



MBA207

## ETHICS AND RESPONSIBILITY IN BUSINESS

### ASSIGNMENT #4

**DUE: by 11:59pm of Wednesday April 17. Submit via bCourses.**

PROFESSOR GUO XU, SPRING 2024

### **Rigorously Ethical Behavior in Business Games**

**Guidelines** to RIGOROUSLY ETHICAL.XLS (the answer spreadsheet)

**Instructions** This assignment relies on two documents. One is these **Guidelines**, and the other one is the spreadsheet RIGOROUSLY ETHICAL.XLS, that is being distributed to you. As explained below, you will use these Guidelines as your input, or source, document, from which you will obtain all necessary information to complete the assignment. The spreadsheet is where you will record your answers. You must submit the completed spreadsheet via bCourses. The title of the document must be: 207-X-Assignment4, where X stands for the cohort (Oski/Axe).

The exercises in this assignment ask you to identify the specific actions that correspond to different decision-making criteria we have studied thus far: namely those of a self-interested actor, act-utilitarianism, rule-utilitarianism, deontological/duty ethics, and theories of justice.

The RIGOROUSLY ETHICAL.XLS spreadsheet contains two tabs. The first one, called EXAMPLE, describes a simple game to make sure you understand the game representation of the scenarios contained in the exercise. A companion explanation of the example is contained below, within these **Guidelines**. Review the example and make sure you know which payoff is whose before you attempt to answer any questions.

The second tab in the spreadsheet is called ANSWER SHEET and it is the one where you are to record your answers. Follow the instructions at the top of the answer sheet, and unless indicated otherwise make all answers an abbreviated, most often single-character, selection (B, C; Y, N; A,

B, C, D; R,U). The second tab also contains game representations of the scenarios you are to analyze in this assignment.

The exercise contains five different scenarios. In the first scenario, two firms consider whether to bribe or compete for contracts. In the second, a company decides whether to export to a country where there are corrupt officials. In the third, two firms ponder the strategic choice of an industry standard. In the fourth, a technician considers the ethics of misreporting data. In the fifth scenario, workers in two sectors decide over a redistribution policy. Each scenario (except for the last two) is represented in the form of a game in the ANSWER SHEET tab of the spreadsheet. In all games except the second, the choice of strategy by all players is simultaneous.

The following pages of these **Guidelines** contain background narratives regarding each scenario.

In each instance where a game is explicitly presented, you are to consider that the players in the situation constitute all relevant members of society. This will make your life easier when applying utilitarian criteria.

NOTE: This is an individual assignment. Collaboration is not permitted.

## The EXAMPLE tab

Turn to the EXAMPLE tab of the spreadsheet and familiarize yourself with the basic game shown there. The purpose of this example is to make sure you understand the game representations of the simultaneous-move scenarios detailed below. In the example, the player choosing rows is Player 1, and the player choosing columns is Player 2. There are four possible outcomes to the game depending on the actions chosen by the two players: (Abate, Abate), (Abate, Pollute), (Pollute, Abate), and (Pollute, Pollute). Each of these outcomes triggers utility payoffs for the two players as shown in the matrix. The matrix has four *compartments*, each corresponding to one outcome of the game. These are shaded with different colors in the example in the spreadsheet. Each compartment contains two Excel *cells*. The left hand side cell in a compartment shows the payoff to Player 1 and the right hand cell shows the payoff to Player 2 when the outcome corresponding to that compartment has been realized.

Example: Suppose you (Player 1) choose Abate and Player 2 chooses to Pollute. Then the outcome is represented by the white cells. Specifically, you receive 4 payoff units and Player 2 receives 12 payoff units. All such possibilities are shown in the table below the matrix.

Different scenarios represented through different games are presented in the ANSWER SHEET tab. For each scenario, you will be asked a range of questions about types of behavior.

Once you have read the Scenarios below, you may turn to the ANSWER SHEET tab and begin the assignment.

## The Scenarios

### Scenario 1: Bribes for contracts

Two firms, ChipIn and Conduct, compete over government procurement contracts. Each firm or player chooses independently and simultaneously one of the two actions: Bribe or Compete. The award of a contract delivers a payoff of 4 units to the winning firm. Because both firms produce an undifferentiated good of comparable quality, each firm has a 50% chance of winning the contract when both are competing. Bribing allows a firm to obtain the contract with certainty if the other firm does not bribe. Given the illicit nature, however, firms must pay one unit to avoid detection when engaging in bribery. When both firms bribe, each firm faces a 50% chance of winning the contract. The payoffs in the matrix contained in the AnswerSheet.xls file details payoffs for all workers/managers/owners of each firm. You are Firm 1, ChipIn.

### Scenario 2: The corrupt customs official

Beyond Yourself produces perishable goods and is deciding whether to export to a highly lucrative developing market. The only way to export products into the country, however, is through the country's main container port, which is notorious for its inefficient handling of customs clearance. In particular, there have been numerous cases where customs officials have threatened firms with misclassifying goods to charge higher tariffs (this threat is labeled with *Higher tariff* in the game tree). Making these threats is costly to the officials as they need to avoid detection by superiors (costing 1 unit of payoff). The threat of misclassification, however, allows officials to demand a payment from trading firms if firms want to pay only the normal tariff. While such cases would eventually be resolved if and when the importer declines to pay the official (*Decline to pay*), the arbitration process following a complaint is lengthy. The delay would result in the goods going bad before they clear customs and can be sold.

Suppose the payoffs are summarized in the game tree shown in the spreadsheet (the first payoff denotes the payoff of the **customs official**, the second payoff is your payoff as **Beyond Yourself**). As an example, for the case when Beyond Yourself decides to trade and the customs officials impose the normal tariff, the customs officials receive a payoff of 1 while Beyond Yourself receives a payoff of 4. Each sequence of actions leads to a final situation A, B, C, or D, with the associated payoffs indicated in the game tree.

### Scenario 3: Coordinating on industry standards

Two firms, Gugl and Appl, produce VR headsets. Each firm has developed a separate operating system (OS) for their headsets. Google's operating system, Roboid, competes with uOS. *Each firm can choose from one of two strategies: to adopt the Roboid operating system or to adopt the uOS operating system for their headsets.* This definition of strategy is important: a strategy is a choice of operating system, not a choice of "conceding" or "sticking with my own standard." All reasoning must be applied to a choice of strategy understood as a choice of operating system.

Each firm would rather have its own operating system be the industry standard. But because developing software compatible to each operating system is very costly, app developers will not develop the apps for different head set operating systems. Coordinating on just one operating system will therefore be much better for the app ecosystem, platform size and thus profits. The game in the spreadsheet details the profits for Gugl and Appl contingent on each firm's choice of operating system for its headsets. Logically, Gugl does better when both firms coordinate on Roboid, and Appl does better when both firms coordinate on uOS. Both firms suffer most when their choices are uncoordinated, as app developers and consumers wait for the industry to converge on a single standard.

### Scenario 4: Partnership

Pistero is an auto-parts maker that has long been supplying high quality cylinder valves to leading automakers. Valves undergo enormous stress, opening and closing thousands of times per minute. Valve failure can lead to problems from poor engine efficiency to total engine failure. When one of their main clients decided to develop a new, high-performance muscle car, they asked Pistero to produce the valves. This was a big win for Pistero. Getting this deal underscored their solid position in the industry.

The development process for both the car and the valves was long, and stipulated stress tests for the valves along the way. The joint project between Pistero and the client moved into each phase only once the previous phase was completed to everyone's satisfaction. The stress tests were an important milestone of each phase. The standards for the tests were higher than those of other valves Pistero produced. The unusually high standards—which Pistero agreed to at the outset—were due to the high-performance nature of the car the client was developing.

Halfway through the process, a technician at Pistero noticed that the results of the tests were concerning. Valves were failing at rates that did not meet the standards agreed upon with the client. Two days later a meeting with the client would be held to discuss progress and determine whether the project could move onto the next phase. When the technician brought her report to her team leader, the team leader suggested that they should still label the results "satisfactory." The team leader argued that "while technically below the agreed standard" the results were still

“better than those of other valves commonly produced in the industry.” The team leader added two more arguments for not revealing concerns. One was that there were still a couple more phases to go through, and glossing over concerns now would give Pistero time to catch up with the engineering demands to make the valves stronger. The other argument was that revealing concerns would jeopardize Pistero’s ability to hold on to a profitable project. After all, their client could turn around and take the project to another valve maker.

## Scenario 5: Life Lottery

Consider an economy with two individuals, each working in a different sector. Individual 1 works in “occupation A,” while individual 2 works in “occupation B.” Under the status quo, individual 1 earns 2 units and individual 2 earns 1 unit, as shown in the payoff table.

Suppose that – under the status quo – individual 2 proposes a redistributive policy whereby a tax of 0.2 units is levied on individual 1 to support individual 2. Due to inefficiencies in the tax system, however, only half of the 0.2 units ends up in individual 2’s account so that the new payoff under the status-quo is 1.8 for individual 1 and 1.1 for individual 2.

In addition, there is a chance that the status quo will be disrupted by the advent of AI. In that scenario, the payoff of individual 1 is 2 and the payoff of individual 2 is 5.