Seven years later, in 1952, the United States scaled the nuclear ladder, detonating its first thermonuclear device in the Pacific. 'Mike', as the bomb was designated, exploded with a force 500 times greater than the bomb detonated over Hiroshima, in the process wiping the test island off the map. The H-bomb really changed everything, transforming the very nature of war and peace. Or, as Winston Churchill put it, 'The atomic bomb, with all its terror, did not carry us outside the scope of human control or manageable events, in thought or action, in peace or war. But … [with] the hydrogen bomb, the entire foundation of human affairs was revolutionized.' Indeed, it was a brave new world.

A sample of statistics from the nuclear age that followed provides a sobering reminder of the scale of the problem. Upwards of 128,000 nuclear weapons have been produced in the past 60 years, of which about 98% were produced by the United States and the former Soviet Union. The nine current members of the nuclear club – the United States, Russia, Great Britain, France, India, Pakistan, China, Israel, and North Korea – still possess about 27,000 operational nuclear weapons between them. At least another 15 countries currently have on hand enough highly enriched uranium for a nuclear weapon.

Within this context, we will look at the science of nuclear weapons and how they differ from conventional weapons; the race to beat Nazi scientists to the bomb; the history of early attempts to control the bomb, through to the Soviet detonation of an atomic device in August 1949; the race to acquire the H-bomb, with its revolutionary implications; the history of nuclear deterrence and arms control, against the backdrop of the changing international landscape, from the Cold War to the present; the prospect and promise of missile defence, from the end of World War II, through Ronald Reagan's dream of shielding the American homeland from a massive Soviet ballistic attack ('Star Wars'), through the current administration's reduced goal of defending against a small