

Rationality Framework

Conditions of Rationality

Fallacies (patterns of violating the corresponding condition) and actions for improvement

		What it means	Why it exists	Imp. (*1)	Assess. (*2)	AI (*3)	Fallacies (Examples)	Why fallacies occur	Actions (Examples)		
Human System	Fundamental Principle: Use of Text		Write out the question, claim, and premises in text (Make decisions using a visible medium)	Without externalizing and fixing your thinking, careful deliberation is impossible	High	Easy	Low	<ul style="list-style-type: none"> Overreliance on spoken communication Making decisions entirely in your head 	<ul style="list-style-type: none"> Unfamiliarity with writing Unawareness of the benefits of text 	N/A (the principle itself is the action)	
	Question	Clarity	The question is clear and specific enough that its meaning is unambiguous	Thinking by the Human System begins with the question	High	Easy+	High	<ul style="list-style-type: none"> Absence of a question Vague question 	<ul style="list-style-type: none"> Insufficient language skills 	<ul style="list-style-type: none"> Make written questions more specific Develop language skills (study language arts) 	
		Unity	The question remains the same throughout (In discussions, all parties share the same question)	If the question is different, it is a different decision (by definition)	High	Easy+	Low	<ul style="list-style-type: none"> Question drift 	<ul style="list-style-type: none"> Spoken discussion without text Lack of discussion training 	<ul style="list-style-type: none"> Write the question where everyone can see it 	
		Value	The question is worth thinking about (Not a condition of rationality)	Self-evident (there is no point in thinking about something not worth thinking about)	N/A	Depends	High	(Not a condition of rationality)		<ul style="list-style-type: none"> Value is determined subjectively, but at minimum, carefully consider whether the question is likely answerable 	
Individual Decision-making / Factual Rationality	Claim	Freedom	A state or environment in which you do not have to resolve until sufficient cost has been invested	Investing cost increases the likelihood that the claim is right	High		Low	<ul style="list-style-type: none"> Confirmation bias Intervention by strong power 	<ul style="list-style-type: none"> Rely on others (discussions etc.) Do not let strong power intervene in decision-making 		
		Resolution	Once sufficient cost has been invested, either resolve or abort the decision (Not a condition of rationality)	Excessive cost investment worsens the cost-effectiveness of a decision	N/A	Hard	Low	(Not a condition of rationality)		<ul style="list-style-type: none"> Society / Social norms - Hierarchism / Religion Education - Science reduced to rote memorization Little opportunity to determine answers for oneself 	<ul style="list-style-type: none"> Analyze the question and consider the priority between freedom and resolution
		Autonomy	Think for yourself and take responsibility for your claim (No authoritarianism about facts)	Authoritarianism is faith, and the rightness of faith cannot be evaluated by others	High	Easy	Low	<ul style="list-style-type: none"> Authoritarianism 	<ul style="list-style-type: none"> Distance yourself from hierarchical norms Try making decisions autonomously 		
Individual Decision-making / Factual Rationality	Premises	Elements	Objectivity	Premises are based on data (things actually observed)	What cannot be observed cannot be recognized in the same way by others	High	Hard	Low	<ul style="list-style-type: none"> Emotional reasoning Falsehood (lies and errors) 	<ul style="list-style-type: none"> Lack of science education Lack of mechanisms to punish falsehood 	<ul style="list-style-type: none"> Learn scientific thinking Establish mechanisms to detect and punish falsehood
			Universality	Data reflects the truth (not affected by random chance)	What we truly want to know is the truth, not the data	Low	Easy+	High	<ul style="list-style-type: none"> Sampling bias Availability bias 	<ul style="list-style-type: none"> Lack of statistics education 	<ul style="list-style-type: none"> Study statistics
		As a Whole	Relevance	The premises do not contain anything irrelevant to the rightness of the claim	Self-evident (what is irrelevant is irrelevant)	High	Hard	Low	<ul style="list-style-type: none"> Ad hominem arguments Overemphasis on delivery 	<ul style="list-style-type: none"> Hierarchism 	<ul style="list-style-type: none"> Learn to recognize irrelevance
			Exhaustiveness	Everything necessary to support the claim has been considered without omissions	If there are omissions in what has been considered, we cannot know if the claim is fully right	High	Hard	High	<ul style="list-style-type: none"> Arguments with omissions 	<ul style="list-style-type: none"> Lack of the concept of "exhaustiveness" 	<ul style="list-style-type: none"> Learn various frameworks Always consider counterarguments
			Logicity	Premise elements are correctly connected to form the premises as a whole	Cannot be explained (Explaining the correctness of logic requires logic itself)	High	Easy+	High	<ul style="list-style-type: none"> Denying the antecedent Affirming the consequent 	<ul style="list-style-type: none"> Insufficient study of logic (mathematics and formal logic) 	<ul style="list-style-type: none"> Study mathematics Study logic
Others	Stability of Unstated Assumptions		The values and knowledge treated as unstated assumptions contain no irrationality or errors	Ultimately, the "reason the claim is right" includes the unstated assumptions	High	Hard	Low	<ul style="list-style-type: none"> Irrational ways of determining rightness Misalignment of unstated assumptions 	<ul style="list-style-type: none"> Lack of understanding of rationality Tendency to equate others with oneself 	<ul style="list-style-type: none"> Study rationality Imagine the other party's values and knowledge 	
	Comprehensibility of Explanation		The claim and premises are clear and easy to understand for anyone	For the rightness of content to be evaluated, the content must be understood	Low	Depends	Low	<ul style="list-style-type: none"> Use of obscure language Burying the conclusion 	<ul style="list-style-type: none"> Insufficient language skills Inclination toward obscure explanations (authoritarianism) 	<ul style="list-style-type: none"> Always explain as clearly as possible State the question and claim first 	

*1 Importance — High: If this condition is not met, the decision is not rational. Low: Meeting this condition is desirable, but it does not apply to every decision.

*2 Assessability — Easy: The method for judging whether this condition is met is established / easy to judge (Easy+ means some training required to judge). Hard: The method for judging is not established / judgment becomes subjective. Depends: Judging depends on the case.

*3 AI Compatibility — High: AI can be effectively used to meet this condition. Low: AI is of little or no help in meeting this condition.