This debate is about whether or not the spread of nuclear weapons improves or worsens the prospects for peace. The arguments can be boiled down succinctly as follows. Waltz takes a realist position (anarchy, self-help, unitary and rational states) from which he derives a position that nuclear weapons create a deterrence framework that make it highly unlikely that states will engage in conventional wars. Thus, nuclear proliferation can make the world a safer place. Sagan responds from the perspective of organizational theory (recall the Allison article on organizational politics), saying that military organizational culture creates conditions (biases, bounded rationality, standard operating procedures) such that the proliferation of nuclear weapons makes the world much more unsafe. I include main points from the arguments below.

Waltz: More may be better
Peace: absence of general war among the major states of the world. If this is peace, then the world since 1945 is the most peaceful in modern history. Features in the postwar system that were not present earlier must account for “the world’s recent good fortune.” The two biggest such changes are a shift from multipolarity → bipolarity → unipolarity, and nuclear weapons.

Two ways for a state to fend off attack. 1) The defensive ideal: build up such a strong defense that no one would think of attacking you. 2) Deterrence: build up retaliatory forces that would inflict unacceptable punishment on an aggressor. Don’t confuse deterrence and defense: second-strike nuclear forces are deterrent, not defensive.

Nuclear weapons: increase risks of escalation, increase the potential costs of war, obviate the need to acquire new territory to ensure your own security, create certainty about relative balances of power.

Preemptive and preventive strikes: As more states try to get nukes, other states could strike preemptively and preventatively to take out the fledgling arsenals, but it’s unlikely. Because you have to attack early in the process or else the adversary may already have a nuke that it could launch at you, and you’d have to attack with enough devastation as to prevent the country from being able to resume development again in the future.

Second-strike capability: is required for deterrence, but its easy to maintain. Even small states can build up second-strike forces. Dispersing weapons won’t make command and control any harder b/c new nuclear states will have small arsenals.

Arms races: won’t happen because you only need a very small force to serve the deterrent purposes. Smallness of the nuclear arsenals of new nuclear states is key to Waltz’s arguments.

Sagan: More Will be Worse
Says what’s missing is an alternative theory of the consequences of nuclear proliferation apart from realism; an alternative that is a broader conception of the effects of nuclear weapons proliferation on the likelihood of war. Sagan’s alternative: organization theory. Sagan argues that military organizations are unlikely to fulfill the operational requirements for stable nuclear deterrence.
3 requirements of the rational deterrence framework:

- There must not be a preventive war during the transition period when one state has nuclear weapons and the other state is building, but has not yet achieved, a nuclear capability.
- Both states must develop, not just the ability to inflict some level of unacceptable damage to the other side, but also a sufficient degree of second-strike survivability so that its forces could retaliate if attacked first.
- Nuclear arsenal must not be prone to accidental or unauthorized use.

→ organizations make it hard to fulfill any of these three requirements.

Organizations: function within a severely ‘bounded’ or limited form of rationality; are myopic; suffer from ‘goal displacement,’ meaning they often become fixated on narrow operational measurements of goals and lose focus on their overall objectives; have multiple, conflicting goals, and choose and pursue objectives on a political basis.

Military biases encourage preventive war:

- Military officers self-select into the profession and socialization, are more inclined to see war as likely in the near term and inevitable in the long term.
- Susceptible to a ‘better now than later’ logic.
- Military officers are biased towards offensive doctrines and decisive operations.
- Military plans incrementally leading it to focus on immediate plans for war on the subsequent problems of managing postwar world.

Military biases discourage the building of survivable forces:

- Military bureaucracies are interested in having more resources, nucs are expensive, if you spend money on them you have fewer other things like military hardware missiles, aircraft etc.
- Organizational plans for war and conceptions of deterrence do not require invulnerable forces, militaries will not have incentives to pursue building them.
- Military organizations need routines to coordinate and such routines are inflexible and slow to change. Poorly designed SOPs can undermine a survivable military force. Routines produce ‘signatures’ to enemy forces revealing otherwise ‘hidden’ units.
- Organizations tend to learn only after failures.

Accidents:

- Boundedly rational organizations will inevitably have serious accidents over time when they have “high interactive complexity’ and “tight coupling”.
- New powers lack the organizational and financial resources to produce adequate mechanical safety devices and safe weapons design features.
- The ‘opaque’ and covert nature of nuclear proliferation in the contemporary world exacerbates nuclear weapons safety problems.
- Tight-coupling problem will be significantly worse since new nuclear states are in closer proximity to expected adversaries than the US and USSR.
• Risk of war high if the leader of a gov’t of a new nuclear power fears a decapitation attack and then delegates authority to use the weapons to a lower-level person. (increases the likelihood of launch in the event of a false alarm)
• Political and social unrest is likely in the future in a number of new nuclear states

After this exchange between the authors there is a chapter in which Waltz expresses optimism about the nuclear proliferation between India and Pakistan and Sagan expresses pessimism, precisely for the reasons they outline above. Then Waltz responds to Sagan and Sagan again to Waltz. The only new things in these last two articles concern terrorism and nuclear missile defenses.

Terrorism:
• Waltz says there are three kinds of terrorists: those who want to compel an action, those who want to punish an action and those who want to kill for the sake of it. The first kind want to use limited means and don’t want nuclear weapons; the second kind want nukes but also want a secret and closed organization and nuclear weapons open them up too much; the third kind definitely want nukes but they want anything – chemical and bio weapons will do. And, a few more states getting nukes won't make it any easier for these kinds of terrorists to get them, so the spread of nuclear weapons really doesn’t worsen the prospects for nuclear terrorism.
• Sagan also says there are three kinds of terrorists: millinerian (think end of the world is nigh); neo-nazis and racist hate groups; Islamic jihadists. First group isn’t interested in nukes, second group thinks its their duty to use them and deterrence won’t stop them, third group also wants nukes and the only way to keep them from having them is to stop the spread of weapons – if Islamic states get nukes then they get closer to the hands of terrorists

Missile defense:
• Waltz – it is a BAD idea because its defensive, not deterrent, and in pursuing it you undermine everything good and deterrent about nuclear weapons. Missile defense will create things like arms races whereas the presence of nuclear weapons wont.
• Sagan – it is a BAD idea because it won’t work, and because it will encourage countries to increase the size and operational alert status of their weapons, increasing the chances of accidental launch.