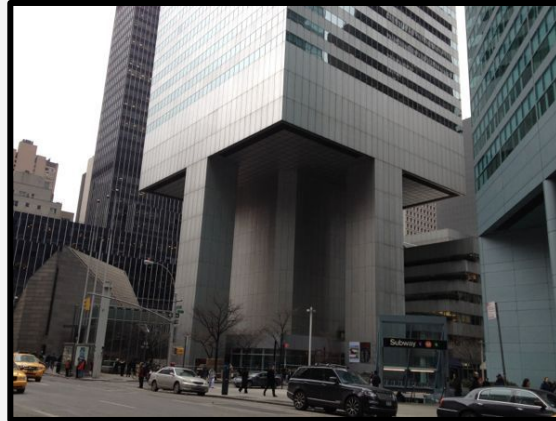
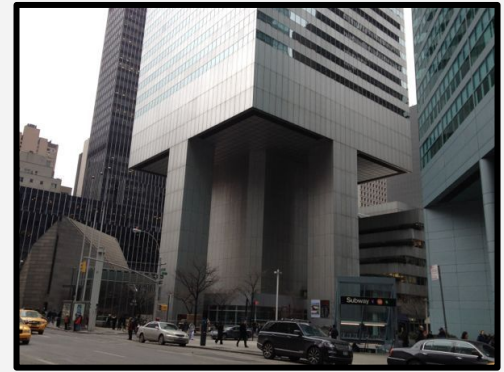


Citicorp Tower 'Collapse'

Rio Wagabaza • MJ Anselmo • Jackson Wheeler • Ethan Hopkins



What went wrong?

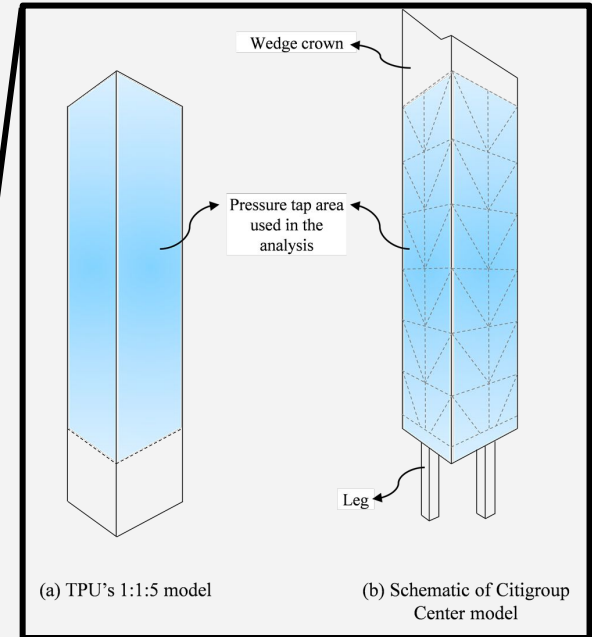


- Built on 5 pillars / 4 small pillars surrounding a large central pillar
- Designed to withstand perpendicular winds but not side winds
- The bolts had worn away from constant winds erosion
- Sloppy installation of the bolts caused erosion

★ Although it never actually collapsed, a student proved that it was vulnerable!

Ethical Dilemmas?

- Builders built tower without considering all risks and prioritizing public safety
- If the building were to collapse, it would've tipped instead of collapsed in on itself. If this were to happen up to 200,000 people could have died
- The engineers failed to properly analyze the building before construction
- An emergency evacuation plan was devised but never occurred: people were left in the dark



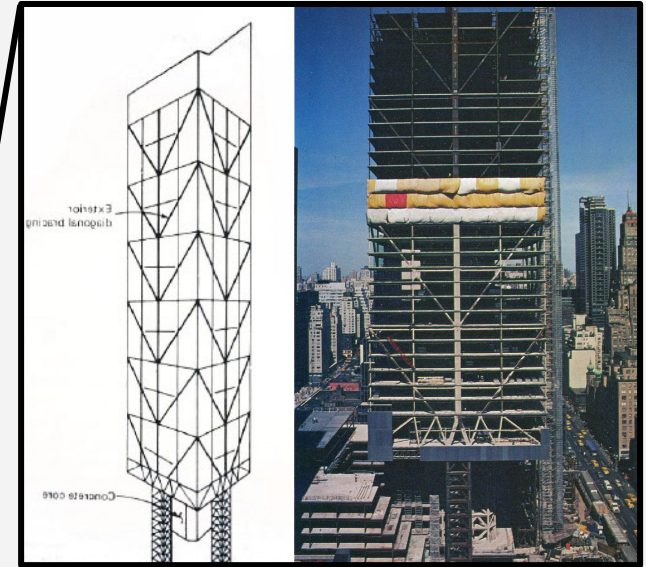
Known/Unknown Facts?

Known:

- **LeMessurier**, along with the staff of the wind modeling laboratory, were aware of the structural issues early on.
- **June 1978** — The steel frame was officially deemed structurally inadequate.
- Created plans to evacuate 156 city blocks in case of hurricane.

Unknown (at the time):

- Architect had failed to account for quartering winds when calculating wind stress.
- Major potential risk to public safety unknown for a year.



Conclusion

- Although implementing new architectural feats is important, it cannot sacrifice safety
- The engineers did the ethical thing and modified the building to prioritize public safety

★ “white lies at this point are entirely moral. You don’t want to spread terror in the community to people who don’t need to be terrorized.”

- *William LeMessurier, Structural Engineer of Citicorp building*



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