

GREAT IMMIGRANTS

PRINCETON, 1992

GREAT AMERICANS

FEATURING TERENCE TAO

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WHEN MY FATHER DROPPED ME OFF AT PRINCETON, I WAS 16 YEARS OLD AND BY MYSELF IN THE U.S. FOR THE FIRST TIME.

WHILE THE OTHER GRADUATE STUDENTS ORGANIZED STUDY PLANS, I DISCOVERED THE INTERNET AND PLAYED COMPUTER GAMES.

I'VE ALWAYS LIKED MATHEMATICS, AND UNDERSTOOD IT EASILY.

WHEN I WAS FIVE, I REMEMBER TELLING MY GRANDMOTHER TO PUT THE DETERGENT ON THE WINDOWS IN THE SHAPE OF NUMBERS.

I EXCELLED WITHOUT MUCH EFFORT, GRADUATED COLLEGE IN AUSTRALIA AT 15, THEN RECEIVED A FULBRIGHT SCHOLARSHIP TO GO TO SCHOOL IN THE U.S.

SO WHEN THE TIME CAME FOR MY FIRST GENERAL EXAM AT PRINCETON, I CARRIED A CONFIDENT ATTITUDE INTO THE TEST.

THAT WAS A MISTAKE.

GENERAL EXAMS ARE THREE-HOUR TESTS WHERE THREE PROFESSORS QUIZ YOU ON YOUR AREA OF STUDY. THEY WRITE DOWN CERTAIN MATHEMATICAL EXPRESSIONS AND ASK QUESTIONS LIKE ...

HAVE YOU SEEN THIS BEFORE?

$T = (f)$

$L^2 - L^2$

L^1

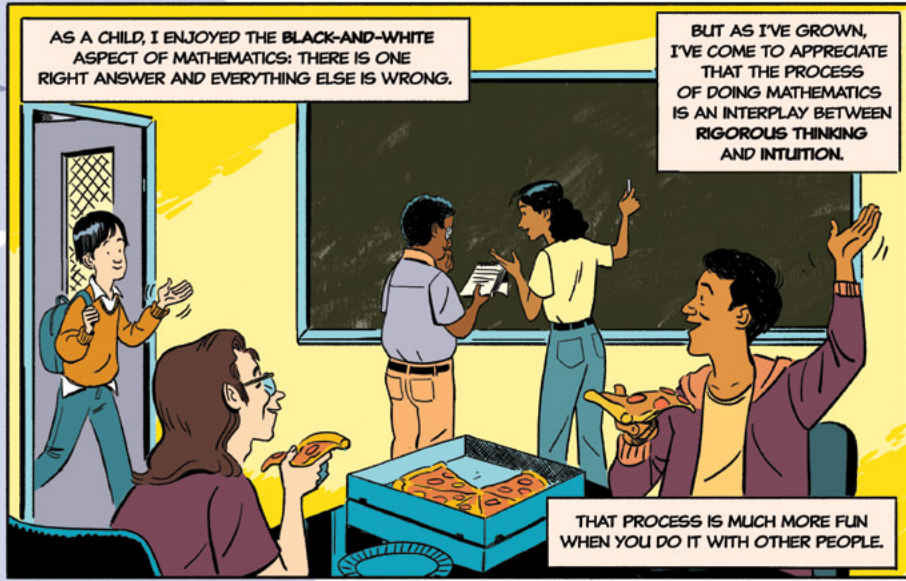
$\Delta u = f$

MINE WENT OFF THE RAILS QUICKLY AND I KNEW IT.

IT WAS EMBARRASSING: THE QUESTIONS GOT EASIER AND EASIER, BUT I STILL STRUGGLED.



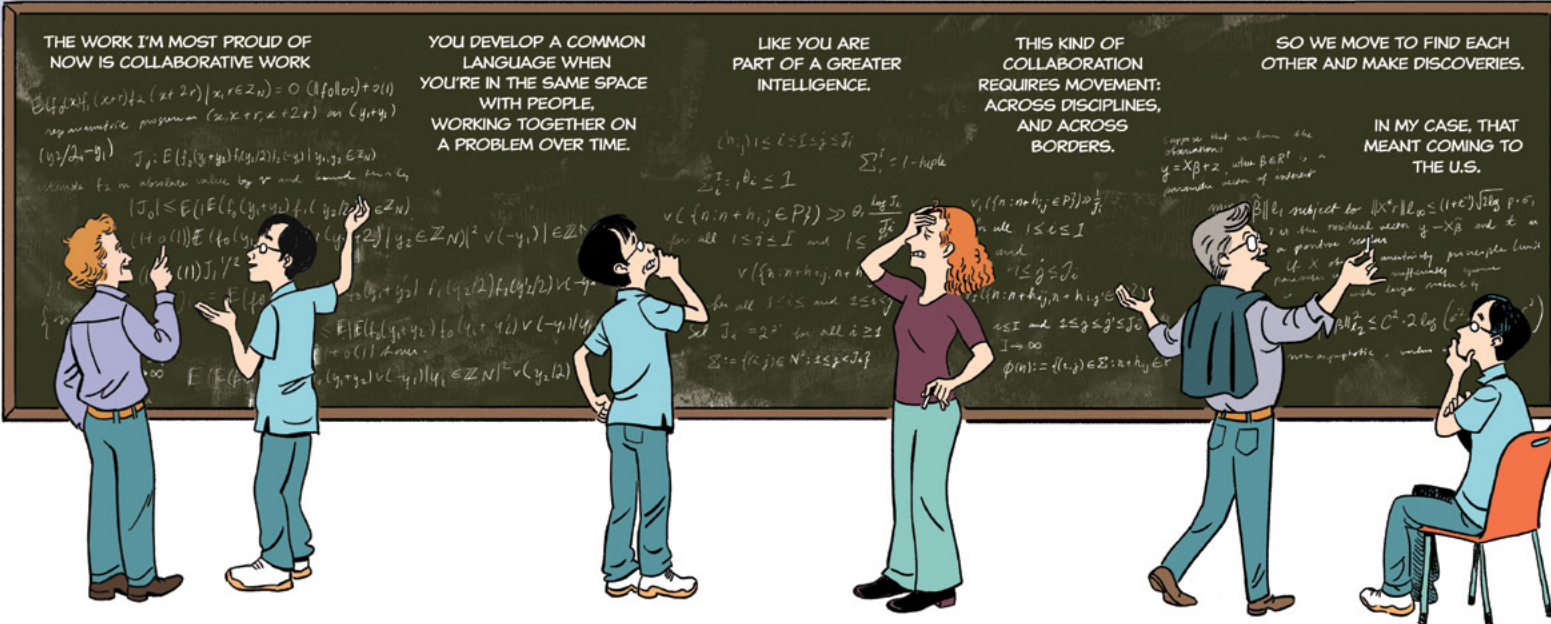
I SURVIVED THE EXAM, BARELY. MY ATTITUDE DIDN'T.



AS A CHILD, I ENJOYED THE BLACK-AND-WHITE ASPECT OF MATHEMATICS: THERE IS ONE RIGHT ANSWER AND EVERYTHING ELSE IS WRONG.

BUT AS I'VE GROWN, I'VE COME TO APPRECIATE THAT THE PROCESS OF DOING MATHEMATICS IS AN INTERPLAY BETWEEN RIGOROUS THINKING AND INTUITION.

THAT PROCESS IS MUCH MORE FUN WHEN YOU DO IT WITH OTHER PEOPLE.



THE WORK I'M MOST PROUD OF NOW IS COLLABORATIVE WORK

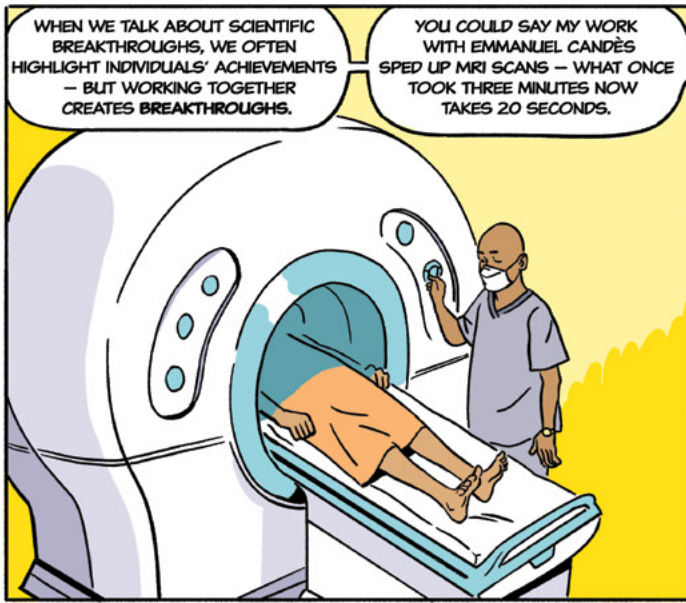
YOU DEVELOP A COMMON LANGUAGE WHEN YOU'RE IN THE SAME SPACE WITH PEOPLE, WORKING TOGETHER ON A PROBLEM OVER TIME.

LIKE YOU ARE PART OF A GREATER INTELLIGENCE.

THIS KIND OF COLLABORATION REQUIRES MOVEMENT: ACROSS DISCIPLINES, AND ACROSS BORDERS.

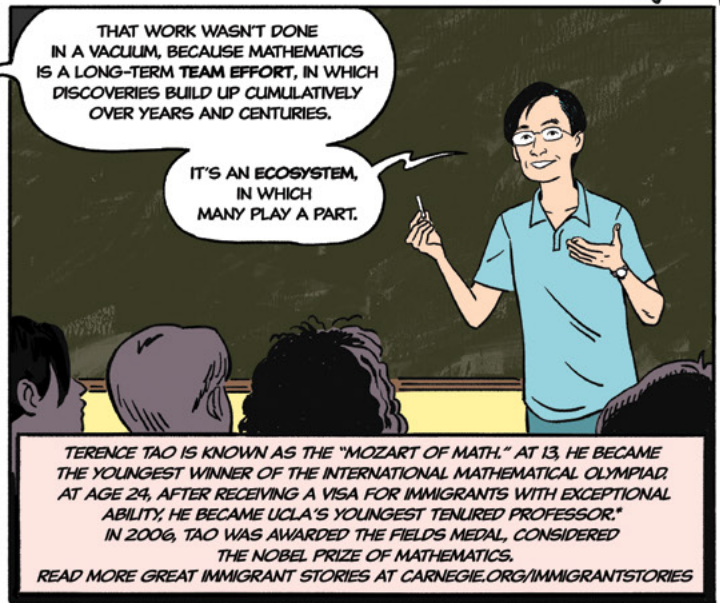
SO WE MOVE TO FIND EACH OTHER AND MAKE DISCOVERIES.

IN MY CASE, THAT MEANT COMING TO THE U.S.



WHEN WE TALK ABOUT SCIENTIFIC BREAKTHROUGHS, WE OFTEN HIGHLIGHT INDIVIDUALS' ACHIEVEMENTS - BUT WORKING TOGETHER CREATES BREAKTHROUGHS.

YOU COULD SAY MY WORK WITH EMMANUEL CANDÈS SPED UP MRI SCANS - WHAT ONCE TOOK THREE MINUTES NOW TAKES 20 SECONDS.



THAT WORK WASN'T DONE IN A VACUUM, BECAUSE MATHEMATICS IS A LONG-TERM TEAM EFFORT, IN WHICH DISCOVERIES BUILD UP CUMULATIVELY OVER YEARS AND CENTURIES.

IT'S AN ECOSYSTEM, IN WHICH MANY PLAY A PART.

TERENCE TAO IS KNOWN AS THE "MOZART OF MATH." AT 13, HE BECAME THE YOUNGEST WINNER OF THE INTERNATIONAL MATHEMATICAL OLYMPIAD. AT AGE 24, AFTER RECEIVING A VISA FOR IMMIGRANTS WITH EXCEPTIONAL ABILITY, HE BECAME UCLA'S YOUNGEST TENURED PROFESSOR.* IN 2006, TAO WAS AWARDED THE FIELDS MEDAL, CONSIDERED THE NOBEL PRIZE OF MATHEMATICS. READ MORE GREAT IMMIGRANT STORIES AT CARNEGIE.ORG/IMMIGRANTSTORIES

*THE O-1 VISA, WHICH IS RESERVED FOR "PERSONS OF EXTRAORDINARY ABILITY," WAS LIMITED TO 40,040 AS OF 2024. SOURCE: HOW THE UNITED STATES IMMIGRATION SYSTEM WORKS, AMERICAN IMMIGRATION COUNCIL, 2024