

ARTIFICIAL INTELLIGENCE ~

DESIGN CHARACTERISTICS

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Assumption: Any AI system must be empirically testable, and guided by social and moral norms. So it must be embodied. Embodied AI would likely be guided by the norms suggested below, and have capabilities like those listed below:

CAUTIONARY NOTE: A full-fledged AI system would be like a very smart robot. If it were autonomous, and unsupervised by humans, and not required to follow social and moral norms, it would pose a significant risk to humans and other species.

NORMATIVE GUIDELINES

AI systems should not harm human beings.

AI systems should be controlled by humans.

No AI system should be independent of control by humans.

AI CAPABILITIES

A nervous system / brain, part of the animal's integrated brain-body system (BBS).

Multiple Mental Processes: thinking, feeling, decisionmaking, imaging, remembering, expecting, etc.

Multiple Message processing capabilities: neural, mental, sensory, emotional, etc.

Multiple Social Interaction capabilities

Facial Recognition / Facial Expression Interpretation Capabilities

Multiple Communicative competences: eg., gestures, vocalizations, speech

Gestural, Verbal, Symbol Interpretive Codes & Languages

Multiple Sensory organs ~ in all physical media

Multiple Embodied Intelligences: Bodily, Social, Linguistic, Emotional, Sensory, Motor, Temporal, & Spatial

Motor behavior capabilities: eg., legs, wings, or fins, etc

Motor consciousness: moving limbs to get things, walking, running, swimming, etc.

Sensorimotor Consciousness – all sensory consciousness involves motor functions—eg moving head to see/hear/smell better, contact/touch objects/animals;

Intelligent Voluntary choice

Intelligent Voluntary control of bodily functions, capabilities

Multiple executive functions/ decisionmaking capabilities

EG, planning, foresight, canvassing options, , etc.

Decision-making Norms & Values

Normative evaluation capability, in which the organisms/species survival wellbeing and reproduction as core values

Social & psychological emotions

Intense/Calm Positive & Negative Emotional, feelings: eg., hope, fear,

Painful / Pleasant feelings

Normative evaluation capability, in which the organisms/species survival wellbeing and reproduction as core values

Intense/Calm Positive & Negative Emotional, feelings: eg., hope, fear,

Positive & negative feedback on decisions, actions, outcomes

Learning, improving behavior

Episodic & procedural memory

Multiple organic processes, most autonomic: unconsciously regulated & coordinated

Blood circulation, eg., a heart, arteries & veins

Multiple biochemicals, eg. hormones, adrenaline, dopamine, etc

An AI BBS Energy processing system – food consumption, digestion

An AI BBS Waste excretion capability

An oxygen processing system, eg., breathing.