

civilian population, unless circumstances do not permit<sup>92</sup>. The position of customary international law on this issue is less clear.

### III 2. Military Advantage

The second cumulative element of a military objective is that of a *definite military advantage*. In establishing a military advantage, the frame of reference is the key to properly interpreting the norm<sup>93</sup>. Furthermore, the definite military advantage gained must be concrete and not purely hypothetical. Thus, the calculus must be made from a strategic perspective and not from a narrow tactical point of view. Furthermore, the norm imposes an obligation of means. That is, those who plan such an attack must have the necessary information enabling them to respect the norm. Should there be a doubt as to the definite military advantage to be gained, the attack must be called off. The principle of military necessity circumscribes the definition of a legitimate target in space.

Professor Michael N. Schmitt points out a doctrinal debate on what he refers to as the degree of nexus between the object and individual attacked and military operations<sup>94</sup>. This debate centers upon a difference of opinion between ICRC, which propounds a restrictive approach and the less restrictive American view. In his argument, Professor Schmitt refers to U.S. military manuals, for example *The Commander's Handbook on the Law of Naval Operations*, which states, "*economic targets that indirectly but effectively support and sustain the enemy's war-fighting capability may ... be attacked*"<sup>95</sup>.

Consequently, satellites and their architecture can be perceived as legitimate military targets and become the object of attacks. In fact, considering the economic importance of space assets within an information-based economy, the argument contained within the Commander's Handbook increases the justification for targeting satellites and their architecture.

### III 3. Legitimate Means and Methods

To classify satellites and their architecture as legitimate military objectives is certainly interesting but in itself insufficient to launch an attack against these assets. Any use of force must respect the principles described here.

#### III 3.1 Application of the Principles

The use of force must be proportional. On this point, it is interesting to note both the similarity and difference in terms when comparing A.P. I Art 52.2, which uses the term "military necessity" with A.P. I Art. 57.2 (a) (iii), (proportionality) which, uses the term "direct military advantage anticipated". For the rule of A.P.I Art. 52.2 to be respected, each military objective must have an articulated, precise military advantage. On the other hand the rule of A.P.I Art 57.2(a)(iii), which deals with the precautions in attack, adds another variable into the equation, namely that of the loss of civilian lives which could result from the attack. Furthermore A.P.I Art 57.2(a)(iii) adds another dimension to the concept of definite military advantage, which must also be direct. The difficulty of the calculus is compounded by the realities of space, namely orbits. The calculus of proportionality when using conventional arms on earth is a static concept. Collateral damage occurs immediately and remains static in time. Space debris resulting from a hard kill remains in orbit<sup>96</sup>.

Another consideration in the targeting of satellites and their architecture is found in Article 27 of the Annex to Hague IV<sup>97</sup>, which offers protection from intentional attack to buildings dedicated to science

<sup>92</sup> A.P.I Art. 57.2(c).

<sup>93</sup> Commentary, supra note 86, para. 2218.

<sup>94</sup> See *Bellum Americanum*, supra note 31 at 1076.

<sup>95</sup> *Bellum Americanum*, supra, note 31, at 1076.

<sup>96</sup> On this point it is interesting to note that the OST establishes within its Article IX two concepts which may have an impact upon the creation of space debris through a hard kill. Firstly, Art IX creates an obligation of "due regard to corresponding interests of all other States Parties to the Treaty" upon the conduct of the space activities by states. Secondly Art. IX states that States are to "pursue studies of outer space...and conduct exploration...so as to avoid ...harmful contamination". This second obligation may arguably have an impact upon the testing of new ASAT technology.

<sup>97</sup> Reprinted in Roberts & Guelff, supra note 5, at 73, 78. It is important to note that "The Nuremberg International Military Tribunal had already found in 1945 that the humanitarian rules included in the Regulations annexed to the Hague Convention IV of 1907 "were recognized by all civilized nations and were regarded as being declaratory of the laws and customs of war" (International Military