# Sensors guideline Exam Sam525 2024

# 1) How can rational theory explain stable patterns of social interactions?

Important elements to consider, mainly taken from Risjord, are:

### **Equilibrium and Predictability**

Rational choice theory often draws on game theory to analyze interactions. In repeated or ongoing interactions, stable patterns can emerge as equilibria, where individuals' strategies lead to mutual benefit or minimization of conflict. For example, in cooperative behaviours like trade or social contracts, individuals continue to act predictably if doing so maximizes their long-term gains.

### Institutionalization

Over time, rational behaviour leads to the establishment of norms, rules, or institutions that stabilize interactions. Once these norms are recognized, individuals find it rational to adhere to them because violating them often results in penalties or social exclusion.

### **Cost-Benefit Analysis**

Rational theory assumes individuals weigh the costs and benefits of their actions. Stable social patterns persist when the benefits of following established norms outweigh the costs of deviation, ensuring compliance over time.

# **Reciprocity and Reputation**

Rational actors value their reputations, especially in repeated interactions or within close-knit groups. Behaviors like cooperation, trust, and reciprocity stabilize because individuals understand the long-term benefits of maintaining positive relationships.

# **Cultural Transmission**

While culture may seem outside the bounds of strict rationality, rational theory can incorporate cultural learning. Stable patterns of interaction are passed down because they have historically proven to be beneficial or efficient for individuals within a society.

# If the candidate mentions correctly three out of five of these topics the task is considered good.

# 2) Explain how we can describe games with instrumental rational agents and account for the game "prisoner's dilemma".

Games with instrumental rational agents involve scenarios where players are assumed to act to maximize their individual utility or preferences. These games are typically described using game theory, which provides tools to analyze decision-making in strategic contexts.

To describe such games:

- Define the Players: Identify the decision-makers (agents) involved.
- Actions/Strategies: Specify the possible choices or strategies available to each player.
- Payoffs: Assign numerical values to outcomes, representing the utility each player receives based on the combination of chosen strategies.
- Rules of Interaction: Outline the order of moves (simultaneous or sequential) and whether players have perfect or imperfect information about each other's choices.
- Rationality: Assume that players aim to maximize their payoffs, given their knowledge and expectations about other players' strategies.

# The Prisoner's Dilemma

The Prisoner's Dilemma is a classic example of a game involving instrumental rational agents. Here's how it is described and analyzed:

The Setup:

Players: Two individuals

Strategies: Each player can either Cooperate (C) or Defect (D).

	Co-operate	Defect
Co-operate	3,3	0,5
Defect	5,0	1,1

Payoffs: Represented in a matrix:

Story: Bill and Jill are arrested for a crime. They are interrogated separately and must decide independently whether to betray (Defect) or remain silent (Cooperate). The payoffs reflect their jail sentences (lower payoffs represent longer sentences).

# **Key Features:**

Dominant Strategy: Defection is the rational choice for both players, regardless of what the other does:

- If Bill cooperates, Jill gets a higher pay off by defecting (5 > 3).
- If Bill defects, Jill gets a higher pay off by defecting (1 > 0).

The same logic applies to Bill.

- Nash Equilibrium: The outcome (Defect, Defect) is the Nash equilibrium, where neither player has an incentive to unilaterally change their strategy, as doing so would reduce their payoff.
- Pareto Suboptimality: The equilibrium (Defect, Defect) is worse for both players compared to (Cooperate, Cooperate), highlighting the tension between individual rationality and collective well-being.

If the candidate can define instrumentality and rationality and draw the matrix the task is considered as answered

# 3) What does it mean when we say that something (e.g. race) is socially constructed?

When we say that something (e.g., race) is socially constructed, we mean that it is a concept or category created and defined by society rather than being an inherent, biological, or natural fact. Social constructions are shaped by cultural, historical, political, and economic contexts and are maintained through social practices, norms, and institutions.

Key Features of Social Construction:

# Not Natural or Biological:

- While certain physical traits (e.g., skin color) may exist, the meanings, significance, and categorizations attached to those traits are socially assigned.
- In the case of race, biology doesn't determine categories like "White" or "Black"— society does.

# **Cultural and Historical Variability:**

- Social constructions vary across cultures and change over time.
- For example, racial categories in the United States differ from those in Brazil, and the meanings attached to racial categories have evolved (e.g., shifting definitions of "whiteness").

### **Created Through Interaction:**

- Social constructions emerge through human interaction, language, and agreements about how the world is understood.
- These ideas are perpetuated by institutions (e.g., governments, schools, media) and reinforced through everyday practices.

### Power and Inequality:

- Social constructions often reflect and perpetuate power dynamics.
- For instance, race has been socially constructed to justify systems of inequality, such as colonialism, slavery, or segregation.

A good answer includes all these element

4) Explain how risk may have different ontological and epistemological approaches in social sciences.

We expect the candidate to elaborate and explain the matrix from Lupton

# What does it mean when we say that something (e.g. race) is socially constructed?

Epistemological approaches to risk in social sciences (Lupton pp 49)			
Epistemological position	Associated perspective and theories	Key questions	
Realism. Risk is an objective hazard, threat or danger that exists and can be measured independentlyof social, cultural processes. Risk perceptions may be distorted or biased through social and cutural framework	Techno-scientific perspective and theories Cognitive psychology	What risks exist? How should we measure them? How should information about risk be effectively communicated to the public? How to reduce 'bias' in the public's response How do people respond cognitively to risks? What worldviews shape their responses?	
Weak constructionist/critical realism. Risk is an objective hazard, threat or danger that is inevitablemediated through social and cultural processes and can never be known in isolation from these processes	Risk Society perspective	What is the relationship of risk to the structures and processes of late modernity? How is risk understoodin differentsocial contexts. Why is some dangers named 'risks' and other not? How doeas risk operate as symbolic measure? What are the situated context of risk?	
Strong contructionist Nothing is risk in itself – what we understand to be risk (orhazardor danger) is the product historicallyand culturally contigent 'ways of seeing'	'Governmentality' perspective. Post structuralism Biophilosophy	How do discourses and practises around risk operate in the construction of subjectivity, embodiment and social relations. How does risk operate as part of governmental strategies and rationalities? How are risk assembalges configured?	
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# 5) Explain the techno-scientific perspective and the social constructivist perspective of risk.

Use the matrix from Lupton and elaborate:

There after discuss!

#### The realist



Risk in modernity



Risk and governmentality



Combining the different perspectives of risk with definitions taken from the matrix.