# Questions for Canteen Dilemma

Thomas S. N.

December 19, 2018

## Questions and ordering

Players are how certain they are that their colleague made the same choice as them, i.e that they will meet. If either player lose all her bonusses, both players will be asked five more detailed questions. If both make it through all rounds without losing, the players are asked four of these five questions. Below are the five questions, their order and a preliminary suggestion regarding its formulation.

### 1. Certainty

How certain are you that your colleague has made the same choice as you? [Answers are based on a 5-point Likert scale with equal intervals from 50% to 99%: No certainty (50%), Slightly certain (62,5%), Somewhat certain (75%), Quite certain (87,5%), Very certain (99%)].

## 2. What strategy did you play?

What strategy did you use while playing this game? [Free text answer]

### 3. Only if game is lost: Whose fault was it?

The game is over. Do you think it was your fault it is over, your colleagues fault, or do you think it was because of some other reason? [Yes/No, or writing other reason in free text answer]

## 4. Choosing possible cut-off point

Assuming you could decide a cut-off point with your colleague prior to the game, meaning that either of you would only go to the office if you arrive at this time or later, what time would you select? [Buttons with 8:00, 8:10, 8:20 ... 9:10]

## 5. Question about simple common knowledge

You arrived at [last round arrival time], do you know that it's safe for you to go to the canteen, that is, do you know you will meet your colleague there? [Yes / No]

[Alternative suggestion]

Given your play-style, are you always sure to meet your colleague when you go to the canteen? For example when you arrive at [last round arrival time]? [Yes / No]

## 6. Question about real Common Knowledge

Given your play-style and your arrival time at [last round arrival time] as an example. Consider if you know that you both arrived before 9. Now consider if you know that your colleague knows that you both arrived before 9. And consider if you know that your colleague know that you know that you both arrived before 9? Imagine this process infinitely repeated, are you always sure to meet your colleague if you choose to go to the canteen, for example when you arrive at [last round arrival time]? [Yes / No]

#### [Alternative suggestion]

Given your play-style/strategy and arrival time [last round arrival time], consider whether you know with certainty that you both arrived before 9 (i.e. + 10 minutes to your time) which makes it safe to go to the canteen. If this is the case, consider if you know if you colleague is also certain that you both arrived before 9. If this is the case, consider if you know, that your colleague knows, that you're certain that you arrived before 9. Imagine this process iterated infinitely, meaning you know your partner knows, that you know, that your partner knows, etc, that you both arrived before 9 and can safely go to the canteen. Given your play-style/strategy, do you know, that you partner knows, that you know, etc. in the sense described above, that you are sure to meet your colleague when you choose to go to the canteen? For example/including when you arrive at [last round arrival time]? [Yes / No]