

## NeuroStrike Weapons and the Combat Domain After 2020: Caution

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The basic principle of a suggested **neurostrike weapon** is a fairly simple proposition. It entails a hand held, or platform mounted, or aerial mounted, RF, directed energy or **neurocognitive disrupter** which is designed to harm, disable or permanently damage a human brain—or the brains of several in close proximity to the attack. Unlike future forecasts of likely, suspected or even probably designable future weapons systems which significantly alter the battle domain after 2020 and upset all prior theories of combat or the use of non-lethal force on both civilian and military targets, this one is real and it has been here a while. One can look to examples such as neurcognitively compromised U.S. diplomats in Havana and Guangzhou as well as instances where allegedly such weapons were deployed by Chinese government police in the Hong Kong protests in 2019.

So, before a general description of its **neurocognitive disruptive effects [NDE]** is explored here it is of utmost importance to assess the net strategic value of such weapons in future grey zone, counter insurgency, regime stabilization, regional armed conflict and all out war situations. In terms of a general rule the NDE issue here which figures prominently, also previously described elsewhere as **NeuroCognitive Conflict [NCC]**, betrays an elusive and near stealth array of qualities. Further it implies that to properly ascertain its net strategic effects in the next decade after 2020 defense planners, along with elements of the National Command Authority, must weigh the offensive and defensive dimensions of this threat. The basic NCC systems which pose the threat are grounded in variations of RF, ultra-wide-band and microwave technology but since the mid 1970s have been progressively enhanced and upgraded to maximize their non-kinetic but still harmful capabilities.

Whether future armed conflict at any level of complexity, from limited interventions involving SOF personnel to the more complex array of issues associated with theatre warfare, include consideration of the nuanced threat posed by NCC is anyone's guess. Certainly the technology has demonstrated its effectiveness against largely civilian targets in embassies and elsewhere. Considered an 'unconventional electronic attack' the technology has certain appeal due to its non-lethal effects but effective defensive measures erected against NCC forms of attack are lacking today. The scope and scale of **neurostrike** weaponry should be a matter of grave concern after 2020 as the broad beam of NCC disruption can be estimated to have effective results at 3,000 meters and repeated directional targeting can produce long lasting and irreversible cognitive damage versus temporary loss of memory, certain motor functions or related neurological disruption. There is some evidence also that such technologies have been studied and tested for their effects on vehicular machine systems which are electronic in nature and which are under consideration for neutralizing wheeled threats, crowd control and selected civil disturbance scenarios.

The most urgent issue is to assess how prepared the United States and its allies are for covert, subtle and undetected instances of NCC technology use and thereby formulate better defensive, deterrent and quicker warning devices which alert potential targets to the detection of such technology nearby. We suspect that NeuroStrike associated technologies have disruptive effects on C4ISR systems as well. Efforts to identify and characterize the NCC threat for the NATO alliance, as well as conduct research to establish the best forensic mechanism for pinpointing its sources and thereby enable successful deflection of covert NCC activities should be a paramount security priority for DoD and our allies in the decade beginning in 2020.