

Call for action on diversity and inclusion in academia

Special Invisibles Event

- * Prof. Hitoshi Murayama (UC Berkeley and IMPU Tokyo)
- * Dr. Lou Strolger (Space Telescope Science Institute)
- * **Prof. Denise R. Gonçalves**
Valongo Observatory, Federal University of Rio de Janeiro- Brazil
- * Dr. Daniel Hernández (Google)
- * Prof. Patricia Conde Muiño (IST Lisbon)

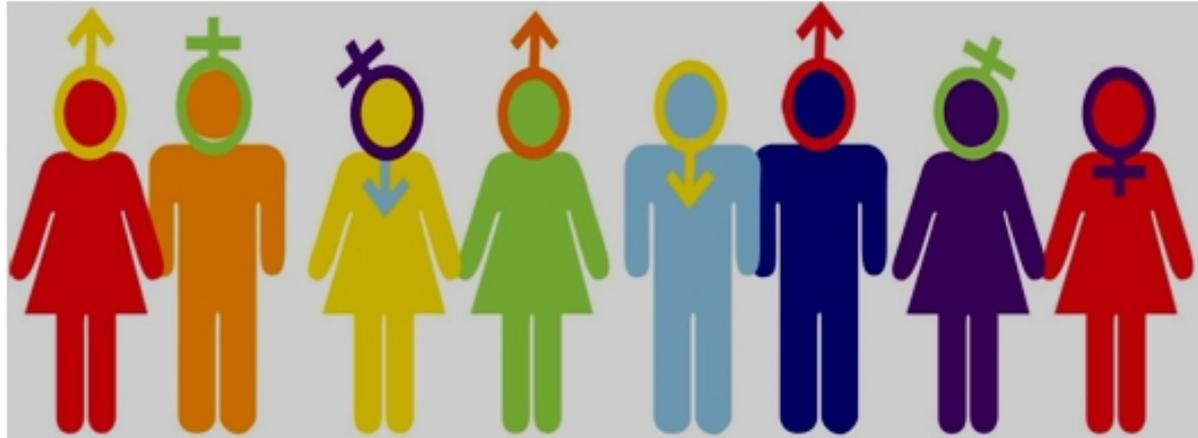
Premises

“

- **Diversity**, equity, and inclusion can **increase creativity** and **contribute to individual and collective development**, besides providing equal opportunities and avoiding the loss of talented people.
- **New concepts and different perspectives**, education and science can benefit and, reciprocally, **exert positive feedback in favor of changing the observed picture of inequality**.
- **Intercultural diversity** is also seen as **essential for critical thinking**.

All especially desirable in Brazil -- whose economy is one of the strongest in the world and, at the same time, one of the most unequal.”

Facts



Discrimination-free zone

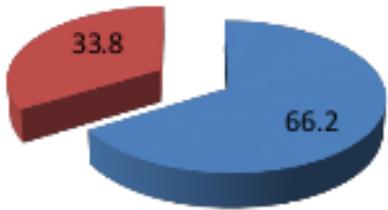
The issue of the distribution of professionals in STEM/academia goes far beyond that of the gender distribution...



- 54% of Brazilians are non-white
- Brazil is not a racial democracy: whites have higher salaries and face less unemployment

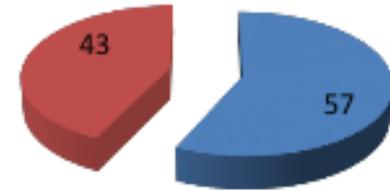
Number Evolution of the Master and PhD holders in Brazil Per Gender

1980

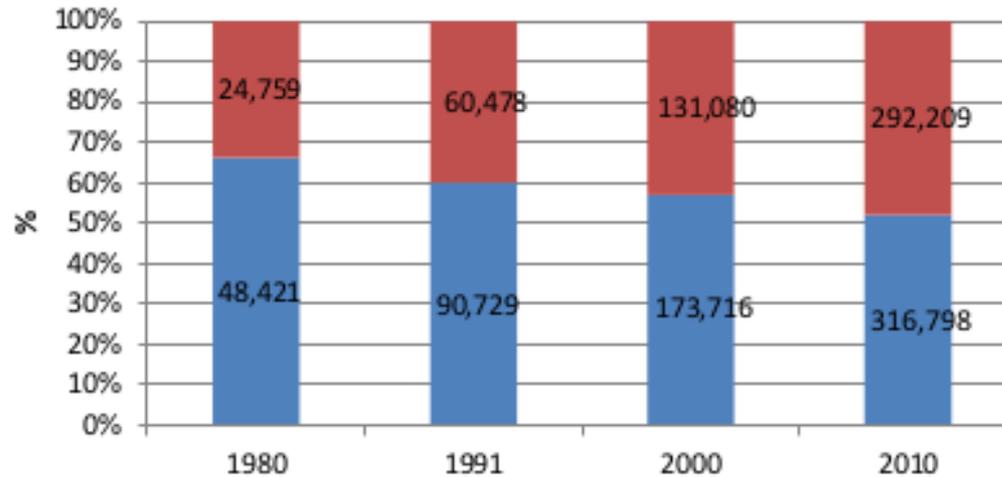


Male
Female

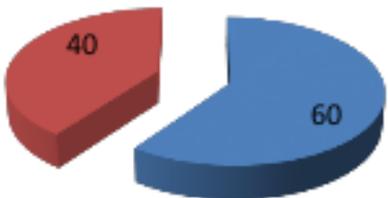
2000



Male
Female

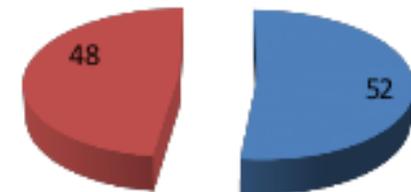


1991



Male
Female

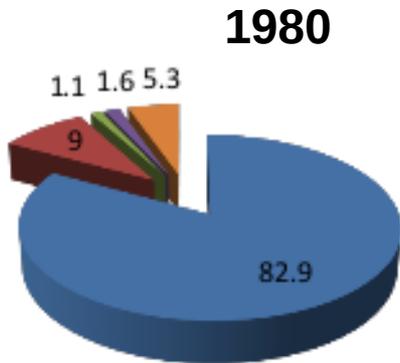
2010



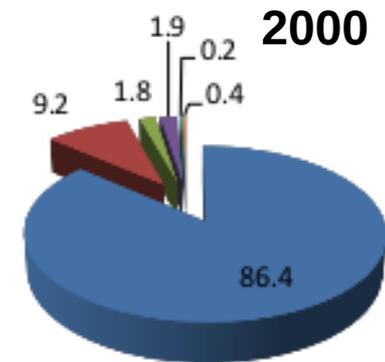
Male
Female

➔ Up to obtaining the PhD degree, if all areas are considered, figures for female and male are in equilibrium.

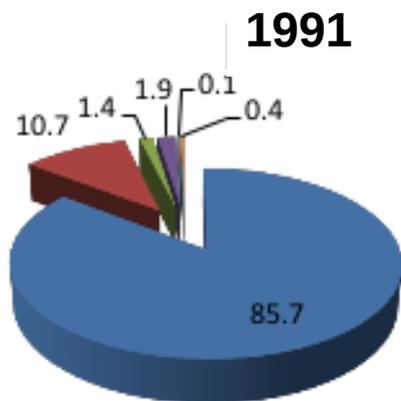
Number Evolution of the Master and PhD holders in Brazil Per Race



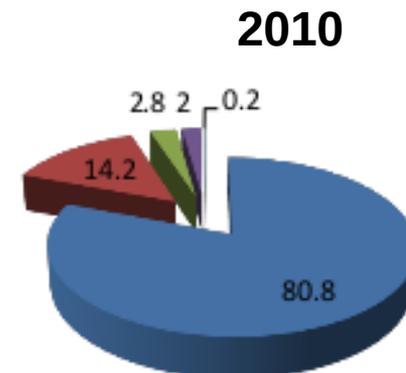
White
Parda ("brown")
Black
Asian
Indigenous
Others



White
Parda
Black
Asian
Indigenous
Others



White
Parda
Black
Asian
Indigenous
Others

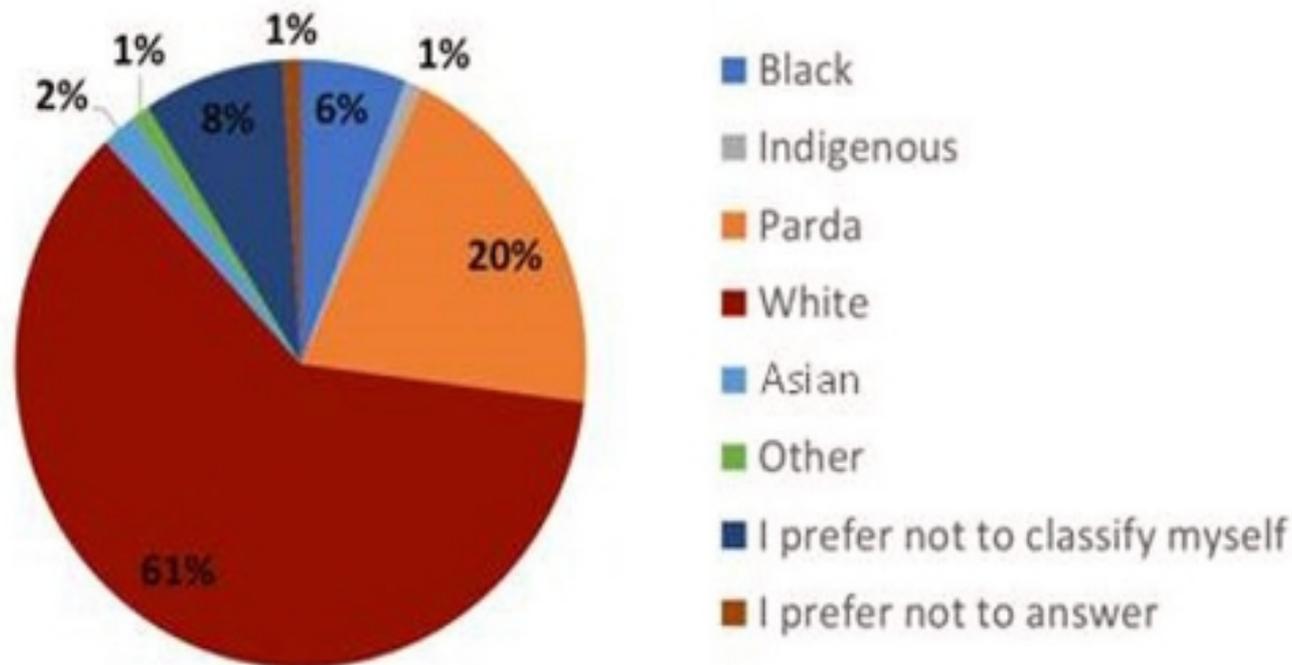


White
Parda
Black
Asian
Indigenous
Others

➔ Education Ministry suggested policies that were mostly not implemented due to the political crises since 2014

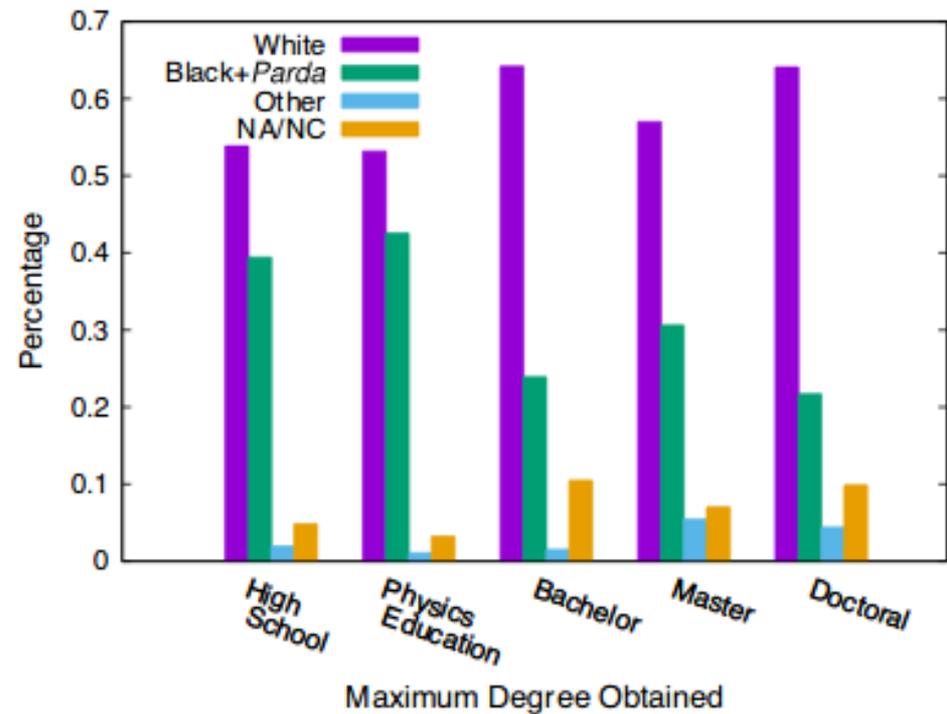
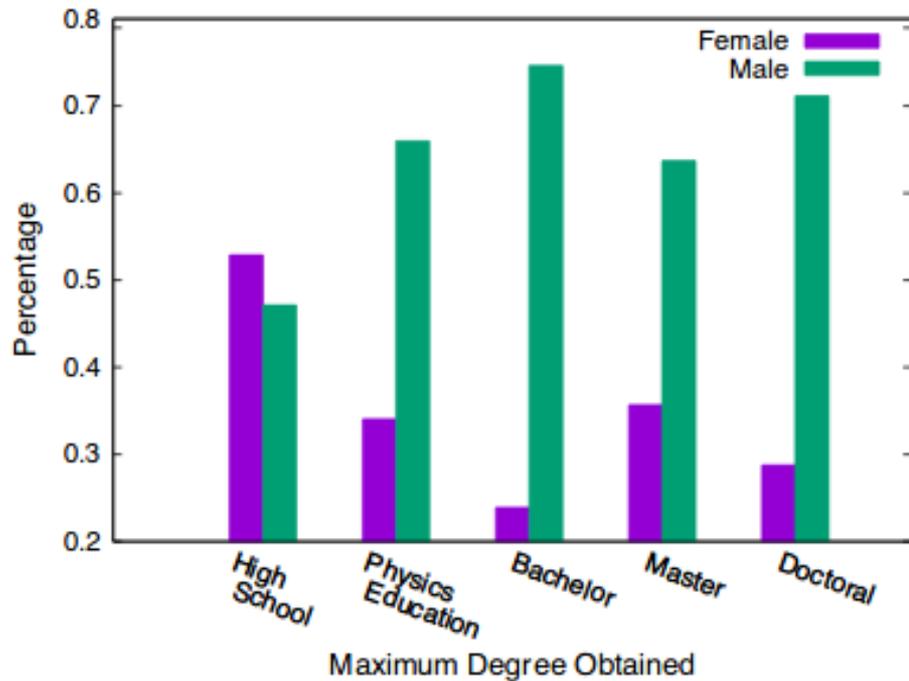
Brazilian physicists community diversity, equity, and inclusion: a first diagnostic

– The survey (students and professionals) goal was to understand the composition of this community in terms of the social markers of difference age, race, ethnicity, geographical origin, sex, gender, sexual orientation and disabilities.



Brazilian physicists community diversity, equity, and inclusion: a first diagnostic

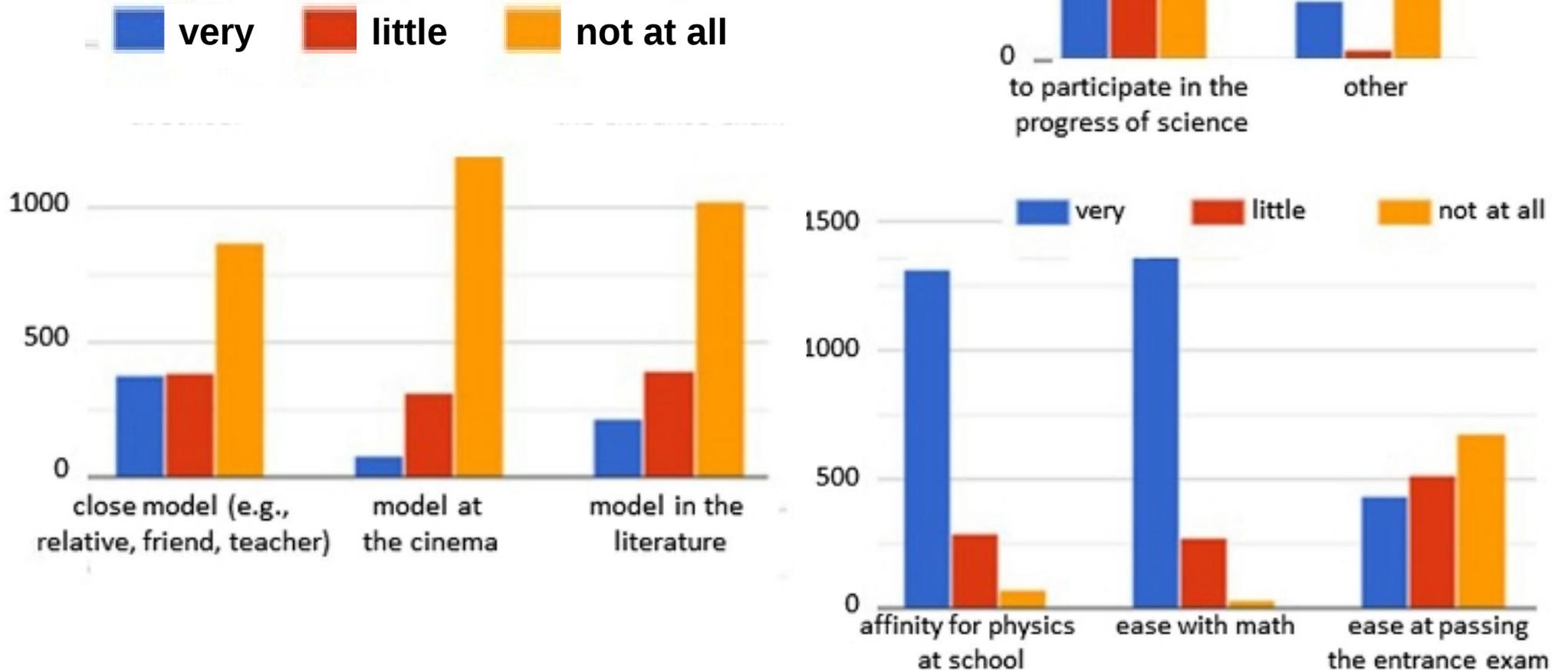
- Highest degree attained, separated by race or ethnicity group



Physics education and bachelor's correspond to undergraduate degrees at the same level.

Brazilian physicists community diversity, equity, and inclusion: a first diagnostic

– Motivations for choosing physics and the lack of model



Histograms showing the number of (nonexclusive) responses associated with each motivation

One possible path: the relevance of models

Actions to motivate higher diversity in the STEM

The clear trends in terms of gender and ethnicity lead a number of outreach activities in Rio de Janeiro: communicating astronomy by visiting public (no fees) high-schools

These visits emphasized that:

- Brazilian students do not consider science because they don't have models to follow.
- Brazilians, in general not only students, are often unable to quote Brazilian scientists.
- Brazilian students get very motivated to follow their skills on maths and physics after having contact with scientific results and scientists, not to mention the non-white females.
- I found a very similar situation in Addis Ababa and Mbarara (Feb 2020; East African Regional Office of Astronomy for Development).

– An Astrophysicist – gender and race in the choice for science



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