

Citicorp building, a spectacular 59-storied skyscraper featuring a striking 45° angled top and a giant tuned mass damper, is located in downtown Manhattan of New York city. The structure rests on four supporting columns located at the center of each side. Each column is equivalent of nine stories building in terms of elevation. In an effort not to interfere with St. Peter's Lutheran Church who claimed to have a property right at the corner of the block where the building was supposed to be built, Engineer William LeMessurier came up with this innovative solution. LeMessurier however failed to come up with a satisfactory solution nine months after the completion of the construction of the building, when he discovered that the building was vulnerable in the face of '16-year storm' strike. He confronted a dilemma of what to tell New York people. As the hurricane season was looming, he quickly notified the city authority to take necessary steps for evacuation if need arises, figured out a solution to the problem and started the repair work. LeMessurier and the New York City officials however preferred to deceive the public saying that there were no safety issues involved and further work was carried out only to meet the latest building code. The deception evidently interfered with New York people's free choice of making decision for them and this interference could be attributed as strong paternalism. Paternalism is a practice of making decisions for others withholding their rights and freedom of choice. The essay using the method of Line Drawing analyzes whether the strong paternalistic decision of Engineer William LeMessurier could be justified. The essay also explores if any Creative Middle Way solutions that would satisfactorily fulfill the competing obligations existed for LeMessurier instead of deceiving the people of New York City.

Line Drawing is a method that helps to draw a border between the rightness and wrongness of an application of a concept in a certain circumstance. The method identifies a number of features about the concept or test case that facilitates the viewer to observe the whole state of affair from two analogous situations: the positive paradigm at one end of a feature's spectrum makes the application of the concept clearly appropriate while the negative paradigm at the other end makes that application clearly inappropriate. Three features that I have chosen to draw a line of demarcation to the given test case are *the reason of deception*, *the timing of the incident*, and *the effectiveness of precautionary measures*. The first feature *the reason of deception* tries to find LeMessurier and the New York City officials' motivation to deceive and make decisions for New York people. It directly questions their intention. The second feature *the timing of the incident* investigates the consequences of the paternalistic decision in the context of time; the period when the decision was made. The last feature *the effectiveness of precautionary measures* is hypothetical; but to be shown later, it serves as an important parameter that aids in deciding the extent to which 'precautionary measures' could be used in defense of the paternalistic decision.

The table below distinguishes the given test case from positive and negative paradigm based on the features already identified.

Table 1. Features of paradigm and Line Drawing of test case

Features	Positive Paradigm <i>(Deceiving NY people is absolutely morally permissible)</i>	Test Case	Negative Paradigm <i>(Deceiving NY people is absolutely morally impermissible)</i>
Reason of deception	Solely Public Safety	_____x_____	Protecting personal reputation and Citicorp's business
Timing of the incident	Zero possibility of 16 year storm hitting NY that time	_____x_____	16 year storm was imminent
Effectiveness of Precautionary Steps (If the storm had hit Citicorp building)	No casualty and no death	_____x_____	Minimal casualty and few deaths

The table shows that the first feature the *reason of deception* is leaned towards negative paradigm. In reply to the question why they deceived, Engineer LeMessurier might argue that he truly did so for public safety, and this is positive paradigm. He might also try to justify his and the New York City officials' favor of paternalism from the point of view that revealing the truth was an uncalled for as it had the potential to push the panic button. This however, is a weak logic. The possibility of revealing the truth creating panic is negligible since rectification work had already started and necessary steps for quick evacuation in case of an emergency were also taken. With all these measures taken including the availability of constant weather updates from three different sources, revealing the truth would rather have left the New York people with a choice to make decisions for themselves. Positive paradigm here clearly fails to justify the strong paternalism of LeMessurier and the New York City officials. Negative paradigm on the other hand justifies their stance. Since truth would have created neither any panic nor any other kind of trouble relating to public safety, one of the reasons that probably had encouraged LeMessurier to keep the flaw secret from the public was his fear of a question mark being placed on his reputation as a practicing engineer. Citicorp owners might have been thinking in parallel. They may have thought that revealing the truth might put their business at stake. It therefore infers that people's right to know the truth was overlooked to protect the business and financial interest and reputation of LeMessurier and the Citicorp Company, respectively. Hence I put the 'x' mark corresponding to the feature *the reason of deception* close to negative paradigm. The second feature the *timing of the incident* also leans toward the

negative paradigm. If the possibility of 16-year storm hitting the Citicorp building when the repair work was being undergone was zero, choosing the path of paternalism would have made sense. However, the hurricane was imminent and it posed a serious safety threat. Even in such a crucial situation LeMessurier and co wanted to get away not with the flaw in the building, but with the concealment of the flaw until the repair work was over risking New York peoples' lives and interfering with their choice, even though the New York people were capable of making a free and informed decision. Timing of the incident therefore does not defend LeMessurier's decision by any means and hence I have made the 'x' mark corresponding to this feature inclined towards negative paradigm. The third feature *the effectiveness of precautionary measures* is hypothetical, as mentioned earlier. Hypothetically speaking, if the hurricane had struck the building and there was no casualty or death, LeMessurier and Citicorp's decision to opt for strong paternalism would have been proved to be perfect. If the hurricane had struck and caused a few deaths, the relatives of the dead people could easily have claimed that the deceased might have not preferred to work in that building had the flaw of the design were disclosed to them earlier. Since there is no way to know how effective precautionary measures would have been in the face of the hurricane strike, as the hurricane moved harmlessly out over the Atlantic, I put the 'x' mark corresponding to the hypothetical third feature in the middle of its spectrum.

Since the negative paradigm has outweighed positive paradigm of two of the three features, the overall test case converges to negative paradigm. Going for the option of strong paternalism required LeMessurier and the New York City officials to compromise with their own integrity because strong paternalism in their situation directly meant a breach of trust that public put on engineers. This paternalism also illustrated that they had a wicked attitude of getting away with the secret and emerging as winner instead of taking blame for what went wrong. The analysis by Line Drawing method therefore makes it clear that strong paternalistic decision of LeMessurier simply didn't meet the moral and ethical obligations and hence the decision cannot be justified.

Although in a situation like one the Citicorp building crisis presented making the right choice is not impossible, engineers who want to save personal reputation and business interest of the associated company abiding moral and ethical obligations may find it tough to pick up the choice that is unquestionably right. Creative Middle Way could be an alternative in such circumstances. Terminologically, Creative Middle Way refers to the solution that honors majority of the competing obligations to a certain extent. The competing obligations that LeMessurier and New York officials faced in deciding what to tell the people of New York are:

1. Engineers should give public safety the highest priority, take responsibility for their tasks and must make their flaw public knowledge since public place their trust on engineers.

2. Strong Paternalism should be avoided if people, properly informed, have the capability and ample time to make sensible decisions for them.
3. Saving LeMessurier's engineering reputation and financial interest of the construction firm and Citicorp.

Three possible middle way solutions could have been-

1. Telling the people that the building was being updated to latest building code, but warning them of potential safety threat in the face of hurricane strike and its drastic consequence.
2. Telling people that the tower is vulnerable to 16 year storm because joints of diagonal girders were bolted instead of full-penetration welding.
3. Keep the building and the surrounding area within one mile of the building evacuated for the whole month of August and September (the hurricane season)

The first middle way solution neither involves paternalism nor puts the reputation of LeMessurier and the business of Citicorp at stake. Also it does not put public safety in question because of making public aware of the drastic consequence of hurricane strike. The solution however involves lying and denial of taking responsibility. The second middle way solution fulfills the second obligation only; it concedes when it comes to the first and third obligations. Bolting the joints was partially responsible for the Citicorp tower being vulnerable to total collapse; the principle reason was the tower's inability to withstand the effect of diagonal wind. LeMessurier didn't take the effect of diagonal wind into account while designing the building. Also if LeMessurier had opted for the second solution, it would have put the financial status of the construction firm in substantial risk. The last middle way solution was most likely practically impossible since it would have affected day to day business and commercial activities of the New York City in many ways. The first two solutions involve deception while the last one is practically impossible, but from the Creative Middle Way standpoint, the first option is the best, since it meets the competing obligations most.

The Line Drawing method together with Creative Middle Way solutions demonstrated that the best thing for LeMessurier and the New York City officials would have been to tell the truth to the public. The Line Drawing Method made it clear that the deception was morally impermissible since it required going for strong paternalism which was unnecessary and unfair in the context of the situation LeMessurier and the New York officials faced. At the same time the best possible Creative Middle Way solution too was enfolded within the circle of deception. The analysis of the dilemmatic situation of LeMessurier by Line Drawing and Creative Middle Way Solution highlighted the complexity and perplexity that could be associated with an engineering decision and the challenge will continue to inspire future engineers to think and analyze deeply before making the final ethical judgment.