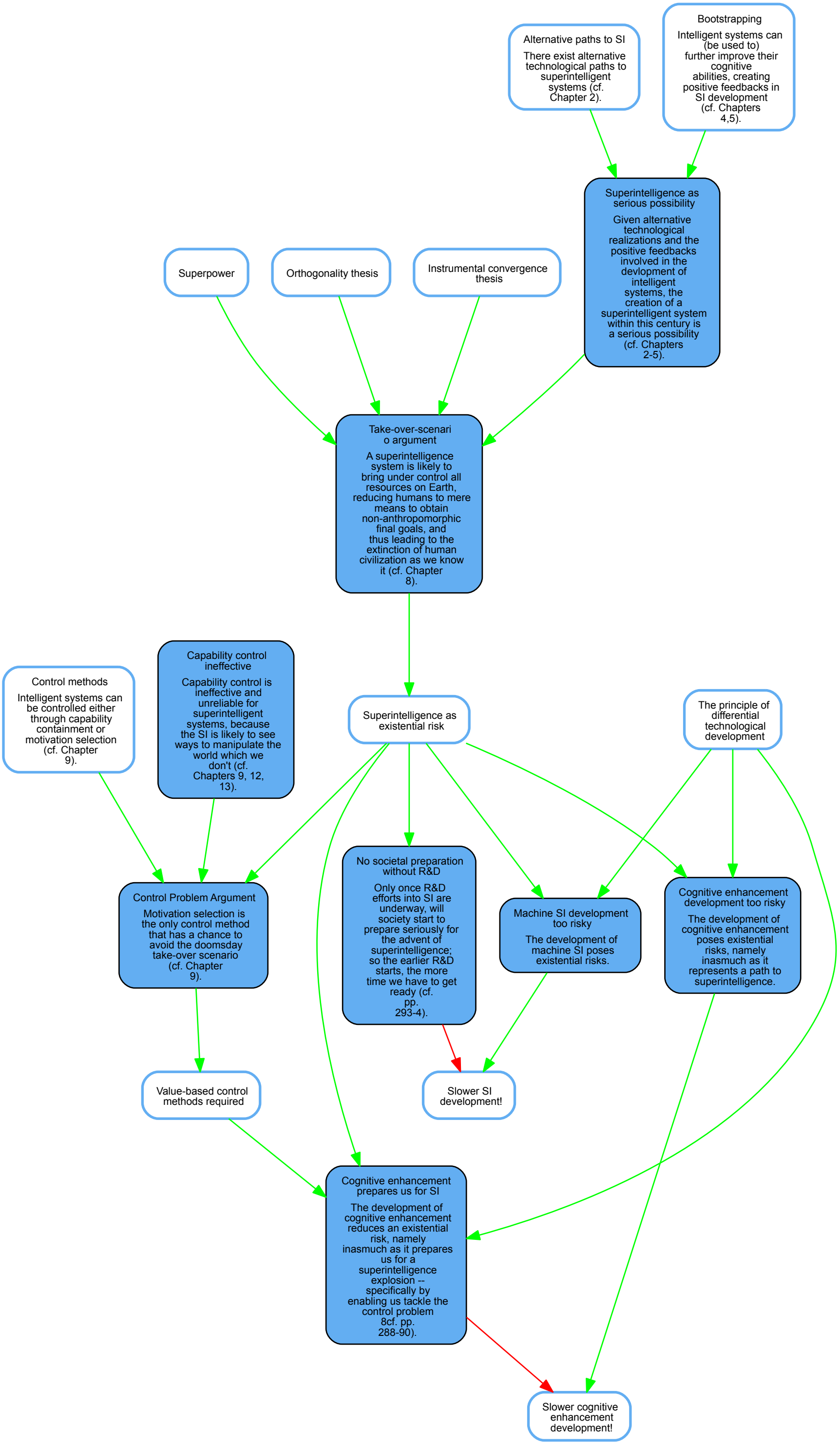
Alternative paths to SI
There exist alternative technological paths to superintelligent systems (cf. Chapter 2).
Bootstrapping
Intelligent systems can (be used to) further improve their cognitive abilities, creating positive feedbacks in SI development (cf. Chapters 4,5).
Superintelligence as serious possibility
Given alternative technological realizations and the positive feedbacks involved in the devlopment of intelligent systems, the creation of a superintelligent system within this century is a serious possibility (cf. Chapters 2-5).
Superpower
Orthogonality thesis
Instrumental convergence thesis
Take-over-scenario argument
A superintelligence system is likely to bring under control all resources on Earth, reducing humans to mere means to obtain non-anthropomorphic final goals, and thus leading to the extinction of human civilization as we know it (cf. Chapter 8).
Control methods
Intelligent systems can be controlled either through capability containment or motivation selection (cf. Chapter 9).
Capability control ineffective
Capability control is ineffective and unreliable for superintelligent systems, because the SI is likely to see ways to manipulate the world which we don't (cf. Chapters 9, 12, 13).
Superintelligence as existential risk
The principle of differential technological development
Control Problem Argument
Motivation selection is the only control method that has a chance to avoid the doomsday take-over scenario (cf. Chapter 9).
No societal preparation without R&D
Only once R&D efforts into SI are underway, will society start to prepare seriously for the advent of superintelligence; so the earlier R&D starts, the more time we have to get ready (cf. pp. 293-4).
Machine SI development too risky
The development of machine SI poses existential risks.
Cognitive enhancement development too risky
The development of cognitive enhancement poses existential risks, namely inasmuch as it represents a path to superintelligence.
Value-based control methods required
Slower SI development!
Cognitive enhancement prepares us for SI
The development of cognitive enhancement reduces an existential risk, namely inasmuch as it prepares us for a superintelligence explosion -- specifically by enabling us tackle the control problem 8cf. pp. 288-90).
Slower cognitive enhancement development!