

## Civil defence planning in the 1960s & 1970s: A propaganda exercise?

Written by Johanna Kohler

This PDF is auto-generated for reference only. As such, it may contain some conversion errors and/or missing information. For all formal use please refer to the official version on the website, as linked below.

# Civil defence planning in the 1960s & 1970s: A propaganda exercise?

<https://www.e-ir.info/2011/11/10/civil-defence-planning-in-the-1960s-1970s-no-more-than-a-propaganda-exercise/>

JOHANNA KOHLER, NOV 10 2011

*'A thousand years scarce serve to form a state: An hour may lay it in the dust.'*[1]

While earthquakes, as natural catastrophes, have plagued mankind for thousands of years, the disaster from nuclear bombs as well as – accidentally – from nuclear power stations such as in Japan in 2011 is man-made and has only existed since 1945. As they are man-made catastrophes, governments are in different ways accountable, since their policies can result in direct misery for their own people – be it through failure of deterrence, or the continued policy of building nuclear power stations. Thus a system of protection for the worst-case-scenario has to be developed: civil defence. This system is a propaganda tool to justify policies among the population as well as to keep them calm. This essay assesses civil defence in the 1960s and 1970s, the time when nuclear war was not so remote a possibility. Propaganda was thus used in its most basic sense, as 'information, especially of a biased or misleading nature, used to promote a political cause,'[2] namely that a nuclear war against the communists could be fought and won. How should one hide from a nuclear bomb and its impact? The age of civil defence in its traditional setting was over. Its end was marked by the explosion of two atomic bombs in Hiroshima and Nagasaki. State officials in the 1960s and 1970s pretended that the threat of fifty-mega-ton-weapons could be countered with a defence agenda that might protect against attacks with conventional bombs of six tons of TNT – the largest bomb used in the Second World War.[3] This essay argues that civil defence in the nuclear age has never been more than a political tool for governments used for emotions management and as a political tool for winning public consent on key Cold War issues. Deterrence could only be pursued if the population stood firmly behind the government and was prepared for nuclear war. To illustrate this it will first be shown that the preconditions of dealing with the threat of atomic war differed, politically and psychologically, due to varying previous experiences in the United States, the United Kingdom and Germany. Then the different schemes and rhetoric behind civil defence in these countries are examined in order to show that national mentality, and the nation's political security culture as well as societal relations impacted upon its development. Finally, the farce of civil defence will be dismantled, as reflected in public protest.

In 1979/80, at a time of heightened international tension, the British government 'decided to spend £5,000 million...on four Trident submarines, one of the most destructive weapons ever invented; it agreed to install 160 American-owned and operated cruise missiles in Britain, and it issued *Protect and Survive*.'[4] This rather critical account epitomises the political culmination of both the advancement of weapons and the question of public safety or the lack thereof. The threat of nuclear war had evolved from the Soviet explosion of Joe-1 in August 1949 to the Tsar Bomba in October 1961. In 1958, America started deploying intercontinental ballistic missiles and in the 1960s France and China had successful nuclear tests. An area of twenty to a hundred square miles can be set on fire within minutes by one strategic nuclear weapon detonated over a city.[5] Deterrence, the main policy of the Cold War, came to a test with the Cuban Missile Crisis in October 1962, which was also a test of the efficacy of previous civil defence programmes. During the crisis, the sense of impending doom undermined well-publicised civil defence programmes, and led to doubts about the government's trustworthiness.[6] It has been estimated that as many as 10 million Americans took 'vacations' in rural areas far away from potential targets.[7] Panic increased and it is evident that people were not ready to follow the government guidelines in a calm and orderly manner; instead, on 24 October the *New York Times* phone lines were jammed with 15,000 calls in nine hours with queries about personal safety

## Civil defence planning in the 1960s & 1970s: A propaganda exercise?

Written by Johanna Kohler

measures.[8] During those thirteen days, many Americans recognised the reality of nuclear war's threat while acknowledging the unreality of civil defence plans, inadequate funding and insufficient shelters.[9]

The foundations for certain civil defence mentalities were laid earlier and reflect the nations' experience with conflict management. While the United States had not been faced with attacks on their mainland, European countries had fresh memories of manslaughter in World War Two. The general hysteria and panic among the American public concerning a potential nuclear attack, which is reflected in various films of the time – be it in a moral way like in 'The Day the Earth stood still' or in a satire like 'Dr. Strangelove' – was countered by a firm government approach, promising a victory over communism and protection of the population against all evil. The civil defence programmes are therefore to be seen as part of the American 'can-do' mentality. In Britain, like the US a victorious nation, the memories of World War Two as reflected in *Dad's Army* were revived as a time when the population stood together in the face of the German threat. Therefore the government attempted to regenerate that kind of atmosphere among its population, and indeed, by the early 1960s more than 600,000 people were involved in civil defence duties.[10] However, not all nations could connect to war-time experience: in Germany civil defence during World War Two was a failed promise. It remained linked to the country's Nazi past, and to its experience of total war and total defeat. Therefore, the postwar attempt to re-establish civil defence was an 'effort to reforge a state-citizen compact that fundamentally rested on the state's ability and willingness to protect its citizens against external dangers.'[11] The civil defence approaches thus largely reflect the different mentalities derived from the war and the role of the countries in the international setting.

By example of America, it shall be portrayed that civil defence was a vital tool in the logic of cold war politics. American security rested not on passive civil defence, but on the active defence provided by the American nuclear deterrent. The reason why civil defence was furthered was to keep the illusion of security alive, otherwise the tolerance for deterrence might have crumbled. 'Civil defense was marketed to the American people as self-protection for survival. It was a necessary illusion: indispensable to the moral underpinning of national security, but ultimately irrelevant to survival under nuclear attack.' [12] By practicing self-control and discipline in the face of incalculable risks Americans learned how to cope with the demands of the Cold War.[13] There was even an intrinsic contradiction between the government suggesting that civil defence would allow people to survive a nuclear war, and the promotion of deterrence, which basically implied that a nuclear war could not be survived. Thus in 1979 a high US civil defence official evaluated the programme as follows: 'Since the Cuban missile crisis... funds have been spent to create the illusion of having civil defense when in reality we have virtually none. So, if I am asked today, "What is the capability of the nation to protect its citizens from the consequences of nuclear attack?" I would say virtually none.'[14] It was a purely propagandistic exercise used as a political tool.

In the following, schemes of civil defence shall be compared and assessed. As portrayed above they served both as a political propaganda tool and to keep the population occupied to prevent mass hysteria. In America civil defence implied a piecemeal militarisation of everyday life. The Federal Civil Defense Administration (FCDA) paved the way for the intrusion of military ideas and structures into civilian life, again an indication that civil defence was used to achieve political goals. However, although such educational exercises generally raised the bomb consciousness, the public rejected family militarisation. McEnaney argues that the eventual failure of civil defence can be attributed to such paradoxes of militarisation.[15] In 1951 the Office of Civil Defense issued two civil defence programmes: *Survival Under Atomic Attack* spread the information that except for radioactivity, nuclear weapons were not fundamentally different from conventional ones, whilst propagating measures for self-protection like 'Duck and Cover'[16]; *Alert America* promoted the programme of nuclear crisis management by dramatising the danger of the Soviet threat and convincing Americans of the necessity of civil defence. It also aimed at persuading 15 million people to volunteer for training in one of the specialised defence services.[17] During the Kennedy administration tensions increased immensely with the Berlin Wall crisis in 1961 and the Cuban Missile Crisis in 1962. Therefore, Kennedy asked Congress for more than 100 million dollars for public fallout shelters and home-based imminent nuclear danger alarm systems.[18] While in 1964 Senate buried the Shelter Incentive Bill, ushering in a twelve-year period in which civil defence ceased to be a major issue, another concept emerged in the early 1970s: strategic evacuation or crisis relocation. The main reason behind it was the alleged build-up of Soviet civil defence capabilities; by no means had the doctrine of mutual assured destruction secured universal acceptance among politicians.[19]

## Civil defence planning in the 1960s & 1970s: A propaganda exercise?

Written by Johanna Kohler

In Britain civil defence started with the Civil Defence Corps (CDC), established by the Civil Defence Act of 1948, as well as the Auxiliary Fire Service (AFS), which made Local Authorities responsible for recruiting and training the volunteers, who at the end of 1964 numbered 122,000 in the CDC and 14,000 in the AFS.[20] However, in 1968 the government disbanded CDC and AFS. The issue was used as a political propaganda tool between Conservatives and Labour, as is evident in Sir Renton's conservative pamphlet which criticised the socialist government for making that decision: 'the worst result was that the 75,000/80,000 remaining Civil Defence volunteers and 25,000 of the AFS, trained and ready to form a nucleus for expansion at the threat of war, were told that their services were no longer needed.'[21] Renton calculated in 1969 that a somewhat altered continuation of the programme would only cost an extra four million pounds. This shows how politicians tried to win over voters by promoting their interest on a local level.[22] Interestingly, in the whole pamphlet the word 'nuclear' or 'atomic' does not appear once, apparently to avoid apprehension. Thus by 1968, programmes in Britain shifted towards the American educational approach. For evacuations – considered throughout the 1960s and 1970s – Britain was too small an island to provide safety away from nuclear targets. The government therefore claimed that instead 'full shelter protection for the civilian population' could be achieved by 1969-70, yet such a promise remained pure rhetoric.[23]

Leaflets, such as 'Advising the Householder on Protection against Nuclear Attack,' were published, accompanied by public information films, 'Civil Defence Information Bulletins' (1964). Moreover, radio scripts were prepared in the early 1970s for the case of a nuclear attack: 'This is the Wartime Broadcasting Service. This country has been attacked with nuclear weapons...stay tuned to this wavelength, stay calm and stay in your own homes'[24] – mirroring broadcasts of World War Two. The impression was conveyed that everything was under government control. Most famously, the 'Protect and Survive' series was produced – but not published – in the late 1970s and reproduced almost unaltered in 1980. It was a naïve approach advocating the construction of 'adequate shelters'; if no bunker was available, fall-out rooms or inner refuge had to be created by blocking the windows, and then either making a 'lean to' with sloping doors taken from rooms above or using tables surrounded by boxes and bags, 'filled with sand, earth, books and clothing'. On the other hand, it informed the reader that 'even the safest room in your house is not safe enough,' which shows the inherent contradiction of this approach. If no refuge could be reached one should virtually 'duck and cover', like the Americans, using a briefcase or jacket to cover one's head. A stay in the shelter might take up to 14 days due to fallout danger;[25] however, it is not suggested what should be done afterwards if all communications, including radio, broke down and uncontaminated food and water were not available. All the above measures have close connotations to World War Two experiences, in which Britain maintained high civilian morale during the Blitzkrieg, some notions were even romanticised in hindsight. It was therefore possible for the governments during the Cold War – be it Labour or Conservative – to connect to a previously existing positive mentality.

In contrast, Germany was not able to relate to the failed promise of the Nazis during the war. The Federal Republic faced a strategic dilemma: on the one hand, because of West Germany's exposed position on the front line of the Cold War and Soviet superiority in conventional weapons, they were dependant on the West's first and early use of nuclear weapons. On the other hand, any nuclear response to a Soviet attack would necessarily turn Germany into a nuclear battlefield and hence into a nuclear wasteland.[26] A NATO exercise 'Carte Blanche' over Western Europe in 1955 – simulating a nuclear war in which 335 atomic bombs of the size of the Hiroshima bomb were dropped in a simulated battle zone stretching from Norway to Italy – demonstrated the complete lack of protection for the West German civilian population in the case of nuclear war. Civil defence thus became the politically necessary complement to rearmament and Western integration.[27] However, already in April 1957 Germany's most prominent nuclear scientists warned in the manifesto 'Göttingen 18', that in a nuclear age, the 'entire population of the Federal Republic could probably be extirpated' and they knew 'of no technical possibility of protecting large population centres from this danger'.[28] A brochure published in the early 1960s called 'Everyone has a chance'[29], – which resembled the British version – was mocked from its very first issue and not taken seriously by the public, as is reflected in a *Spiegel* article of 1962 titled 'Everyone has no chance'.[30] It argues that it was a mere propaganda tool, trying to create hope while miserably failing, not least because in total it had spent only 786 million DM, or 1.47 percent of the federal budget,[31] on civil defence, whereas the government had spent 2.4 billion on protecting German cow milk.[32] Scorn like that was not only a media reaction to such policies but was widely reflected in the population since most people were aware that they were unlikely to survive a nuclear war if Germany was to be the main battlefield.[33] The government was thus not successful in convincing the German population of the necessity

# Civil defence planning in the 1960s & 1970s: A propaganda exercise?

Written by Johanna Kohler

of civil defence.

In all countries, suspicion was aroused by the civil defence schemes, and doubts grew, culminating in an era of protest, especially in the 1980s. From a scientific perspective Carl Sagan spread the concept of 'nuclear winter': fireballs from high-yield thermonuclear explosions could deplete the ozone layer and the climatic effects of nuclear dust and smoke could be 'subfreezing temperatures in a twilit radioactive gloom lasting for months or longer.'<sup>[34]</sup> Moreover, warnings were issued by the British Medical Association's Board of Science that a 'nuclear attack would cause the medical services in the country to collapse.'<sup>[35]</sup> However, beyond science, the logic of civil defence also had a substantial cultural effect. In the song 'Two Tribes' (1984) by Frankie Goes to Hollywood Patrick Allen's voice was refeatured along the lines of 'Protect and Survive' video clips, however, mocking its original content: 'Mine is the last voice that you will ever hear. Do not be alarmed.'<sup>[36]</sup> Another example of public discontent is Raymond Brigg's graphic novel *When the Wind Blows* (1982). It demonstrates the reaction of an elderly couple in the countryside who fall back into some romanticised memory of the war whilst preparing shelter for a nuclear attack.<sup>[37]</sup> Calls for nuclear disarmament under the motto 'protest and survive' became gradually louder in many countries and the Campaign for Nuclear Disarmament issued pamphlets denouncing civil defence as 'the cruellest confidence trick' based on 'the illusion that you can have a nice neat, humane, limited nuclear war. And that's the most dangerous delusion that mankind's ever dreamed up.'<sup>[38]</sup>

Byron wrote in the early nineteenth century that 'an hour may lay [the state] in the dust', thinking of the warfare of his time. The twentieth century has managed to reduce that time span even further. This essay has assessed civil defence in its validity to protect from nuclear disasters, and found that its efficacy is to be neglected in terms of physical protection, but was applied as a propaganda tool to achieve political aims, in America, the UK and Germany. The populations responded differently due to varying previous experiences of civil defence. However, by the 1980s, its farce had become apparent, not least when the Chernobyl disaster happened in 1986 and, according to some sources, possibly left more than 100,000 dead or fatally ill.<sup>[39]</sup> Sagan is right in stating that 'nuclear war is a problem that can be treated only theoretically.'<sup>[40]</sup> However, nuclear civil defence is also a problem that can only be treated theoretically. If it came to a test, the negative outcome of the experiment would be proven. Although, it is common sense that 'except for fools and madmen, everyone knows that nuclear war would be an unprecedented human catastrophe,'<sup>[41]</sup> it appears that the leaderships of several nations strive towards such a test, of course, by maintaining the rhetoric of civil defence for their populations at home. The paradox of the 1960s and 1970s is thus ongoing, not least in times of international terrorism. A test, not in form of nuclear war, but in form of a nuclear catastrophe, may well have arrived in Japan. One can only hope that its outcome proves that civil defence after all has some effects to protect human lives.

## Bibliography

### Primary Sources

BBC. 'Transcript to be used in wake of nuclear attack.' *British Broadcasting Service*. [http://news.bbc.co.uk/1/shared/bsp/hi/pdfs/03\\_10\\_08nuclearattack.pdf](http://news.bbc.co.uk/1/shared/bsp/hi/pdfs/03_10_08nuclearattack.pdf) (accessed 10 March 2011).

Bolsover, Phil. *Civil Defence: The Cruellest Confidence Trick*. London: Campaign for Nuclear Disarmament, 1980.

Editorial. 'Luftschutz: Jeder hat keine Chance.' *Der Spiegel*, 21, 1962. <http://www.spiegel.de/spiegel/print/d-45140177.html>.

Editorial. 'Please Don't Call Times for Cuba Information.' *New York Times*, 25 October 1962, 9.

Renton, Sir David. *Coping with Emergencies in Peace and War*. London: Conservative Political Centre, 1969.

UK Civil Defence. 'Protect and Survive.' *Archive of UK Civil Defence Material*. <http://www.atomica.co.uk/main.htm> (accessed 11 March 2011).

# Civil defence planning in the 1960s & 1970s: A propaganda exercise?

Written by Johanna Kohler

US Congress, House, Committee on Appropriations. *Hearings, Housing and Urban Development – Independent Agencies Appropriations for 1980*. 96<sup>th</sup> Congress, 2<sup>nd</sup> session, Washington D.C., 1979.

Ziviler Bevölkerungsschutz. ‚Jeder hat eine Chance.‘ *Ziviler Bevölkerungsschutz, BRD 1960*. [http://www.schouwer-online.de/technik/zivilschutz\\_de01.htm](http://www.schouwer-online.de/technik/zivilschutz_de01.htm) (accessed 10 March 2011).

## Secondary Sources

‘Atomic Culture.’ <http://www.atomica.co.uk/culture.htm> (accessed 10 March 2011).

Biess, Frank. ‘Everybody has a Chance’: Nuclear Angst, Civil Defence, and the History of Emotions in Postwar West Germany.’ *German History* 27: 2 (2009): 215-243.

Briggs, Raymond. *When the Wind Blows*. London: Penguin Books, 1982.

Byron, William Lord. *The Works of Lord Byron*. Paris: A. and W. Galignani, 1828.

Cocroft, Wayne and Thomas, Roger. *Cold War: Building for Nuclear Confrontation 1946-1989*. Swindon: English Heritage, 2004.

Davis, Tracy. 2007. *Stages of Emergency: Cold War Nuclear Civil Defense*. Durham: Duke University Press.

George, Alice. *Awaiting Armageddon: How Americans faced the Cuban Missile Crisis*. Chapel Hill: University of North Carolina Press, 2003.

Helms, Nadine. ‚Hausmittel gegen die Apokalypse.‘ *Spiegel Online*. [http://einestages.spiegel.de/static/topicalbumbackground/8321/hausmittel\\_gegen\\_die\\_apokalypse.html](http://einestages.spiegel.de/static/topicalbumbackground/8321/hausmittel_gegen_die_apokalypse.html) (accessed 10 March 2011).

Kerr, Thomas. *Civil Defense in the U.S.: Bandid for a Holocaust?* Boulder: Westview Press, 1983.

McEnaney, Laura. *Civil defense begins at home: militarisation meets everyday life in the fifties*. Princeton: Princeton University Press, 2000.

Nuclear Darkness. ‘Global Nuclear Arsenal 2009.’ *Nuclear Darkness*. [http://www.nucleardarkness.org/include/nucleardarkness//files/global\\_nuclear\\_arsenal\\_in\\_number\\_2009.pdf](http://www.nucleardarkness.org/include/nucleardarkness//files/global_nuclear_arsenal_in_number_2009.pdf) (accessed 10 March 2011).

Oakes, Guy. *The Imaginary War: Civil Defense and American Cold War Culture*. Oxford: Oxford University Press, 1994.

Oxford Reference Online. *Oxford Dictionary of English*, edited by Angus Stevenson. Oxford: Oxford University Press, 2010. <http://www.oxfordreference.com/views/ENTRY.html?subview=Main&entry=t140.e0666410> (accessed 10 March 2011).

Sagan, Carl. ‘Nuclear Winter.’ *School of Individual Liberalism*, 1983. [http://www.cooperativeindividualism.org/sagan\\_nuclear\\_winter.html](http://www.cooperativeindividualism.org/sagan_nuclear_winter.html) (accessed 10 March 2011).

The Report of the British Medical Association’s Board of Science and Education. *The Medical Effects of Nuclear War*. Chichester: British Medical Association, 1983.

US History. ‘Fallout Shelters.’ *United States History*. <http://www.u-s-history.com/pages/h3706.html> (accessed 10 March 2011).

## Civil defence planning in the 1960s & 1970s: A propaganda exercise?

Written by Johanna Kohler

Vidal, John. 'Chernobyl nuclear accident: figures for deaths and cancers still in dispute.' The *Guardian*, 10 January 2010. <http://www.guardian.co.uk/environment/2010/jan/10/chernobyl-nuclear-deaths-cancers-dispute> (accessed 10 March 2011).

[1] Lord Byron, *The Works of Lord Byron* (Paris: A. and W. Galignani, 1828), 56.

[2] Oxford Reference Online, *Oxford Dictionary of English*, edited by Angus Stevenson (Oxford: Oxford University Press, 2010).

[3] Nuclear Darkness, 'Global Nuclear Arsenal 2009,' *Nuclear Darkness*. [http://www.nucleardarkness.org/include/nucleardarkness//files/global\\_nuclear\\_arsenal\\_in\\_number\\_2009.pdf](http://www.nucleardarkness.org/include/nucleardarkness//files/global_nuclear_arsenal_in_number_2009.pdf).

[4] Phil Bolsover, *Civil Defence: The Cruellest Confidence Trick* (London: Campaign for Nuclear Disarmament, 1980), 3.

[5] Nuclear Darkness.

[6] Alice George, *Awaiting Armageddon: How Americans faced the Cuban Missile Crisis* (Chapel Hill: University of North Carolina Press, 2003), 68.

[7] *Ibid*, 68.

[8] Editorial, 'Please Don't Call Times for Cuba Information,' *New York Times*, 25 October 1962, 9.

[9] George, *Awaiting Armageddon*, 86.

[10] Wayne Cocroft, Roger Thomas, *Cold War: Building for Nuclear Confrontation 1946-1989* (Swindon: English Heritage, 2004), 231.

[11] Frank Biess, 'Everybody has a Chance': Nuclear Angst, Civil Defence, and the History of Emotions in Postwar West Germany,' *German History* 27:2 (2009): 223.

[12] Guy Oakes, *The Imaginary War: Civil Defense and American Cold War Culture* (Oxford: Oxford University Press, 1994), 166.

[13] *Ibid*, 33-34.

[14] US Congress, House, Committee on Appropriations, *Hearings, Housing and Urban Development – Independent Agencies Appropriations for 1980*, 96<sup>th</sup> Congress, 2<sup>nd</sup> session, 1979, 482.

[15] Laura McEnaney, *Civil defense begins at home: militarisation meets everyday life in the fifties* (Princeton: Princeton University Press, 2000), 152-153.

[16] Oakes, *The Imaginary War*, 52-53.

[17] *Ibid*, 82.

[18] US History, 'Fallout Shelters,' *United States History*, <http://www.u-s-history.com/pages/h3706.html>.

[19] Thomas Kerr, *Civil Defense in the U.S.*, (Boulder: Westview Press, 1983), 133, 149.

[20] Sir David Renton, *Coping with Emergencies in Peace and War* (London: Conservative Political Centre, 1969), 9.

## Civil defence planning in the 1960s & 1970s: A propaganda exercise?

Written by Johanna Kohler

[21] *Ibid*, 10.

[22] *Ibid*, 21.

[23] Cocroft, Thomas, *Cold War*, 235.

[24] BBC, 'Transcript to be used in wake of nuclear attack,' *British Broadcasting Service*. [http://news.bbc.co.uk/1/shared/bsp/hi/pdfs/03\\_10\\_08nuclearattack.pdf](http://news.bbc.co.uk/1/shared/bsp/hi/pdfs/03_10_08nuclearattack.pdf).

[25] UK Civil Defence, 'Protect and Survive,' *Archive of UK Civil Defence Material*. <http://www.atomica.co.uk/main.htm>.

[26] Biess, 'Everybody has a Chance,' 223.

[27] *Ibid*, 224.

[28] *Ibid*, 225.

[29] Ziviler Bevölkerungsschutz, 'Jeder hat eine Chance,' *Ziviler Bevölkerungsschutz, BRD 1960*. [http://www.schauwer-online.de/technik/zivilschutz\\_de01.htm](http://www.schauwer-online.de/technik/zivilschutz_de01.htm).

[30] Editorial, 'Luftschutz: Jeder hat keine Chance,' *Der Spiegel*, 21 (1962). <http://www.spiegel.de/spiegel/print/d-45140177.html>.

[31] Biess, 'Everybody has a Chance,' 227.

[32] *Ibid*, 22-23.

[33] Nadine Helms, 'Hausmittel gegen die Apokalypse,' *Spiegel Online*. [http://einestages.spiegel.de/static/topicalbumbackground/8321/hausmittel\\_gegen\\_die\\_apokalypse.html](http://einestages.spiegel.de/static/topicalbumbackground/8321/hausmittel_gegen_die_apokalypse.html).

[34] Carl Sagan, 'Nuclear Winter,' *School of Individual Liberalism*, 1983. [http://www.cooperativeindividualism.org/sagan\\_nuclear\\_winter.html](http://www.cooperativeindividualism.org/sagan_nuclear_winter.html).

[35] The Report of the British Medical Association's Board of Science and Education, *The Medical Effects of Nuclear War* (Chichester: British Medical Association, 1983), 124.

[36] 'Atomic Culture,' Available at: <http://www.atomica.co.uk/culture.htm> (accessed 10 March 2011).

[37] Raymond Briggs, *When the Wind Blows* (London: Penguin Books, 1982).

[38] Bolsover, *Civil Defence*, 57.

[39] John Vidal, 'Chernobyl nuclear accident: figures for deaths and cancers still in dispute,' *The Guardian*, 10 January 2010. <http://www.guardian.co.uk/environment/2010/jan/10/chernobyl-nuclear-deaths-cancers-dispute>.

[40] Sagan, 'Nuclear Winter.'

[41] *Ibid*.

—

Written by: Johanna Köhler

# **Civil defence planning in the 1960s & 1970s: A propaganda exercise?**

Written by Johanna Kohler

Written at: Royal Holloway, University of London

Written for: Dr. E. Sullivan

Date written: March 2011