

## Game Theory and Queuing in Vietnam: Why Don't People Line Up?

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# Game Theory and Queuing in Vietnam: Why Don't People Line Up?

"As you prepare to leave UWC to return to your respective home country, please keep in mind that each of you will be somewhat culture-shocked by your own country." The words of our vice-principal at the end of my first year at UWC-USA still echo in my mind every time I come back home, seeing people rushing out in chaos, hoping to be the first to get out of customs at Tan Son Nhat Airport, people casually littering on the street, and people not respecting traffic safety law, etc. I often asked myself a simple question, "Why don't people queue up?", but even a question that simple cannot be easily answered.

Not standing in line, littering, cheating in school, talking loudly on buses or not respecting traffic laws are only a few items on a long list of bad habits practiced in our daily life. These issues are so common that a term is coined for their sake: "Văn hóa lùn" ("Bad culture"). They occur so often that in the views of many, they are an inseparable part of the Vietnamese culture, that it is only natural for Vietnamese to not stand in line, for example.

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However, victimizing a culture is always easier than trying to understand the roots of the problem. Furthermore, accepting that such behaviors are a part of our culture is dangerous, for it prevents us from thinking of how to change ourselves for the better. What, then, causes people to behave in such a way?

Insights from basic game theory, in particular the so-called "Prisoner's Dilemma," can help us look at the problem from a new perspective. The Prisoner's Dilemma is a thought-experiment in Mathematics in which two captured prisoners have to independently choose to either remain silent or confess to the crime. The offer made by the police to the two prisoners is: if they both confess, each serves two years in prison. If they both remain silent, each serves only one year. However, if one remains silent, only to be betrayed by the other who confesses, then the one who confesses goes free while the silent prisoner has to serve three years in prison.

In this canonical example, the optimal *collective* decision for both prisoners is to cooperate and remain silent. However, since each prisoner has to make the decision without being certain of the other's decision, there is simply not enough trust to cooperate. Following individual's optimal choice, both prisoners would confess, bringing them to the worse outcome of two years in prison for each. This mathematical example demonstrates that two individuals making independent decisions would logically lead to a bad outcome and ignore the optimal collective outcome.

We can think about the decision of whether to stand in line of people in the same way. The best scenario in this case is one in which everyone lines up and respects the "first come, first served" rule. However, if one person is tempted by his or her personal desire to cheat the rule, skip the line, and get ahead of everyone else, the rest will also find that it is in their interest to do the same. What is interesting is that, without mutual trust, even before anyone actually skips the line, just by anticipating that *someone will*, no one would respect the queue.

In the context of traffic safety, the phenomenon that no one stops at a traffic line during rush hours can be understood as the result of everyone anticipating everyone else to not stop at the traffic line. As someone who stubbornly sticks by the rules, I stopped at the traffic line one day only to be hit from behind by another motorbike who then yelled at me: "Are you crazy? Can't you see that no one else is stopping here?" Clearly, the decision of not respecting traffic laws in this case is not the decision of any individual, but rather a collective decision of a group of people who lack mutual trust for one another.

Right now, we are in a 'bad equilibrium' in which everyone is stuck at the worst social outcome (i.e., no one stands in line). What makes this an 'equilibrium' is the fact that no single person finds it attractive to deviate from what already is (that is, if no one is lining up, no one would be willing to be the only one who lines up), making this situation seem almost inescapable.

A natural question would be, "How do we move from the current bad equilibrium to a better one in which everyone respects the rule?" Without getting too involved in the details of game theory, my natural instincts require that some of us must pioneer in choosing the nicer course of action, i.e. line up, not cheat, respect traffic laws, etc. This decision necessarily makes one worse off in the short-run, as this action will be taken advantage of by others. However, in the long-run, by playing nice, one can signal to the public that they, too, can safely line up and enjoy the best social outcome together. In other words, unless you start respecting the rules, you cannot expect others to do the same, and changes must start from you adjusting your own course of actions. Trust, the key to reverse the situation, starts from individuals like us.

## **Châu Thanh Vũ**

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