owned firms increased by 57% — *a growth rate nearly 50% more than \$10-million-plus firms overall*, [Growing Under the Radar: An Exploration of the Achievement of Million-Dollar Women-Owned Firms.](#)

% of VC deals going to women-led businesses was 13% in the first half of 2013. Nearly a 20% jump over 2012, according to [Pitchbook](#), a venture-capital research firm.

U.S. ranked #1 among the top 17 countries on having the conditions that foster high potential female entrepreneurship, according to [Gender-Global Entrepreneurship Development Index \(GEDI\)](#).

<http://www.forbes.com/sites/geristengel/2014/01/08/11-reasons-2014-will-be-a-break-out-year-for-women-entrepreneurs/>

What Women Can *and are* Doing - Overall

Industry	Total Employed	% Women
Total	146,305	46.9
Agriculture and related	2,237	24.7
Mining, quarrying gas and oil extraction	1,088	13.3
Manufacturing	15,100	29.3
<u>Durable goods</u>	9,542	25.2
Machinery	1,291	20.7
Computers and electronic products	1,249	32.5
Transport equipment	2,307	25.2
Wood products	390	16.2
<u>Nondurable goods</u>	5,559	36.2
Food	1,726	40.7
Textiles and related	580	53.9
Paper and printing	933	30.2
Chemicals	1,333	34.4
Pharmaceuticals	486	47.5
Cosmetics, soaps, cleaning	139	46.3
Plastics and Rubber	478	28.7

<http://www.bls.gov/cps/cpsaat18.htm> Feb 2015

What Women Can *and are* Doing: Industry

Women In Industry

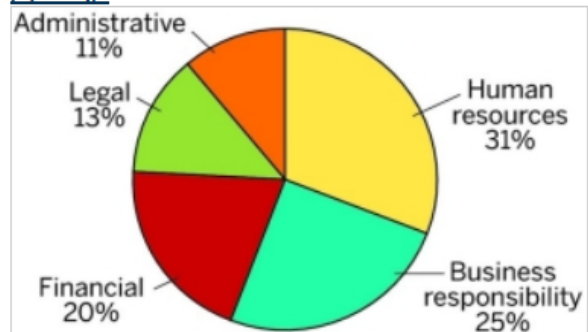
C&EN's annual survey finds an influx of women at the top of chemical firms, b

By [Alexander H. Tullo](#)

Department: [Business](#) | Collection: [Women in Chemistry](#)

Keywords: [women](#), [executives](#), [directors](#), [survey](#), [women in industry](#)

[\[+\]Enlarge](#)



Women in executive positions in 2013 = 45

GENDER ROLES

Human resources is the dominant role for female executives in the chemical industry. NOTE: Data are based on the companies listed on page 19.

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- Increases in women in top positions bring female representation in the **chemical industry close to levels seen in the corporate world at large.**
- Of the 407 board of director positions that exist at 42 public chemical firms, **14.5% are held by women...considered a sharp increase from the 13.6% share C&EN found in 2012.**
- women serving as **executive officers increased significantly** since 2012. Of the 406 executive officers, **11.1% are women, up from 9.9% a year earlier.**

Business Case for Diversity

Creates

Operational
Reputational
Financial
INNOVATION

Value



NOT a compliance exercise and NOT solely about gender –
there are compelling data on the value of
gender diversity!!

Diversity = Superior Intangible Asset Management



- Diversity improves
 - Operations, reputation, finance
- This is why
 - No single expert is better than an *informed, knowledgeable* and diverse group.
 - It's in the math!

Why it has to be women

Equality of opportunity is not just a matter of improving corporate diversity profiles. The simple fact is that companies that employ a higher number of women in senior positions tend to do better on a range of key measures than those that do not

By Judith Giordan

Women are tangible. We are flesh and blood capital and assets – and we deliver results. But at the value we bring to an organisation, we have traditionally been valued as intangible – not made as directly measured or able to be captured on a balance sheet – until now.

Zigzag Investor Capital has achieved a 7% average annual rate of return over the past 10 years. On 10th October, Investor Capital announced the latest asset worth of its Women's Leadership Fund, with a head including Charlie Blue, Kim Campbell and Jenny Shipley (the former Prime Minister of Canada) and New Zealand respectively) Heidi Trackler, the former CEO of the P&G New Zealand, and several others, reports to name only a few. The investment philosophy is to invest in 'Women' and a 'Women's Investing' theme which underpins the need for greater female representation, and taking an active stance against those which do not. In this way we have to make a real contribution towards achieving parity for women in the workplace.

The Women's Leadership Fund joins the angel group of Golden Seeds and the fund and a range of private equity investment in gender diversity in corporate

and represent efforts to invest in an often-undervalued intangible asset – the value of women and diversity to business for results and corporate responsibility.

Simply put, the fact is that the presence of women in corporate leadership positions adds tangible to the bottom line, and the National Association of Corporate Directors reported that companies with women on their board generate 21% in total corporate performance, including market value, enhancing brand identity, keeping the stock price high and improving corporate reputation. This paper reviews the evidence that there is a compelling business case – in terms of operations, reputation and finance – for promoting women's participation in corporate leadership and having women on the board. It also provides recommendations for specific actions women and companies can take to enhance and successfully engage in this paradigm shift.

Current state of gender diversity
The fact that women make up 50% of the population has, in many cultures, not translated into equal representation of women and diversity in senior corporate roles. In fact, the global gender gap index is generally low, with most countries at 0.75 or below, indicating that women are not as represented in leadership roles as men.

Not to be intangible, traditionally associated with factors such as "hard to see" or "not quantifiable", it is important to measure the impact of diversity on business performance. This is why we have to make a real contribution towards achieving parity for women in the workplace.

The Women's Leadership Fund joins the angel group of Golden Seeds and the fund and a range of private equity investment in gender diversity in corporate

www.ecosvc.com

Intangible Asset Management: www.intangible.com

The Wisdom of Crowds
Wisdom of Crowds, James Surowiecki, Doubleday, 2004. ISBN 0-385-72170-6
Why it has to be women, Judith Giordan, Intangible asset magazine, Jan-Feb 2010

When we **SHOW UP, STAY** and do it with **CONFIDENCE**

We **SUCCEED.....**

How many women millionaires?
Depends on the study

Robert Frank | @robtfrank
Sunday, 7 Jul 2013 | 11:00 AM ET



Getty Images

Sara Blakely, the founder of Spanx shapewear, is considered to be the youngest, self-made female billionaire in the world.

We've Met the Enemy - and She is Us



- Show up
- Stay
- Have **CONFIDENCE**

We've Met the Enemy..and She is Us?

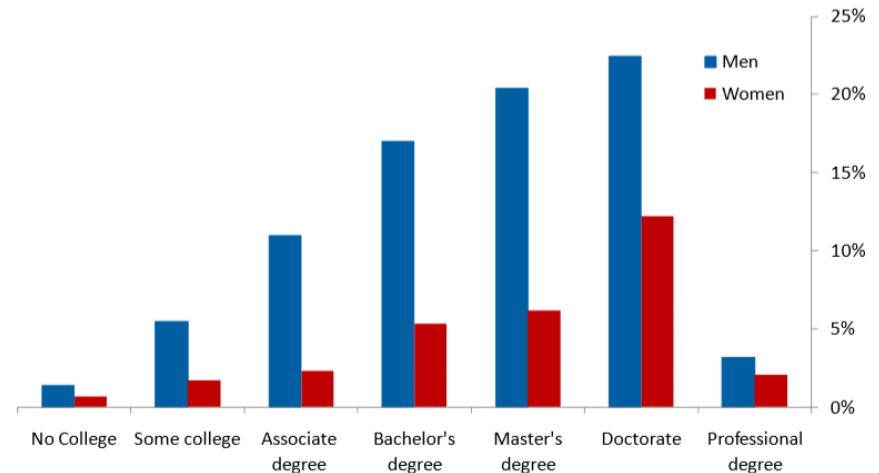
Show Up

Men outnumber women in most STEM careers, but....

- 17% of chemical engineers and 22% of environmental scientists are women but 70% of biologists and >50% of BS chemists!. *But that doesn't mean it's hard for women to get jobs in those fields. In fact, many companies want to hire and keep qualified women for STEM jobs.*

<https://www.iseek.org/careers/womenstem.html>

Figure 2. Share of Workers in STEM Jobs by Gender and Educational Attainment, 2009



Source: ESA calculations from American Community Survey public-use microdata.

Note: Professional degrees include medical, dental, veterinary, and law degrees. Estimates are for employed persons age 16 and over.

<http://www.esa.doc.gov/sites/default/files/womeninstemagaptoinnovation8311.pdf>

We've Met the Enemy..and She is Us?

Show Up

- Women *expect* lower salaries than men for the same jobs
- Men *expect* to earn more than women

... **13 percent** more than women during their first year of work; **32 percent** more at their career peaks

Women Don't Ask – Women and the gender Divide; Babcock and Leschever;
<http://www.womendontask.com/stats.html>

We've Met the Enemy..and She is Us? Show Up

- 30% of male post-docs expected their wives to make career concessions...

....15% of female post-docs expected the same from their husbands.

EMBO Reports 8:977, 2007

We've Met the Enemy..and She is Us?

Stay

- *One year into a profession in science, technology, engineering, or math (STEM), women are far more likely to leave their jobs than their male coworkers.*
- A [new study](#) by the Center for Talent Innovation finds that **women call it quits 45% more often in their rookie years at such STEM jobs than men!**

WHY?

- Bias?
- Isolation?
- Lack of SISU?

<http://thinkprogress.org/economy/2014/02/13/328786/1/women-leaving-stem-jobs/>

<http://www.fastcompany.com/3037075/strong-female-lead/why-are-women-are-leaving-science-engineering-tech-jobs>

We've Met the Enemy..and She is Us?

Stay

cultural shifts required for the workplace to fully be an inclusive environment: (a) **focus** on quality of work/projects completed rather than number of hours worked, (b) **invest** in teleconferencing technologies and to encourage the use of them, (c) **re-evaluate** family values and a commitment to family life and responsibilities, (d) **understand** that work-life balance is not a women issue, "balance would be better for all", and (f) **"enlist men"** in the creation and support of these policies.

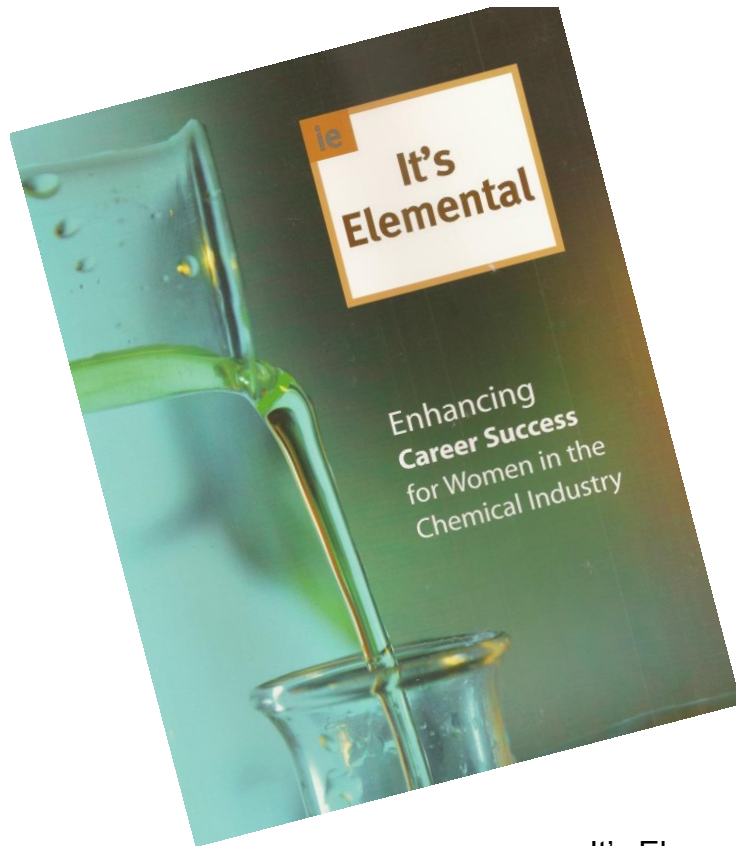
<http://www.theatlantic.com/magazine/archive/2012/07/why-women-still-cant-have-it-all/309020/>

- To MAKE REAL CHANGES...

requires BEING AT THE TABLE...and THAT requires STAYING

We've Met the Enemy..and She is Us?

Confidence



- Strong links between actual success (e.g., salary, position) and **attitudes and beliefs**

It's Elemental: Enhancing Career Success for Women in the Chemical Industry
<http://static.squarespace.com/static/511d1130e4b0555e6be263d4/t/51deb30ee4b063b4f5667136/1373549326095/It%27s%20Elemental%20-%20Project%20Enhance%20-%20Giordan.pdf>
Fassinger/Giordan



We've Met the Enemy..and She is Us?

Male-female differences

Perceptions

- Male managers
 - More level playing field for women
- Female managers
 - More supportive of women
- **Male and female managers**
 - **Overestimate home-work stress experienced by women.**

It's Elemental: Enhancing Career Success for Women in the
Chemical Industry
Fassinger/Giordan

Women In Industry

C&EN's annual survey finds an influx of women at the top of chemical firms, but equality is far off

By [Alexander H. Tullo](#)

[Judith C. Giordan](#) says she has identified an obstacle for women in these fields and, for that matter, for scientists in general. **She says they are too reserved in talking about their accomplishments and thus rarely gain the clout held by marketing and sales people.**

“We are not the ones who will jump up and down,” Giordan tells C&EN. “We are trained to publish and give talks. That is how you get your point across.”

Giordan says women may be less inclined to take credit than male scientists because they are afraid of coming off as aggressive or are hesitant to speak unless they have data that back them up. “It is false modesty,” Giordan says.

“If you have the solution to the problem and you don’t open your mouth about it, whose fault is it that the problem wasn’t solved?”

We've Met the Enemy - and She is Us

Confidence



- **CHANGE THE DIALOGUE...and *change* the game**
 - Personal
 - Business

21st-Century New Contact Sport Career Development



- The rules *are* and *must change...and*
- *We must help change them.*
- **Requires knowledge of the rapidly evolving landscape *and* full commitment and skill**

Take a page from the Ann playbook!...



A great role model for...

- **SHOWING UP**
- **STAYING**
- **And being CONFIDENT!!!**

Chemical Angel Network



Home Investors Entrepreneurs Sponsors Portfolio Profile Calendar

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THE POWER OF TRAINING

ecosVC brings the power of training and investing to science and engineering innovators enabling the translation of your research into commercial innovations to meet the needs of people and the planet.

Thank you!

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Resources

EXTENDED SLIDES WILL BE AVAILBLE on www.ecosvc.com. There's also other stuff that may be interesting to you! 😊 (NOTE THE SMALL BRAG!)

It's ELEMENTAL:

<http://static.squarespace.com/static/511d1130e4b0555e6be263d4/t/51deb30ee4b063b4f5667136/1373549326095/It%27s%20Elemental%20-%20Project%20Enhance%20-%20Giordan.pdf>

Women's Guide to Successful Negotiating: http://www.amazon.com/Womans-Guide-Successful-Negotiating-Collaborate/dp/0071389156/ref=pd_bbs_sr_1/104-3828629-1382362?ie=UTF8&s=books&qid=1185817601&sr=1-1

HBR:

1. http://harvardbusinessonline.hbsp.harvard.edu/b02/en/common/item_detail.jhtml?id=R0104E&referral=1043 (negotiations)

2. http://harvardbusinessonline.hbsp.harvard.edu/b02/en/common/item_detail.jhtml?referral=1933&id=1024&profileId=245785603&DARGS=/b02/en/includes/product_upsell_display_center.jhtml A& DAV= (negotiations)

3. http://harvardbusinessonline.hbsp.harvard.edu/b02/en/common/item_detail.jhtml?id=3469&referral=2340 (career networking)

4. http://harvardbusinessonline.hbsp.harvard.edu/b02/en/common/item_detail.jhtml?id=R0701C&referral=2340 (career networking)