

**INCLUSION-EXCLUSION IN MATHEMATICS: WHO STAYS IN,  
WHO FALLS OUT, WHY IT HAPPENS, AND WHAT WE  
COULD DO ABOUT IT**

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The question of why women and minorities are under-represented in mathematics is complex and there are no simple answers, only many contributing factors. I will focus on character traits, and argue that if we focus on this rather than gender we can have a more productive and less divisive conversation. To this end I will introduce gender-neutral character adjectives “ingressive” and “congressive” as a new dimension to shift our focus away from masculine and feminine. I will share my experience of teaching congressive abstract mathematics to art students, in a congressive way, and the possible effects this could have for everyone in mathematics, not just women. I will present the abstract field of Category Theory as a particularly congressive subject area, accessible to bright school students, and contrast it with the types of maths that are often used to push or stimulate those students. Moreover I will show that it is applicable to working towards a more inclusive, congressive society in this politically divisive era. This goes against the assumption that abstract mathematics can only be taught to high level undergraduates and graduate students, and the accusation that abstract mathematics is removed from real life. No prior knowledge will be needed.

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