

El género y su impacto en las ciencias, la tecnología, las ingenierías y las matemáticas

Genoveva Vargas-Solar

Senior Scientist, French Council of Scientific Research, LIG-LAFMIA
genoveva.vargas@imag.fr

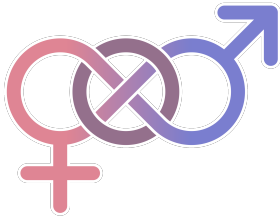
<http://vargas-solar.com/w-stem/>



DISCLAIMER

1 Género

Biología



Sociología

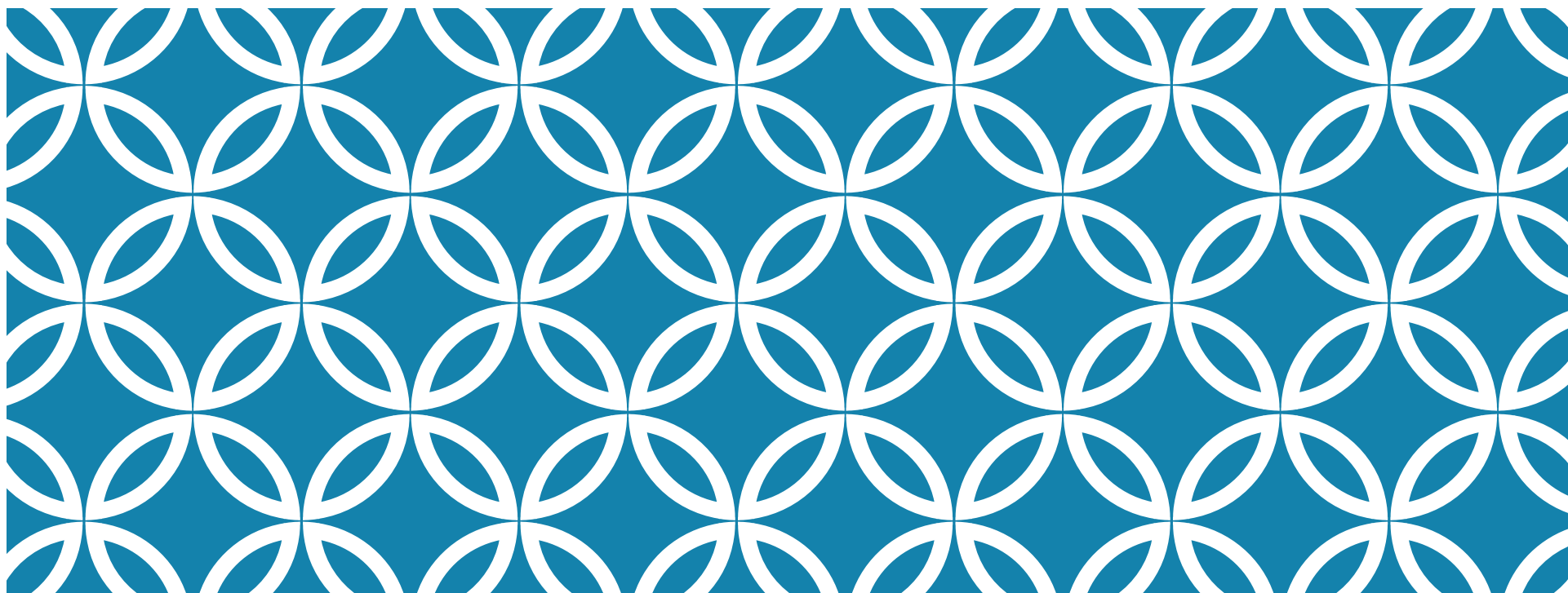


2 Los asuntos de género



3 Debate político - científico

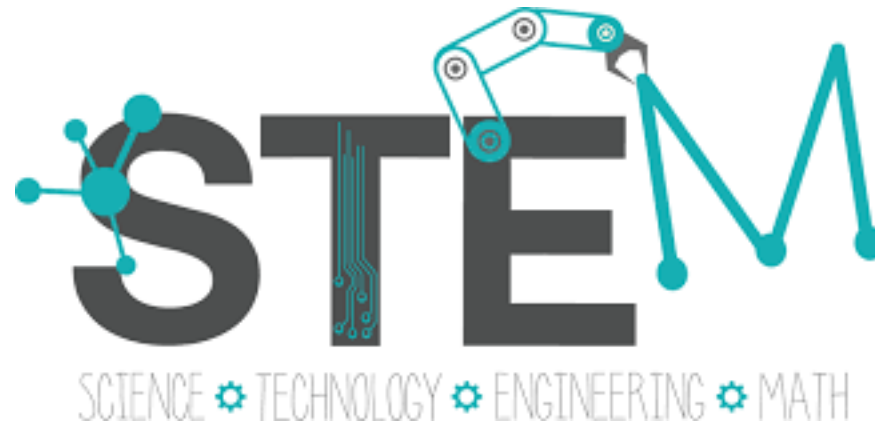




VOCABULARIO E HIPÓTESIS

Segunda parte

VOCABULARIO



- Designa las disciplinas académicas de ciencia, tecnología, ingeniería y matemáticas
- Término utilizado para abordar determinados tratamientos sobre temas relacionados con las ciencias, la educación, la fuerza de trabajo, la seguridad nacional o la inmigración.

VOCABULARIO



Feminism
is
Humanism
Equality Matters

- Alternativa de distribución de oportunidades y de responsabilidades
- No confinar a ningún grupo social según sus características fisiológicas a ningún macro o microcosmos
- Dar acceso a los individuos a toda actividad disponible en la sociedad según sus intereses, sus capacidades y méritos



Male domination is so rooted in our collective unconscious that we no longer even see it.

Pierre Bourdieu

meethille.com

VOCABULARIO



Maximiliano Reyes Esta última campaña que andan sacando de "mujeres poderosas" deja mucho que desear, espero y no salgan con sus estupideces del feminismo, porque es lo último que ando viendo en sus publicaciones de estos últimos días, porque día con día leo los artículos que publican y no, no me parece el giro que le están dando a ésta campaña

Like · Reply · 55 · 3 hrs

[View previous replies](#)



Forbes México De hecho, en el Foro Forbes #MujeresPoderosas del 21 de junio habrá hombres también participando. Se busca la equidad de género. Saludos.

Like · Reply · 189 · 3 hrs · Edited

[View more replies](#)



Daniel Ramirez Piedra Claro, lo triste es que las niñas de ahora ven de ejemplo a las enfermas Kardashian u.u

Like · Reply · 83 · 4 hrs

[6 Replies](#) · 7 mins



Juan César Martínez Esa si es una cabrona y luchona... No como las que tienen 16 años, secundaria truca y un chiquito que cuida la mamá para irse de zorritas a buscar otro macho 🤔

Like · Reply · 92 · 3 hrs

[8 Replies](#) · 6 mins



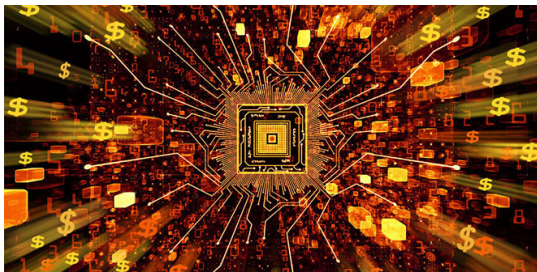
Jorge Javier Guillermo este tipo de personas son...

Write a comment...



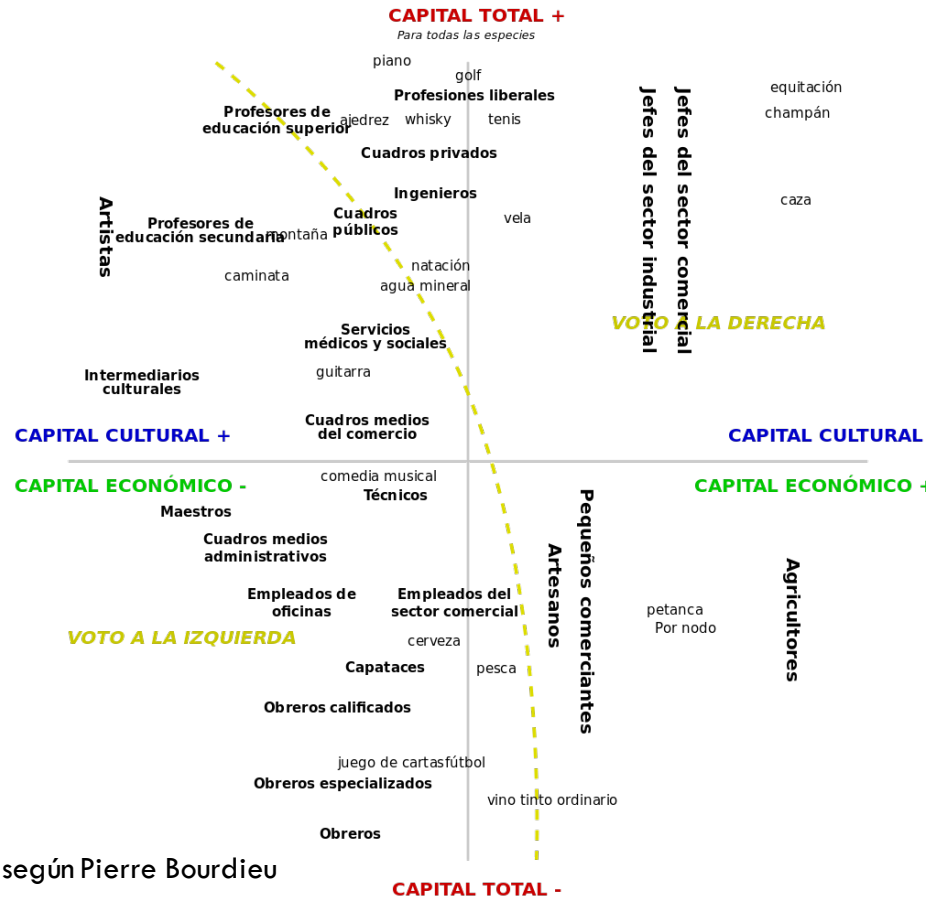
HIPOTESIS

Asuntos de género en STEM: capital y poder

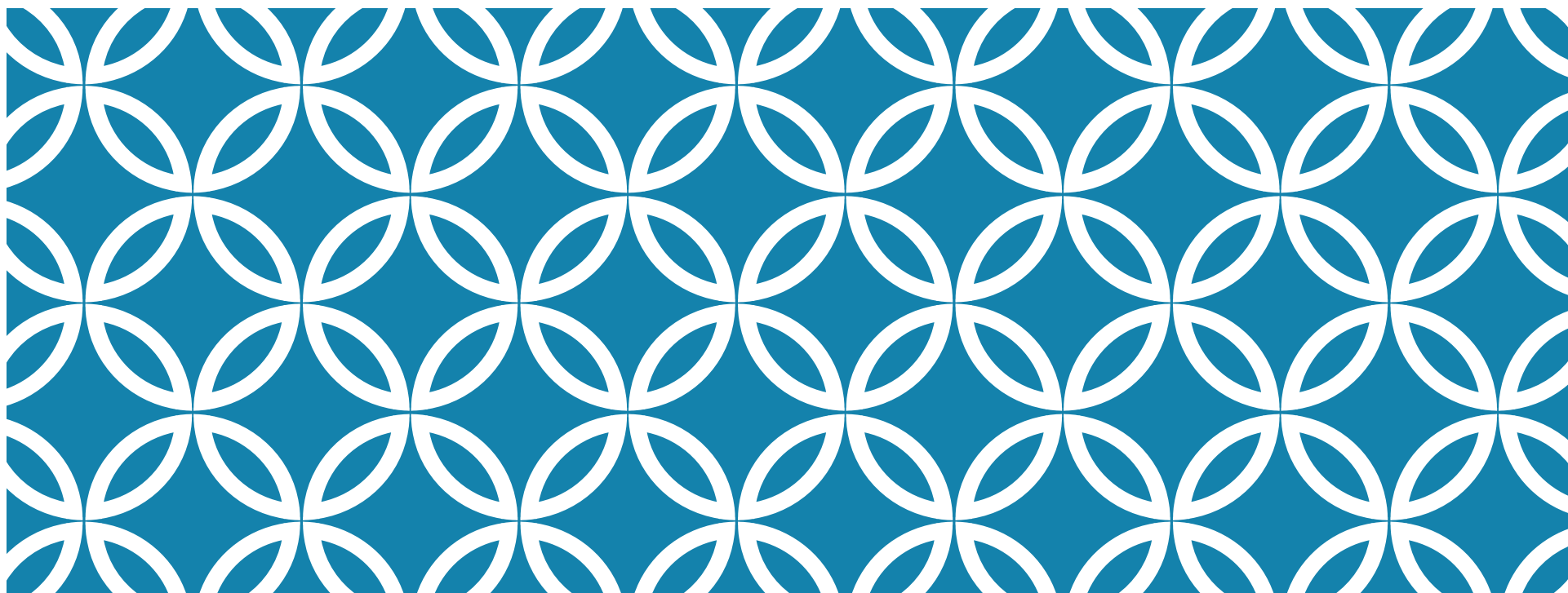


Sistema de capitales: educativo, material y cultural
Pierre Bourdieu en un sésamo

HIPOTESIS



Espacio social y prácticas sociales según Pierre Bourdieu



STEM EN NÚMEROS

Tercera parte

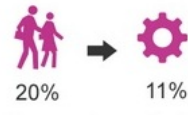
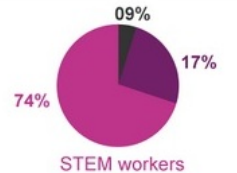
OBSERVACIONES Y NÚMEROS

Asuntos de género en STEM se resumen en un problema de equilibrio

STEM Facts on Women & Girls



74% of STEM workers are male. Only 26% are female.

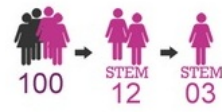


Women comprise more than 20% of engineering school graduates, yet only 11% of practicing engineers are women



Women were 28% of all workers in S&E occupations in 2010, up from 21% in 1993

Women's presence among computer/mathematical scientists declined from 31% to 25% over the period, but only because men's rate of growth in this area was higher than women's. The number of women working in computer/mathematical sciences has increased more than in any other broad occupational area.



Of 100 female bachelor students, 12 graduate with a STEM major but only 3 continue to work in STEM fields 10 years after graduation.



The wage gap between women and men is much smaller in STEM occupations than other occupations. In STEM fields, women earn \$0.92 for every \$1 earned by men, compared to \$0.77 for other fields.

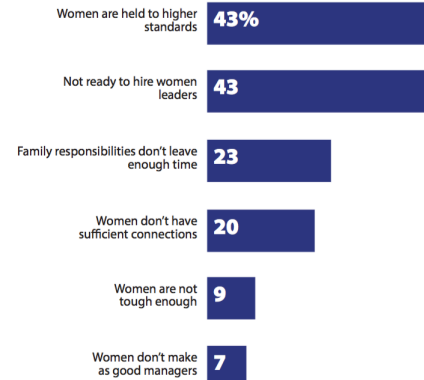


Although women fill close to half of all jobs in the U.S. economy, they hold less than 25 percent of STEM jobs.

Women with STEM jobs earned 33 percent more than comparable women in non-STEM jobs, considerably higher than the STEM premium for men. As a result, the gender wage gap is smaller in STEM jobs than in non-STEM jobs.

What's Holding Women Back from Top Executive Business Positions?

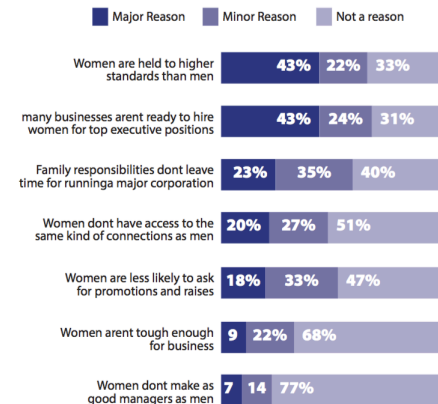
% saying each is a major reason why there aren't more women in...



Source: Pew Research Center survey, Nov.12-21, 2014

Why Aren't More Women in Top Executive Business Positions?

% saying women/men in top positions are good at...

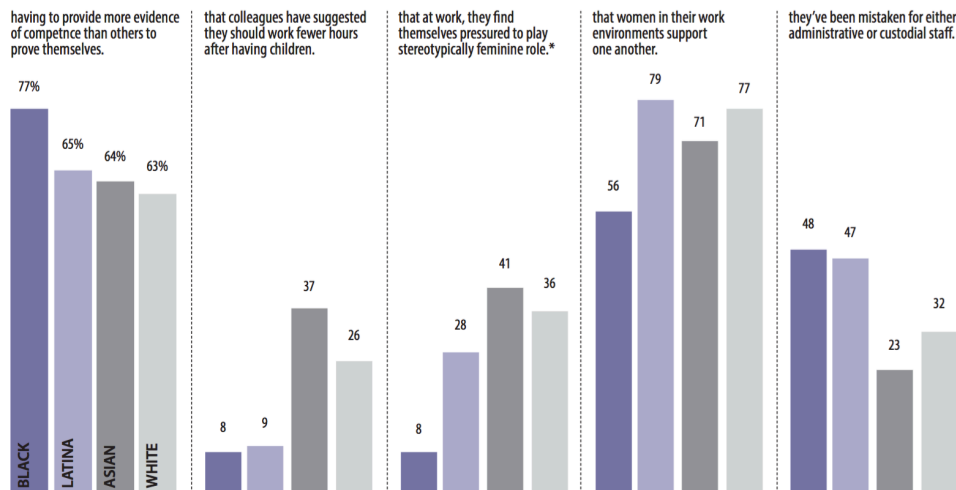


Note: "No answer" not shown.

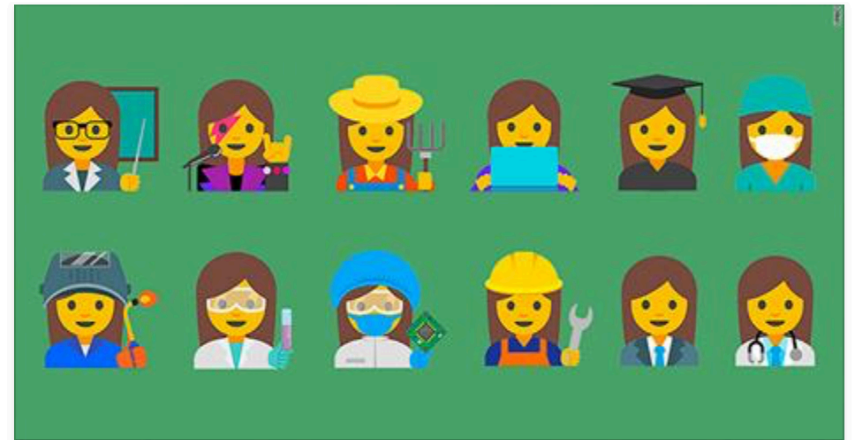
Source: Pew Research Center survey, Nov.12-21, 2014

EL GÉNERO DE LA PROFESIÓN

Percent of U.S. Women in STEM Who Report...

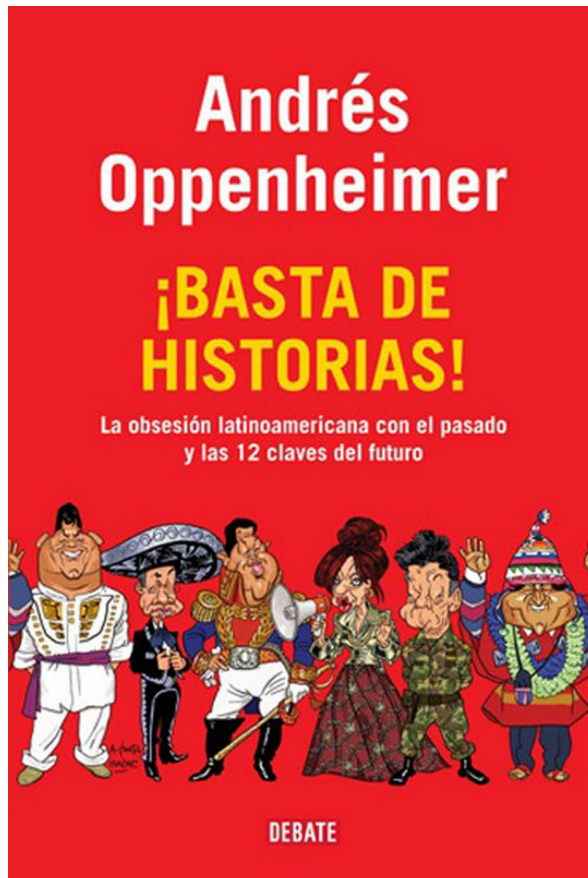


* Such as "Office Mother" or "Dutiful Daughter."
Source: Joan C. Williams, Katherine W. Phillips, and Erika V. Hall



- Se ha apareado a las áreas del conocimiento con los roles sociales masculino y femenino
- Se ha pensado que los hombres son más aptos para abordar cierto tipo de áreas del conocimiento que otras
- La división es mucho más compleja porque intervienen también el factor socio cultural y el racial

DESEQUILIBRIO EN STEM



OBSERVACIONES Y NÚMEROS

En 14 países la probabilidad de que las estudiantes terminen una licenciatura, una maestría y un doctorado en alguna materia relacionada con la ciencia es de 18, 8 y 2% respectivamente, según la ONU

La ANUIES detalla que en el ciclo escolar 2014-2015 estudiaban

- licenciatura un millón 842 mil 978 mujeres y un millón 876 mil 17 hombres en todo el país;
- posgrado 167 mil 967 mujeres y 146 mil 30 hombres.

RAZONES

WHY DIVERSITY MATTERS

A wealth of research now demonstrates enhanced business outcomes when women and other underrepresented groups occupy meaningful innovative and leadership roles.

CONSIDER JUST A FEW EXAMPLES:

RACIAL & GENDER DIVERSITY =

A study of 500 U.S. based companies found that **HIGHER LEVELS OF RACIAL & GENDER DIVERSITY** were associated with **INCREASED** sales revenue, more customers, greater market share & greater relative profits.



In a study of more than 1000 teams at 31 companies, **TEAMS WITH EQUAL NUMBERS OF WOMEN AND MEN** were more likely to experiment, be creative, share knowledge, and fulfill tasks than teams of any other composition.



A study of work teams found that the intelligence level of individual team members was not a predictor of the collective intelligence of the team. However, having **MORE WOMEN** on the team was associated with **HIGHER LEVELS OF COLLECTIVE INTELLIGENCE**.



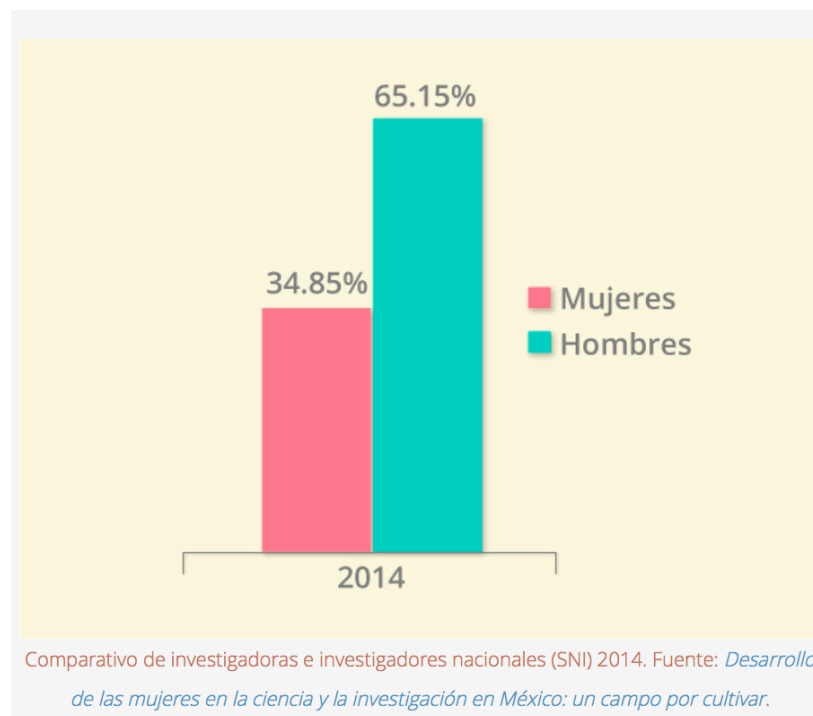
An analysis of more than 20,000 venture-backed companies showed that **SUCCESSFUL** tech startups have twice as many **WOMEN IN SENIOR POSITIONS** as unsuccessful companies.



Using computer and mathematical modeling, a series of studies demonstrated that **diverse teams** consistently **OUTPERFORM** even the teams comprising only the highest-ability members.

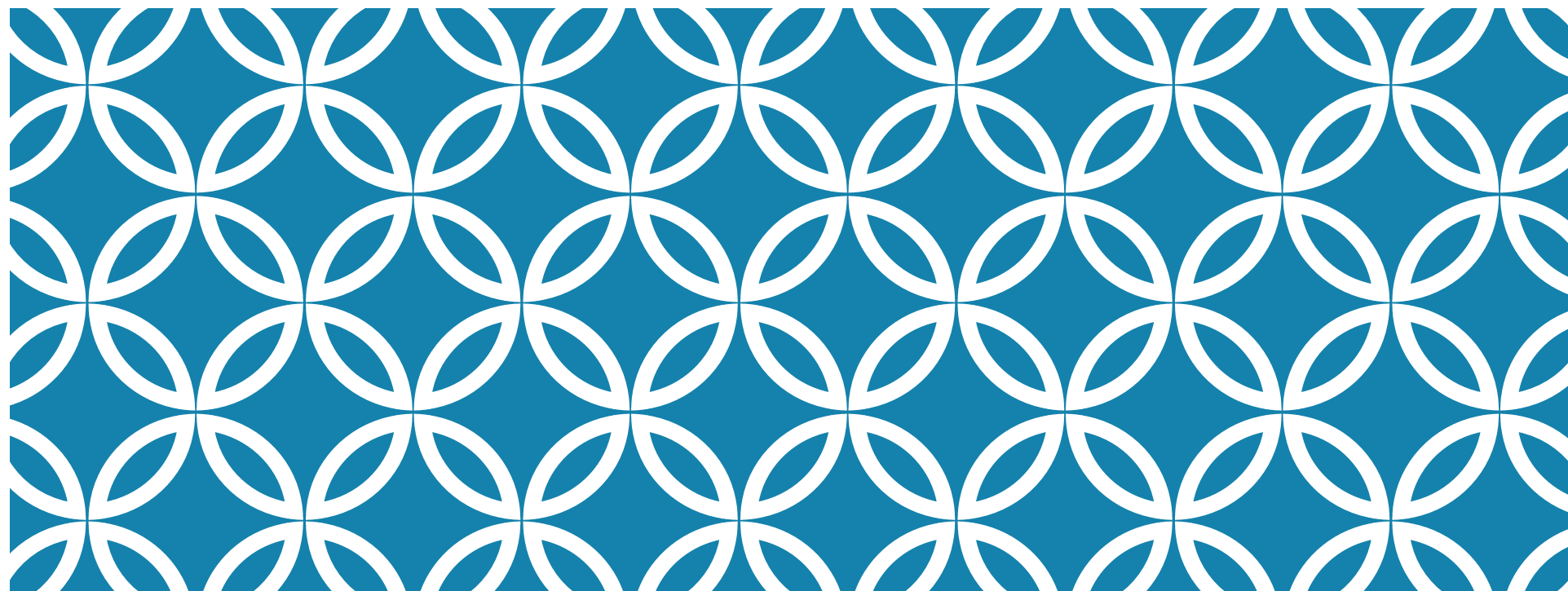
OBSERVACIONES Y NÚMEROS

- 21 % candidato
- **58 % nivel I**
- 15 % nivel II
- **5 % nivel III**



- Biología
- Química
- Humanidades
- Ciencias de la conducta

- Ciencias sociales
- Medicina
- Ciencias de la salud

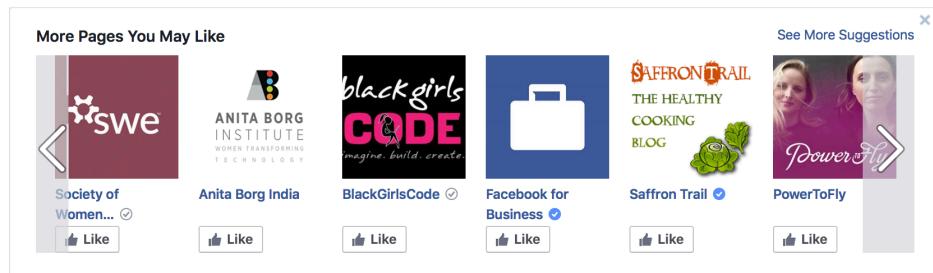
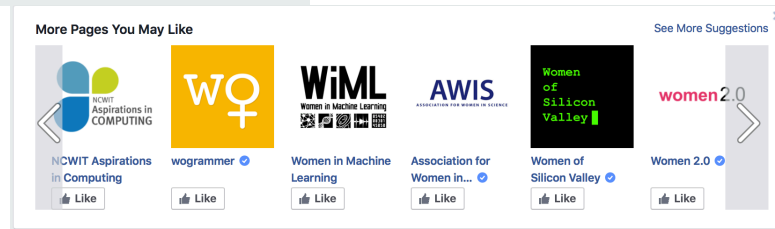
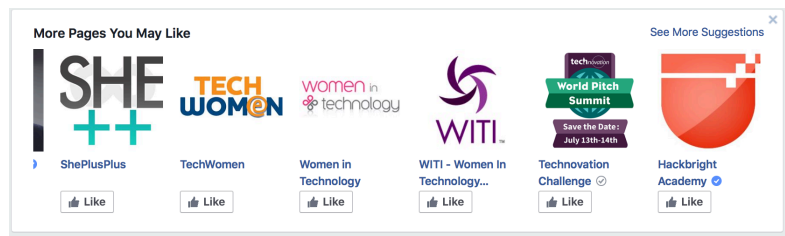


PASAR AL ACTO

Tercera parte bis

PASAR AL ACTO

Fomento dando alas duraderas



Discriminación positiva

solución de fachada o derecho a la estupidez

Deanna Kosaraju ▸ **Global Tech Women**
June 9 at 10:54am · 🌐

Afghanistan: Coding School for women opens



Afghan Coding School Opens Window of Opportunity – Women & Girls Hub

Enhancing Education Afghan Coding School Opens Window of Opportunity A new female-only coding school is helping launch a quiet revolution in Afghanistan,...

NEWSDEEPLY.COM

Un hombre que lee, o que piensa o que calcula, pertenece a la especie y no al sexo; en sus mejores momentos, escapa incluso a lo humano

Marguerite Yourcenar

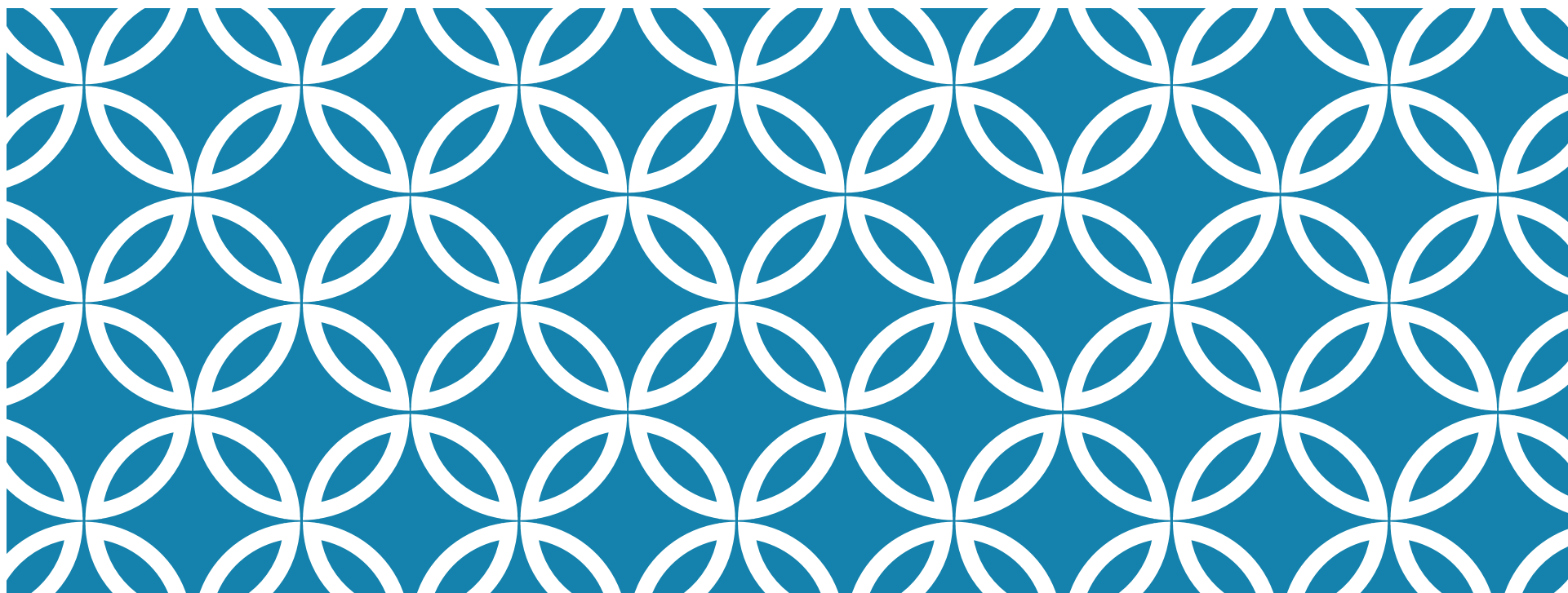


Genoveva Vargas-Solar

Senior Scientist, French Council of Scientific Research, LIG-LAFMIA

genoveva.vargas@imag.fr

<http://vargas-solar.com/w-stem/>



TRIVIA

Epílogo

TRIVIA: WOMEN@STEM IN THE WORLD



Prof. Myriam Mirzakhani
U. Stanford



Prof. Frances Arnold
U. Caltech



Dr. Catherine Hamlin



Eng. Margaret Hamilton
Software Engineer, Project Apollo



Prof. Silvia Torres Peimbert
UNAM



Prof. Ana María Cetto
UNAM, Instituto de Física



Sheryl Sandberg
Facebook COO



Susan Wojcicki
YouTube CEO



Prof. Nieves Brisaboa
U. A Coruña