Rigid Robot | Soft Robot (left panel) — Rigid Robot | Soft Robot (right panel)

Safety

Definition: The perception that a robot operates securely, performing tasks without posing risks or harm and often more safely than humans

Rigid Robot — Arguments	Soft Robot — Arguments
• Reliability & precision • Accuracy & consistency • Quick response time • *Ability to learn & adapt*	• Reliability & precision • Accuracy & consistency • Quick response time • *Reduces risks of injury to humans and animals*

Risk

Definition: The perception that a robot's actions or operations are unsafe, potentially causing harm or posing greater risks than human performance

Rigid Robot — Arguments	Soft Robot — Arguments
• Risk of accidents, injuries, & technical failures • Risk of malfunction or *data security breaches* • *Faulty algorithms*	• Risk of accidents, injuries, & technical failures • Risk of malfunction • *Environmentally vulnerable*

Technological Possibility

Definition: The functional capabilities and performance potential of a robot, focusing on its technical features and operational readiness

Rigid Robot — Arguments	Soft Robot — Arguments
• Improve healthcare • Efficiency & adaptability • *Precise*	• Improve healthcare • Efficiency & adaptability • *Versaility, ease of use, & tailored theraphy*

Technological Limitation

Definition: The inherent constraints or shortcomings in a robot's technological capabilities

Rigid Robot — Arguments	Soft Robot — Arguments
• Limited learning abilities • Operational complexity • *Safety risks, & less emotional support*	• Limited learning abilities • Operational complexity • *Over-reliance, & uncertain future prospects*

Human-Robot-Interaction pos.

Definition: The beneficial aspects of direct interactions between humans and (soft) robots, such as providing support to individuals (e.g., elderly or autistic persons)

Rigid Robot — Arguments	Soft Robot — Arguments
• Encourage social interaction • Emotional connection, & companionship • *Educational support*	• Encourage social interaction • Emotional connection, & companionship • *Tactility & human comfort due to life-like features*

Human-Robot-Interaction neg.

Definition: The adverse aspects of direct interactions between humans and robots, focusing on challenges or negative outcomes specific to their engagement

Rigid Robot — Arguments	Soft Robot — Arguments
• Dependency & unhealthy relationships • Decline in human interaction • *Decline in social skills* • *Lack of physical warmth*	• Dependency & unhealthy relationships • Decline in human interaction • *Strong emotional bonds & emotional manipulation*

Anthropomorphism pos.

Definition: The positive evaluation of attributing human-like characteristics or behaviors to a robot, such as autonomy or emotions.

Rigid Robot — Arguments	Soft Robot — Arguments
• Emotional support & companionship • Facilitate interactions • *Limited tactile interaction*	• Emotional support & companionship • Facilitate interactions • *Foster tactile intimacy & comfort in HRI*

Anthropomorphism neg.

Definition: The negative evaluation of attributing human-like characteristics or behaviors to a robot, such as autonomy or emotions.

Rigid Robot — Arguments	Soft Robot — Arguments
• Lacking empathy & emotional intelligence • Lacking human complexity • *Uncanny valley* • *Autonomy*	• Lacking empathy & emotional intelligence • Lacking human complexity • *False empathy*