At this week's meeting of the American Association for the Advancement of Science in Chicago the nature of the arms race came under scrutiny. One view is that it is a sort of witchcraft practised between the superpowers. Tim Radford reports

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Ballistics and broomsticks

IN AN Indian village in Mexico an American anthropologist came upon two witches. One of them, Florentino, had a reputation as a troublemaker, although he claimed his formulas were only for healing and protection. He also denied causing an illness to the other witch, Porfirio, who also claimed that his rituals were healing ones. In fact, Porfirio, the older of the two, died first. Shortly afterwards, Florentino was brutally clubbed to death at night, by men who were never identified. The villagers accepted the slaying not as a murder but as an elimination of a witch for the good of the community.

Paul Turner of the University of Arizona invited the American Association for the Advancement of Science annual meeting in Chicago to consider the superpower relationship, the arms race, and the nature of deterrence, mutually assured destruction and the hypothetical SDI umbrella as a form of international witchcraft, in which each side insisted that its secret formulas were used for good purposes, in contrast to the secret formulas of the other side which were used for bad purposes. Of course, he said, no American president would admit to coercing other peoples with the use of nuclear weapons, but nor would any village witch admit to coercing others with his rituals. The witch worked in secret ways that could not be divulged, rather like the scientist in a nuclear laboratory. Of course, he admitted, some might object that witchcraft rituals were psychological weapons at best, while nuclear weapons were real.

This distinction lost its significance if nuclear weapons were never used. Then they too became psychological weapons: a view supported by the words of Assistant Secretary of State Richard Burt, when he wanted to push the Pershing II missiles into Europe even though they had failed their early flight tests. What Burt had said was: "We don't care if the goddamn things work or not ... after all, that doesn't matter unless there's a war. What we care about is getting them in."

Paul Turner's story of the two elderly witches who could not live in peaceful coexistence kept echoing through a long series of sombre, almost theological debates on the arms race during the AAAS meeting in Chicago. The debate was theological in that it was conducted by the high priesthood of the superpower strategies — military men, arms negotiators, diplomats, academic theorists, peace campaigners and nuclear weapons scientists who tended to address the realities of the arms race from positions of apparently fundamental faith.

Accordingly Lynn Sykes, a seismologist from Columbia University, a member of the US delegation that negotiated the threshold test ban treaty with the USSR in 1964 argued that there was no verification barrier to a comprehensive test ban treaty without which it would be impossible to end the arms race, while George Miller of Lawrence Livermore Laboratory, which tests bombs, argued that it was important to carry on testing nuclear warheads to maintain the safety of, and confidence in the stockpile as a necessary prelude to the lessening of tension between the US and the Soviet Union. For him, a comprehensive test ban would be a dangerous first step, but a useful climax to arms control.

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Professor Roger Fisher, the director of the Harvard Negotiation Project devoted a plenary lecture to trying to understand what a "good" US-Soviet relationship would look like. Noel Gaylor, a retired Admiral with 46 years' service in the defence of America, had his own answer to that. He wanted to see several fantasies swept away. One was that somehow the Soviet Union was in pursuit of world domination. The other was that the reds would conquer the United States. That was impossible, he said. "We could kill each other but we couldn't occupy each other." He wanted no more daydreams about impermeable shields. He dismissed as illusion the belief that nuclear weapons had any serious military use, or that superiority in weapons numbers made a difference, or that technical superiority made any difference. What he wanted was a reduction in the numbers of warheads: he wanted a joint Soviet-American commission to dismantle and destroy them and to go on doing so until one country or the other asked for a pause, or until each nation.

ended up with about 200 warheads. He favoured nuclearfree zones, and he wanted the military to get out of space weaponry.

weaponry.

He also wanted to see the US and the USSR work together in a number of ways ("when I talk to people who have some kind of animus against the Soviet Union," he said "I usually find that they know nothing about the place at all.") And he wanted military staffs on both sides to be in satellite screen communication with each other, collaborating in intelligence matters and controlling nuclear accidents. The horse, he said pithily, was certainly out of the barn, all but the tail hairs, but it was worth trying to hold it.

Richard Wagner, Jr., of

Richard Wagner, Jr., of Kaman Science Corporation, thought that nuclear testing limits needed to be coupled to, and derived from, other arms control progress simply because the relationship between nuclear testing, warhead development, and defence policy was more inti-mate and detailed than it was 30 or 40 years ago. He foresaw nuclear testing continuing for another 10 or 15 years as the superpower relationship stabilised. Michael Intriligator, of the University College of Los Angeles Centre for International and Strategic Affairs challenged the notion that because arms control negotiation was accomplishing very little, arms control would not work For him, the act of negotiating itself made the world a safer place. He also thought there was considerable value in huge stockpiles of nuclear nn huge stockpiles of nuclear weapons of several varieties, because both number and variety would serve as a hedge against "potentially destabilising technological breakthroughs" that could occur on either side. For instance advances in weapon accuracy were potentially destabilising, but not in the face of overkill from a vast battery of ICBM's backed up by mobile and concealable weapons.

He saw the superpower relationship as one of stability based on mutual deterrence and argued that the greatest danger would come from inadvertent nuclear war from computer accident.

from computer accident, from irrational leaderships, or terrorists. Any arms control agreements would have to be devised carefully to

cope with the instability that would follow the erosion of mutual deterrence and to control the proliferation of weaponry.

Some of the theology was agnostic or even despairing. Stan Sienkiewicz, special assistant to the Under Secretary of State with experience of negotiating under several administrations frankly observed that it gave him hives when a president started waxing eloquent about disarmament because he didn't know any way of getting there. Which earned him a friendly word from the redoubtable Professor Thomas Schelling of Harvard who condemned the Reykjavik summit thus: "Both sides went there to grandstand and one side succeeded. The other side lost its head. They came back talking about 50 per cent cuts in I don't know what or even 100 per cent cuts in I don't know what and after six months we still don't know what. I know people at the summit felt they were on the edge of something enormous. It was probably an enormous blunder."

On the other hand, while he thought the prospects for arms control were bleak the prospects for peace for the rest of the century were rather splendid looking. This was not a view taken by the Harvard psychiatrist John Mack, who argued that the very fear and vulnerability that was the basis for deterrence was, in the United States, spawning an intensification of primitive hatred and new forms of we-they thinking. Curiously, in a series of debates marked by vivid speech, the palm for the best metaphor of the superpower relationship was awarded by several speakers to academician Roald Sagdeev, Director of the Space Research Institute in Moscow, who tersely but cheerfully described the US and the USSR relationship as a marriage — a marriage in which each member of the family had twenty tons of TNT in the basement, and each member had a detonator button. Which is where everybody came in.

