Traditional arms control and nonproliferation regimes have used secrecy and export controls as additional means to prevent some states from developing certain types of weapons that others already have. A reassurance-based space security regime would acknowledge that secrecy and export controls often impede legitimate space commerce and cooperation without preventing the spread of space-related capabilities that could be misused. In other words, it would assume that the most reliable form of protection permits the free flow of most space-related information and technology while it develops equitable rules and monitoring procedures to differentiate between legitimate and hostile or irresponsible uses.

Traditional arms control treaties have often tried to specify obligations in fine detail so that each party knows in advance what is permitted or prohibited. A reassurance-based regime for space security would include agreed-upon processes through which members can decide how to apply broad principles to specific cases and determine how the rules might need to be modified or supplemented to keep pace with technical and strategic changes.

Finally, traditional arms control has often approached verification and compliance measures as additional opportunities for adversaries to compete for strategic advantage, with verification being depicted as an information control game between "hiders" and "finders," and highly politicized non-compliance accusations being used to call for "immediate, swift, and sure" punishment or retaliatory treaty withdrawal.<sup>39</sup> A reassurance-based approach would use systematic transparency as a means to increase mutual benefits from cooperative arrangements. Agreed mechanisms for collecting and exchanging information to document compliance would increase overall confidence in space security and identify compliance concerns that would warrant a regulatory management response. They could also provide additional benefits by making it easier, safer, or less expensive for members to accomplish other peaceful objectives in space. For example, with or without new arms control agreements in space, both states and nongovernmental organizations have an interest in improving overall space situational awareness-i.e., knowledge about what is in space, what it is doing there, and how it is moving in relation to other space objects.<sup>40</sup> The same information needed for avoiding collisions and assessing the health of the space environment could also be useful for verification. Countries and commercial operators will be much more willing to share this type of information, and to broadly support increasing the total quantity and quality of shared information, if these efforts are undertaken in the context of a space security regime that reassures participants that collecting and sharing such information will allow them to benefit from space, reduce the risk of collisions, and will not be misused for competitive purposes, be they commercial or adversarial.

<sup>&</sup>lt;sup>39</sup> The "hiders and finders" model of verification was developed by Amrom Katz in a 1961 *Bulletin of the Atomic Scientists* article, while the phrase "immediate, swift, and sure punishment," was used by Bernard Baruch in his opening speech to the United Nations Energy Commission on June 14, 1946.

<sup>&</sup>lt;sup>40</sup> The need for cooperative steps to improve both the collection and the distribution of information about space objects is explained by Brian Weeden, "The numbers game: What's in Earth orbit and how do we know?" *The Space Review* (July 13, 2009), at http://www.thespacereview.com/article/1417/1.