Black under-**representation** in STEM

The role of Colonialism in HE

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Representation; Nobel prize?

- *After over 100 years, there has not been a single Black Nobel Laureate in science* (616/950).   Only 16/950 **(1.7%)**

- How surprising or relevant is this?

- **1.2 Billion out of a world population of about 7.7 billion are described as Black (15%.)**

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Other Nobel prize under-represented groups

- Asians 80/950 (8.4%) laureates, most in science.
- Women 54/950 (5.7%)

- **The overall Nobel prize gap**
- **44.3% women**
- **51.6% Asians**
- **13.3% Black**

- In 2020 there is a clear path to representation for Asians and women **but not for Blacks**

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Role models, who are they for?

- *You can only be it if **you** can see it.*

- The focus on the student (deficit model).

- The realty:

- You can only be it if **others** can see it.

- The focus on teachers and society.

- The problem starts at school where teachers begin to imagine students in different roles. **Few imagine a Black Physicist**

- Ho many of us have worked with **Black Physicist?**
- https://www.google.com/search?client=firefox-b-d&q=black+physicists

Progression of UK undergraduate students by ethnicity (Advance HE 2019)

	%	Continue or qualify	Transfer	No longer in HE
White	73.9	91.3	1.9	6.8
BAME	26.1	86.8	4.3	8.9
Black	7.9	84.2	4.5	11

Degree outcomes for UK undergraduate students by ethnicity (Advance HE 2019)

	First/2;1	First
White	81.3	31.7
BAME	67.7	20.8
Black	57.6	14.0

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Distribution of Academic staff by ethnicity

UK population by ethnic group	Academic staff by ethnicity (%)	Distribution of Professors (% of total)	Academic staff who are Professors by ethnicity (%)
White (85)	91	92.3	10.9
Asian (8)	**3.6**	**3.1**	9.4
Black (4)	**1.2**	**0.5**	**4.5**
Chinese (0.7)	1.3	1.8	14.3
Mixed (1)	1.4	1	7.1

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- Data from Advance HE, the sector is short of more than 300 black professors and 2,000 black academics.

- Academics are the **gatekeepers of university success.**

- Many suggest the answer is to **Decolonise the curriculum and the university**.

- **What does decolonise mean**?

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- A colonised educational system ignores or excludes perspectives which do not have their origins in western Europe.

- *To decolonise is to rethink, reframe and reconstruct the* **curricula, research and teaching** *so that it is more reflective of the UK and the world today.*

- *Easier to change the curricula (**the reading list**) in social science.*

- The challenge for STEM

- Difficult to change the curricula, but you can rethink, reframe and reconstruct research and approach to teaching.

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A problem with Ontology and Epistemology

- **Ontology**; what is knowledge (reality):
-        many truths (social science) or one truth (STEM)

- **Epistemology**; how you acquire knowledge:
-        many approaches (social science) or one approaches (STEM).

- The perception and reality of STEM today is:

- That the single truth and approach can only be achieved by students, researchers or academics from certain backgrounds.

- The role of bias and teaching through bias.

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- **Initial steps to decolonising the university**

- In your scholarly activity, actively seek out successful people from different racialized groups, regardless of the field, the more you search the more you will find.

- Use these examples in your teaching

- *Invite a **non-white colleague to** collaborate on a research project that does not involve race.*

- *Take on a graduate student (PhD) from an under-represented group.*

- **The university** has to do more to expose its staff and students to counter narratives about **racialized** people.