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Ian Henderson

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INTERNATIONAL LAW CONCERNING THE STATUS AND MARKING OF REMOTELY PILOTED AIRCRAFT

IAN HENDERSON*

I. INTRODUCTION

In recent times, significant media and legal attention has been paid to the use of remotely piloted aircraft (RPA) in areas such as Pakistan and Yemen.¹ The current terminology being used in the media and other areas debating this issue varies. As well as RPA (the current term being preferred in some military circles), other common terms include “drone”, “armed drone”, unmanned (or uninhabited) aerial vehicle (UAV), unmanned (or uninhabited) aircraft system (UAS); and when some form of armament is also involved, sometimes the word “combat” is after unmanned (or uninhabited), leading to the acronyms UCAS or UCAV. The legal issues discussed have generally concerned the use of force, the status of the operators of the aircraft (e.g., military or civilian intelligence agent), the status of the intended target, or the injury caused to someone and the damage caused to something other than the intended target. Comparatively little attention has been paid to legal issues concerning the aircraft themselves; however, the rise in the use and variety of RPA highlights some interesting legal issues concerning the aircraft themselves. This article looks at the international law concerning the “status” of RPA and the legal requirement, if any, for applying “markings” to RPA.

* Wing Commander, Royal Australian Air Force. This paper was written in a personal capacity and does not necessarily represent the views of the Australian Department of Defence or the Australian Defence Force.

1. See generally, *Rise of the Drones: Unmanned Systems and the Future of War: Hearing Before the Subcomm. on Nat'l Sec. and Foreign Affairs of the H. Comm. on Oversight and Gov't Reform*, 111th Cong. 5 (2010), available at http://oversight.house.gov/index.php?option=com_content&view=article&id=621:03-23-2010-national-security-qrise-of-the-drones-unmanned-systems-and-the-future-of-warq&catid=17; *Rise of the Drones II: Examining the Legality of Unmanned Targeting: Hearing Before the Subcomm. on Nat'l Sec. and Foreign Affairs of the H. Comm. on Oversight and Gov't Reform*, 111th Cong. 5 (2010), available at http://oversight.house.gov/index.php?option=com_content&view=article&id=681%3A04-28-2010-qrise-of-the-drones-ii-examining-the-legality-of-unmanned-targetingq&catid=17%3Asubcommittee-on-national-security&Itemid=1; Gary Solis, *CIA Drone Attacks Produce America's Own Unlawful Combatants*, WASH. POST, Mar. 12, 2010, at A17, available at <http://www.washingtonpost.com/wp-dyn/content/article/2010/03/11/AR2010031103653.html>; Marc A. Thiessen, *In CIA's Drone Mission, Who Will Protect the CIA?*, WASH. POST (June 8, 2010), <http://www.washingtonpost.com/wp-dyn/content/article/2010/06/07/AR2010060701986.html?nav=hcmoduletmv>; Jane Mayer, *The Predator War: What are the Risks of the C.I.A.'s Covert Drone Program?*, THE NEW YORKER (Oct. 26, 2009), http://www.newyorker.com/reporting/2009/10/26/091026fa_fact_mayer; Ian Henderson, *Civilian Intelligence Agencies and the Use of Armed Drones*, Y.B. OF INT'L HUMANITARIAN L. (forthcoming 2011).

While this article is concerned only with the aircraft, it is worth recalling that:

Unmanned aircraft systems generally consist of (1) multiple aircraft, which can be expendable or recoverable and can carry lethal or non-lethal payloads; (2) a flight control station; (3) information and retrieval or processing stations; and (4) in some cases, wheeled land vehicles that carry launch and recovery platforms.²

As for the RPA themselves:

Over 1100 makes and models of unmanned aerial systems (UASs) are currently on the market or in development in more than 50 countries... [involving] a diverse collection of fixed wing, rotorcraft, and lighter-than-air flying machines, available in a wide variety of sizes and capabilities.³ The known technologies range from "micro" UAVs that are, in reality, flying robots designed to look and behave like a "bug," fit in the palm of a hand, and carry a high-resolution camera, to 25,000-pound turbojets with wingspans wider than a Boeing 737, operating at or above 60,000 feet at speeds in excess of 530 miles per hour for over 35 hours at a time.⁴ Others designed for scientific research have flown as high as 100,000 feet and have stayed in the air for nearly three days without landing.⁵

II. STATUS AND MARKING OF RPA: STATE AND CIVIL AIRCRAFT

International law divides aircraft into two broad categories: state aircraft and civil aircraft.⁶ The distinction between civil and state aircraft, albeit not always with the same terms, appears to date from the early 20th century.⁷ A reference to state aircraft usually means, as a minimum, aircraft that are "used in military, customs and police services."⁸ It is possible, though, to use the term "state aircraft" to mean all aircraft in the exclusive use or possession of a State and not be limited by the definition in the *Chicago Convention*.⁹ As a result, there are two current views of which aircraft are state aircraft. One view is that despite the vague wording of the *Chicago Convention*, only military, customs and police

2. Rise of the Drones, *supra* note 1, at 4 (written testimony of Michael J. Sullivan, Director, Acquisition and Sourcing Management).

3. Douglas Marshall, *Unmanned Aerial Systems and International Civil Aviation Organization Regulations*, 85 N. DAK. L. REV. 693, 694-95 (citations omitted).

4. *Id.*

5. *Id.*

6. Convention on International Civil Aviation art. 3(a), Dec. 7, 1944, 61 Stat. 1180, 15 U.N.T.S. 295 [hereinafter *Chicago Convention*]; see also *Definition of State Aircraft*, THE EUROPEAN ORGANISATION FOR THE SAFETY OF AIR NAVIGATION (Dec. 22, 2004), http://www.eurocontrol.int/mil/public/standard_page/stateac.html.

7. Jiri Hornik, *Article 3 of the Chicago Convention*, XXVI ANNALS OF AIR AND SPACE LAW 110, 111 (2001).

8. *Chicago Convention*, *supra* note 6, art. 3(b).

9. See Bin Cheng, *State Ships and State Aircraft*, 11 CURRENT LEGAL PROBLEMS 225, 227-28 (1958).

aircraft may be state aircraft.¹⁰ The other view is that other aircraft engaged in purely state activities (e.g. coast guard or search and rescue) may also be state aircraft.¹¹ Regardless of which position is correct, there are two main consequences that flow from being a state aircraft. First, state aircraft are not subject to the *Chicago Convention*, and particularly the detailed air navigation rules. Second, state aircraft enjoy certain immunities and rights.¹² There is no reason not to apply the same legal divisions and consequences to RPA as defined in the *Chicago Convention*.¹³ So, while the *Chicago Convention* is not directly applicable to state aircraft (aside from article 3), there is no reason to treat RPA differently from “normal” state aircraft.

No further requirements are specified in the *Chicago Convention* for an aircraft to have the status of a state aircraft. For example, no particular markings—national or otherwise—are specified. This is particularly noteworthy as article 20 of the *Chicago Convention* states: “Every aircraft engaged in international air navigation shall bear its appropriate nationality and registration marks.”¹⁴ However, the *Chicago Convention* applies to only civil aircraft and not to state aircraft.¹⁵ Accordingly, the *Chicago Convention* does not require any particular markings, registration, etc., for state aircraft.¹⁶ Interestingly, Article 10 of the 1919 *Paris Convention* stated: “All aircraft engaged in international navigation shall bear their nationality and registration marks....”¹⁷ However, it is difficult to

10. ICAO, SECRETARIAT STUDY ON “CIVIL/STATE AIRCRAFT” ICAO Doc. LC/29 -WP/2-I, Attach. 1, ¶¶ 5.2.1–5.2.6 (1994) [hereinafter ICAO Study]; see also SAN REMO MANUAL ON INTERNATIONAL LAW APPLICABLE TO ARMED CONFLICTS AT SEA 85, 13(l) (Louise Doswald-Beck ed., 1995) [hereinafter SAN REMO MANUAL]; Hornik, *supra* note 7, at 122 n. 48; Lieutenant Colonel Andrew S. Williams, *The Interception of Civil Aircraft over the High Seas in the Global War on Terror*, 59 A.F.L. REV. 73, 113 (2007). But see ICAO Study, Attach. 2, ¶ 13 (calls into doubt part of ¶ 5.2.4).

11. Eur. Comm. for Democracy Through Law, *Opinion on the International Legal Obligations of Council of Europe Member States in Respect of Secret Detention Facilities and Inter-State Transport of Prisoners*, ¶ 90, Doc. No. CDL-AD(2006)009 (Mar. 2006) [hereinafter Venice Commission]; see also Michael Milde, “*Rendition Flights*” and *International Air Law*, REDRESS, June 2008, at 8; Hornik, *supra* note 7 at 122–23; I.H. PH. DIEDERIKS-VERSCHOOR, AN INTRODUCTION TO AIR LAW 40, 42 (8th rev. ed. 2006); ROYAL AUSTRALIAN AIR FORCE, OPERATIONS LAW FOR RAAF COMMANDERS ¶ 1.4 (2004), available at <http://airpower.airforce.gov.au/Publications/Details/156/AAP1003-Operations-Law-for-RAAF-Commanders-2nd-Edition.aspx>.

12. The extent of those immunities and rights is discussed below.

13. See *Chicago Convention*, *supra* note 6, art. 8; DEP’T OF THE AIR FORCE, INTERNATIONAL LAW THE CONDUCT OF ARMED CONFLICT AND AIR OPERATIONS, AIR FORCE PAMPHLET 110-31, at 2-4 (1976) (no longer in force); Donald Ward, *The Law of Military Aircraft in War and Peace*, at 5 (1970) (unpublished L.L.M. thesis, McGill University) (available at http://digitool.library.mcgill.ca/R/?func=dbin-jump-full&object_id=46681&local_base=GEN01-MCG02); Marshall, *supra* note 3, at 697-98.

14. *Chicago Convention*, *supra* note 6, art. 20.

15. *Chicago Convention*, *supra* note 6, art. 3(a).

16. See NICHOLAS M. POULANTZAS, *THE RIGHT OF HOT PURSUIT IN INTERNATIONAL LAW* 195 n.288 (2nd ed. 2002) (discussing the non-requirement for registration of state aircraft).

17. *Convention Relating to the Regulation of Aerial Navigation*, art. 10, Oct. 13, 1919, 11 L.N.T.S. 173 [hereinafter *Paris Convention*]. It is “generally considered the forerunner to the *Chicago Convention*.” ICAO Study, *supra* note 10, ¶ 2.1.2.

determine whether article 10 applied to state aircraft. This is because article 30 provided that: "All State aircraft other than military, customs and police aircraft shall be treated as private aircraft and as such shall be subject to all the provisions of the present Convention."¹⁸ A clear inference from this provision is that the *Paris Convention* did not in general apply to certain types of state aircraft.¹⁹

In a discussion of the criteria for determining whether an aircraft is a military versus a civil aircraft, Milde writes:

This wording ["used" and "services"], in the absence of any other guidance, suggests that the drafters had in mind a functional approach to the determination of the status of the aircraft as civil and military: regardless of the design, technical characteristics, registration, ownership etc.; the status of the aircraft is determined by the function it actually performs at a given time.²⁰

Milde's argument and conclusion applies equally to other types of state aircraft. Williams adopts a similar position, stating that whether an aircraft is a state aircraft depends upon function, and not "design or technical characteristics, call sign, registration, or markings—all of which fall within the competence of its state of nationality."²¹ Whether an aircraft is, for the purposes of the *Chicago Convention*, a state or civil aircraft, it is the "usage of the aircraft in question [that] is the determining criterion, and not, by themselves, other factors such as aircraft registration and markings...."²²

Notwithstanding that there appears to be no strict legal requirement for state aircraft to be marked as such, it often seems assumed that an aircraft will bear some sort of marking.²³ Other statements indicating an assumption of marking include: "state aircraft, including military aircraft, are also marked to indicate their nationality";²⁴ and "state aircraft may include aircraft which, in light of their mission, display appropriate state markings...."²⁵

The importance of the expectations of States cannot be over emphasized. When one starts out with the somewhat ambiguous legal position expressed in article 3 of the *Chicago Convention*,²⁶ and the fact that States may essentially

18. Paris Convention, *supra* note 17, art. 30.

19. Hornik, *supra* note 7, at 112-13 (discussing the application of the Paris Convention and not just Chapter VII thereof to state aircraft).

20. Milde, *supra* note 11, at 9.

21. Williams, *supra* note 10, at 107 (emphasis added); *see also* ICAO Study, *supra* note 10, ¶ 5.3.3 (referring to use and other criteria to help ascertain the status of an aircraft).

22. ICAO Study, *supra* note 10, ¶ 1.3.

23. *Id.* ¶ 5.3.2.

24. DEP'T OF THE AIR FORCE, *supra* note 13, ¶¶ 2-4; UNITED STATES AIR FORCE, JUDGE ADVOCATE GENERAL'S SCH., AIR FORCE OPERATIONS & THE LAW: A GUIDE FOR AIR, SPACE & CYBER FORCES 23-24 at n.52 (Tonya Hagmaier et al. eds., 2nd ed. 2009) [hereinafter U.S. AIR FORCE JAG SCHOOL].

25. DIEDERIKS-VERSCHOOR, *supra* note 11, at 42.

26. Hornik, *supra* note 7, at 130 ("[I]t is almost impossible in accordance with the present wording

choose how to classify one another's aircraft,²⁷ then lack of markings only exacerbates the issue.

Despite the aforementioned legal uncertainty, some general observations can be made. At a minimum, state aircraft include aircraft used in military, customs and police services. Whether an aircraft is being so used is primarily a functional test.²⁸ An aircraft need not bear markings to be a state aircraft, but absence of such markings is likely to prejudice the finding that the aircraft is a state aircraft by other States. RPA can be state aircraft and all of the proceeding points apply to RPA. A unique feature of RPA compared to manned aircraft is that RPA can be quite small in size. However, the relevant international law does not change.²⁹

III. RIGHTS AND LIABILITIES OF STATE AIRCRAFT

While this article is not primarily concerned with the detail of the rights and liabilities of state aircraft, some discussion of the topic is important to illustrate the importance of determining whether an RPA is a civil or state aircraft. State aircraft enjoy certain rights and immunities, including immunity "from the jurisdiction of the courts of a territorial state."³⁰ The applicable law on a state aircraft is the jurisdiction, including criminal jurisdiction, of the "flag" State.³¹ A significant immunity is that state aircraft are not subject to "foreign jurisdiction in respect of search and inspection" without consent.³² Interestingly, the 1919 *Paris Convention* drew a distinction between types of state aircraft, with only military aircraft enjoying "the privileges which are customarily accorded to foreign ships of war";³³ while other types of state aircraft did not enjoy such privileges.³⁴ Writing in 1970, Ward expressed doubt as to whether States would generally accept this principle with respect to military aircraft,³⁵ while a nearly contemporary writer seemed to be

of Article 3 to determine with one hundred percent certainty the legal status of an aircraft, i.e. whether it is a civil or state aircraft.").

27. *Id.* ("Neither the operator of an aircraft nor the state of registry can assure that the aircraft concerned will not be treated in another state as a state aircraft . . . Thus, a situation can easily occur in which an aircraft is deemed in one state to be a civil aircraft and in another state to be a state aircraft. The decision of the latter state, in many cases, might be deemed arbitrary (in many cases of a political nature) rather than stemming from the legal term 'discretion.'").

28. I.H. PH. DIEDERIKS-VERSCHOOR, AN INTRODUCTION TO AIR LAW 34 (Kluwer Law Int'l ed., 7th rev. ed. 2001).

29. Marshall, *supra* note 3, at 699 ("There is no minimum size described, so even a radio-controlled model aircraft would be covered under a literal reading of the definition, and no legal authorities state otherwise. In the ICAO regulatory scheme, no distinction is made between manned and unmanned aircraft.").

30. UK MINISTRY OF DEFENCE, THE MANUAL OF THE LAW OF ARMED CONFLICT ¶ 12.6.1 (Oxford Univ. Press, 2004); MINISTRY PROGRAM ON HUMANITARIAN POLICY AND CONFLICT RESEARCH, COMMENTARY ON THE HPCR MANUAL ON INT'L LAW APPLICABLE TO AIR AND MISSILE WARFARE 53 (2010).

31. Williams, *supra* note 10, at 99.

32. Venice Commission, *supra* note 11, ¶ 95.

33. Paris Convention, *supra* note 17, art. 32.

34. Paris Convention, *supra* note 17, art. 33.

35. Ward, *supra* note 13, at 24.

of the opposite view.³⁶ The better view today is that military aircraft enjoy sovereign immunity.³⁷ Further, such immunity applies to all types of state aircraft and not just those used in military, police and customs services.³⁸

Separate from the immunity issue is the issue of the rights enjoyed by state aircraft. For example, only certain types of aircraft may legally intercept suspected pirate ships and aircraft on or over the high seas.³⁹ That right is reserved to military aircraft and "aircraft clearly marked and identifiable as being on government service and authorized to that effect."⁴⁰ Similar rules apply to what type of aircraft may exercise a right of visit of a foreign ship on the high seas, and may engage in hot pursuit.⁴¹ While some have stated that this right is limited to military, police or customs aircraft,⁴² that view seems to be based on interpreting article 3(b) of the *Chicago Convention* as an exclusive list of what may be state aircraft for all purposes. The better view is that as long as the aircraft is "on government service and authorized to that effect," then any aircraft may exercise the function and the aircraft need not be a state aircraft per article 3(b) of the *Chicago Convention*.⁴³

Conversely, State aircraft do not enjoy the rights afforded under the *Chicago Convention* to civil aircraft. For example, non-scheduled civil aircraft do not need permission from a contracting state to fly over or to make stops for non-traffic purposes; assistance in distress; the non-use of weapons against civil aircraft in flight; where an accident has occurred, the state of registry has a right to appoint observers to be present at the investigation and to receive a copy of the report and its findings; and none of the aviation security instruments apply to state aircraft.⁴⁴

By way of analogy from the law of the sea and flagless vessels, States may intercept Stateless aircraft over the high seas.⁴⁵ In this respect, an aircraft showing

36. Abu Kasim Thaher, *International Law and the Legal Status of Military Aircraft in Peacetime* 62 (April 1969) (unpublished L.L.M Thesis, McGill University), available at http://digitool.Library.McGill.CA:80/R/-?func=dbin-jump-full&object_id=47234¤t_base=GEN01.

37. Cheng, *supra* note 9, at 256; J. ASHLEY ROACH & ROBERT W. SMITH, *UNITED STATES RESPONSES TO EXCESSIVE MARITIME CLAIMS* 466 (2d ed. 1996); 73 *ANNOTATED SUPPLEMENT TO THE COMMANDER'S HANDBOOK ON THE LAW OF NAVAL OPERATIONS* ¶ 2.2.2 (A.R. Thomas & James C. Duncan eds.) (1999) [hereinafter *LAW OF NAVAL OPERATIONS*]; U.S. AIR FORCE JAG SCHOOL, *supra* note 24, at 23; ROYAL AUSTRAL. AIR FORCE, *supra* note 11, ¶ 2.3; MINISTRY PROGRAM ON HUMANITARIAN POLICY AND CONFLICT RESEARCH, *supra* note 30, at 53.

38. ICAO Study, *supra* note 10, ¶ 5.2.6.

39. United Nations Convention on the Law of the Sea, art. 107, Dec. 10, 1982, 1833 U.N.T.S. 397 [hereinafter *Law of the Sea*].

40. *Id.*

41. *Id.*, arts. 110(4), (5) and 111(5).

42. Williams, *supra* note 10, at 113.

43. POULANTZAS, *supra* note 16, at 194.

44. Williams, *supra* note 10, at 106 n.210.

45. *Id.* at 128; see also *Law of the Sea*, *supra* note 39, art. 110(1)(d); ROBIN R. CHURCHILL & ALAN V. LOWE, *THE LAW OF THE SEA* 214 (3d ed. 1999); *LAW OF NAVAL OPERATIONS*, *supra* note 37, ¶ 3.11.2.3.

no national markings is the equivalent of a ship not flying a flag.⁴⁶ So, consistent with the conclusions made above, while technically there is no requirement for an aircraft to bear markings to be a state aircraft under the *Chicago Convention*, the lack of markings will operate to prejudice the finding that the aircraft is a state aircraft by other States.

In summary, consistent with the law that applies to ships, the better view is that a state can only claim the immunities and particularly the rights associated with a state aircraft in international airspace if the aircraft displays its status as a state aircraft via appropriate markings.⁴⁷

IV. INTERNATIONAL ORGANIZATIONS AND OTHER CONSORTIUMS

While state aircraft are automatically associated in people's minds with a single State, that need not necessarily be the case. A reference to a state aircraft can, in the abstract, merely be thought of as the opposite of a civil aircraft, with civil aircraft essentially meaning private aircraft.⁴⁸ For example, early work on air law did not use "state aircraft" but rather "public aircraft."⁴⁹ However, international practice has developed to the point where aircraft are registered in one State and one State only. Pursuant to the *Paris Convention*, an aircraft could not "be validly registered in more than one State."⁵⁰ While not directly applicable to state aircraft, this provision has influenced the development of the law. For instance, in 1923 a proposed article, of application to all types of aircraft, stated that "[n]o aircraft may possess more than one nationality."⁵¹ This theme continues through to the present law, and applies not only to the non-availability of joint-state registration/nationality,⁵² but also requires that registration/nationality be attributable to a State and not an international organization (not even one with legal personality).⁵³

As a matter of law, the foregoing applies strictly only to the registration/nationality issue. So while a state aircraft must have the nationality of an actual State (and only one State), this does not preclude international organizations from performing some functions traditionally associated with a State. For example, "[i]n certain circumstances, such as managing specific aircraft or managing the ICAO 24-bit aircraft addresses allocated to NATO, NATO can be

46. See Williams, *supra* note 10, at 129. Although note that Williams refers to article 20 of the Chicago Convention, which is not applicable to state aircraft.

47. See Venice Commission, *supra* note 11, ¶ 103

48. This was the distinction adopted in the 1919 Paris Convention. See Paris Convention, *supra* note 17, art. 30.

49. Draft Convention, 1910 Paris International Air Navigation Conference art. 40, May 8 – Jun. 28, 1910.

50. Paris Convention, *supra* note 17, art. 8.

51. Hague Rules of Air Warfare art. 10 (1923), reprinted in DOCUMENTS ON THE LAWS OF WAR 139-49 (Adam Roberts & Richard Guelff eds., 3d ed. 2000) [hereinafter HRAW].

52. Williams, *supra* note 10, at 96.

53. See ICAO Study, *supra* note 10, ¶ 4.7.1.

regarded as a State Aircraft operator.”⁵⁴ However, this does not mean that “NATO” can be the “State” for the purpose of an aircraft being a state aircraft. For example, NATO aircraft are registered in Luxembourg and display the national military markings of that State alongside NATO markings.⁵⁵

As a final point, it is worth noting that an aircraft could be truly stateless and be neither a civil nor state aircraft for the purposes of the *Chicago Convention*. In such a circumstance, the aircraft would not have the rights or privileges of either class of aircraft.⁵⁶

V. MILITARY AIRCRAFT AND THE LAW OF ARMED CONFLICT

As discussed above, “military aircraft” are a subset of state aircraft.⁵⁷ In addition, RPA can be military aircraft.⁵⁸ Accordingly, the discussion below applies equally to manned and unmanned aircraft. As discussed above, the requirements for an aircraft to be a military aircraft so as to amount to being a state aircraft are simply that the aircraft be used in military service. This is a functional test and the absence of markings is not ipso facto fatal to a claim of military aircraft status, though the absence of markings is likely to prejudice such a claim. What is sometimes overlooked, though, is that separate law applies during an international armed conflict.⁵⁹

54. European Organisation for the Safety of Air Navigation, *Mode S – Harmonisation of the Transition Arrangements for State Aircraft - Process and Procedures for the Managing of the Mode S Compliance Status and the Exemptions Granted to State Aircraft*, EUROCONTROL (1.1 ed. Aug. 22, 2005), available at <http://www.eurocontrol.int/mil/gallery/content/public/milgallery/documents/Mode%20S%20%20Process%20and%20Procedures%20for%20State%20Aircraft%20V11%20Released%20Issue%20220805%20A4.pdf>.

55. Max S. Johnson, *NATO Military Headquarters*, in THE HANDBOOK OF THE LAW OF VISITING FORCES 257, 315 (Dieter Fleck ed., 2001); see also U.S. AIR FORCE JAG SCHOOL, *supra* note 24, at 188. For background on how and why Luxembourg was chosen, see NATO Airborne Early Warning & Control Force E-3A Component, *Frequently Asked Questions*, NATO E-3A COMPONENT, <http://www.e3a.nato.int/eng/html/faq.htm> (last visited May 5, 2011). A similar solution for multinational airlines is discussed in DIEDERIKS-VERSCHOOR, *supra* note 11, at 29. See Ishaq R. Goreish, *The Problem of Registration and Nationality of Aircraft of International Operating Agencies and the I.C.A.O. Council’s Resolution of the Problem (1969)* (unpublished L.L.M. thesis, McGill University) (on file with McGill University). For civil aircraft, also see the last sentence of Article 77 of the *Chicago Convention*, “Nothing in this Convention shall prevent two or more contracting States from constituting joint air transport operating organizations or international operating agencies and from pooling their air services on any routes or in any regions, but such organizations or agencies and such pooled services shall be subject to all the provisions of this Convention, including those relating to the registration of agreements with the Council. The Council shall determine in what manner the provisions of this Convention relating to nationality of aircraft shall apply to aircraft operated by international operating agencies.” *Chicago Convention*, *supra* note 6, art. 77.

56. See Williams, *supra* note 10, at 128-29.

57. *Chicago Convention*, *supra* note 6, art. 3(b); Ward, *supra* note 13, at 6.

58. YORAM DINSTEIN, *THE CONDUCT OF HOSTILITIES UNDER THE LAW OF INTERNATIONAL ARMED CONFLICT* 108 (2004); Program on Humanitarian Policy and Conflict Research, *supra* note 30, at 1, 5-6; U.S. AIR FORCE JAG SCHOOL, *supra* note 24, at 23.

59. See UK MINISTRY OF DEFENCE, *supra* note 30, ¶¶ 12.1, 12.10.

There is no treaty law dealing specifically with the marking of military aircraft beyond that concerning the marking of medical aircraft with the distinctive emblem (i.e., the red cross, crescent or crystal).⁶⁰ Therefore, in an international armed conflict the relevant legal principles concerning military aircraft are drawn from customary international law. Whether or not an aircraft is a military aircraft is important because, unlike civil aircraft and other (i.e., non-military) state aircraft, military aircraft may exercise belligerent rights.⁶¹

As early as 1914, the eminent author on air law, Spaight, proposed that, in times of war, military aircraft shall bear “the distinctive sign of its character as a military aircraft of the said Power, irremovable and recognizable at a distance.”⁶² The HRAW provided that military aircraft be required to “bear an external mark indicating its nation; and military character”⁶³ and non-military state aircraft bear “an external mark indicating its nationality and its public non-military character.”⁶⁴ In addition, the external marks should be “so affixed that they cannot be altered during flight. They shall be as large as practicable and shall be visible from above, from below and from each side.”⁶⁵ It is generally recognized that the rules laid down in the HRAW reflect customary international law on these points.⁶⁶ In particular, after a thorough review of the literature, Ward concludes that a military aircraft must bear distinctive marks of both its nationality and military character.⁶⁷ Ward also states that following “[t]his practice appears to be universal.”⁶⁸ Indeed, in the context of the discussion of markings, it is often assumed that military aircraft will be marked.⁶⁹

It would seem that, strictly speaking, “public non-military aircraft employed for customs or police purposes”⁷⁰ should bear these marks at all times, whereas public non-military aircraft “other than those employed for customs or police

60. Geneva Convention for the Amelioration of the Condition of Wounded, Sick and Shipwrecked Members of Armed Forces at Sea, art. 39, Aug. 12, 1949, 75 U.N.T.S. 31 (entered into force Oct. 21, 1950).

61. HRAW, *supra* note 51, art. 13.

62. JAMES SPAIGHT, AIRCRAFT IN WAR 114, 72-73 (1914).

63. HRAW, *supra* note 51, art. 3.

64. *Id.* art. 4-5.

65. *Id.* art. 7.

66. See IAN HENDERSON, THE CONTEMPORARY LAW OF TARGETING: MILITARY OBJECTIVES, PROPORTIONALITY AND PRECAUTIONS IN ATTACK UNDER ADDITIONAL PROTOCOL I 26-27 (2009); Prosecutor v. Stanislav Galic, Case No. IT-98-29-T, Judgement and Opinion, ¶ 57, n.103 (Int'l Crim. Trib. for the Former Yugoslavia Dec. 5, 2003).

67. Ward, *supra* note 13, at 17-18. See also Thaher, *supra* note 36, at 15-17; SAN REMO MANUAL, *supra* note 10, at 13(j); UK MINISTRY OF DEFENCE, *supra* note 30, ¶ 12.10.4; Knut Ipsen, *Combatants and Non-Combatants*, in THE HANDBOOK OF INTERNATIONAL HUMANITARIAN LAW 79, 113-14 (Dieter Fleck ed., 2008); ROYAL AUSTRALIAN AIR FORCE, *supra* note 11, ¶ 1.3. For a good review of the history of military aircraft markings, see JAMES M. SPAIGHT, AIR POWER AND WAR RIGHTS 76-99 (3rd ed. 1947).

68. Ward, *supra* note 13, at 12.

69. See DEP'T OF THE AIR FORCE, *supra* note 13, ¶ 2-4(d); LAW OF NAVAL OPERATIONS, *supra* note 37, at 114 n.14. But see *infra* notes 79-80 and accompanying text.

70. HRAW, *supra* note 51, art. 4.

purposes”⁷¹ would need to bear such marks only “in time of war.”⁷² However, as the HRAW were never adopted, the main relevance of the Rules is a source for customary international law. With the adoption of the *Chicago Convention*, the HRAW do not reflect customary international law in peacetime concerning marking of aircraft. However, those parts of the HRAW concerning marking of military aircraft do appear to reflect the relevant customary international law applicable during an international armed conflict.⁷³

As briefly mentioned above, the importance of satisfying the requirement for being a “military aircraft” under the law of armed conflict is that during an international armed conflict, “[m]ilitary aircraft are alone entitled to exercise belligerent rights.”⁷⁴ While “belligerent rights” are not defined, those rights include engaging in hostilities, as well as firing on the enemy and attacking military objectives.⁷⁵ “The term ‘hostilities’ includes the transmission during flight of military intelligence for the immediate use of a belligerent.”⁷⁶ This last point needs to be understood in context. The issues concerning the transmission of military intelligence are whether the person doing so is taking a direct part in hostilities⁷⁷ and/or whether the person is a spy.⁷⁸ The more legally interesting issue is probably the spy issue, as a civilian operator of an RPA that is transmitting “military intelligence for the immediate use of a belligerent” is probably taking a direct part in hostilities regardless of whether or not the RPA has military markings.

Notwithstanding the conclusion above concerning the marking of military aircraft, one view has been expressed that while military aircraft are “required to be marked with appropriate signs of their nationality and military character... circumstances may exist where such markings are superfluous and are not required.”⁷⁹ The example given is “where no other aircraft except those belonging to a single state are flown.”⁸⁰ It is arguable that where an aircraft silhouette is so distinctive that both the nationality and military nature of the aircraft can be deduced from the silhouette alone, then no markings are required. The marking requirement originally arose at a time when military and civilian aircraft had

71. *Id.* art 5.

72. *Id.*

73. See Ward, *supra* note 13, at 12.

74. HRAW, *supra* note 51, art. 13; see also UK MINISTRY OF DEFENCE, *supra* note 30, ¶¶ 4.1, 4.4.1; ROYAL AUSTRALIAN AIR FORCE, *supra* note 11, ¶ 2.4; Ward, *supra* note 13, at 9. While Ward refers to only civil and military aircraft, that is probably due to the context in which he was writing.

75. See HRAW, *supra* note 51, art. 16.

76. *Id.*

77. See Protocol Additional to the Geneva Conventions of 12 August 1949, and relating to the Protection of Victims of International Armed Conflicts, arts. 51(1), (3), *opened for signature* Dec. 12, 1977, 1125 U.N.T.S. 3 (entered into force Dec. 7, 1978).

78. See *Id.* art. 46.

79. DEP'T OF THE AIR FORCE, *supra* note 13, ¶ 7-4.

80. *Id.* While the 1976 Air Force Pamphlet is no longer in force, a similar position is expressed in U.S. AIR FORCE JAG SCHOOL, *supra* note 24, at 23.

similar designs and when civilian aircraft were adopted for military use.⁸¹ The problem is that the requirement for military markings has become firmly entrenched in customary international law. Practically, a problem exists in that the silhouette would have to be distinctive from above, below and each side. Also, an issue with relying on silhouette rather than markings arises with captured aircraft. There have been many occasions where an enemy has flown captured aircraft.⁸² To avoid allegations of treachery, the captured aircraft should be clearly marked “with the same markings as the captor’s military aircraft.”⁸³ Finally, as aircraft cannot be operated solely by a coalition but must be attributable to a single nation, an aircraft type would have to be operated by only one nation.⁸⁴ Accordingly, for both legal and operational reasons, the better view is that military aircraft should be marked, and not rely on silhouette. If, however, a State were of the view that legally it could rely on a silhouette providing the required level of distinction, then it would be highly desirable to notify the other belligerent parties that that is the State’s position.⁸⁵

The above applies only during an international armed conflict. In a non-international armed conflict, there is no customary international law requiring the marking of military aircraft. As long as the government forces operate within the other rules of international law applicable during a non-international armed conflict, the government forces may use any type of aircraft with or without markings — noting that misuse of symbols of protection, like the red cross/crescent/crystal (the distinctive emblem), is still prohibited. Use of the distinctive emblem on a RPA that fulfilled the criteria for being a medical aircraft, not including combat search and rescue, would not be misuse.⁸⁶

As the non-state actors in a non-international armed conflict have no legal rights to participate in a conflict in the first place, the issue of the marking of an aircraft operated by a non-state actor is a legal irrelevancy. Regardless of whether a non-state actor wears a uniform or operates a “marked” aircraft, the non-state actor has no legal right to participate in belligerent acts.⁸⁷

Cheng appears to be of the view that an aircraft can be an “aircraft in military service, though not technically a military aircraft.”⁸⁸ This would mean that the aircraft would be a State aircraft under ICAO, but not an aircraft that could

81. See DEP’T OF THE AIR FORCE, *supra* note 13, ¶ 2-4(c).

82. Ward, *supra* note 13, at 15.

83. *Id.*; SPAIGHT, *supra* note 67, at 89–91.

84. Examples of more than one nation in a coalition operating the same RPA type are provided at note 94 *infra*.

85. HRAW, *supra* note 51, art. 8. “The external marks, prescribed by the rules in force in each state, shall be notified promptly to all other Powers.” *Id.*

86. Use of an RPA in a medical role is not hypothetical. The Israel Defense Forces are planning the use of an RPA for evacuation of wounded. Sapphire Itscovich, *Unmanned Aerial Vehicle to Evacuate Injured During Combat*, ISRAEL DEFENSE FORCES (Aug. 6, 2009, 3:46 pm), <http://dover.idf.il/IDF/English/News/Tech/09/08/0601.htm>.

87. This issue is dealt with in greater detail in Henderson, *supra* note 1, at 15.

88. Cheng, *supra* note 9, at 235.

exercise belligerent rights. This is similar to a related but distinct position that an aircraft can be a civil aircraft for the purposes of the *Chicago Convention* but concurrently a “state aircraft” (used in a broad sense of the term) for non-*Chicago Convention* purposes.⁸⁹ This type of aircraft has been referred to as auxiliary aircraft in the *San Remo Manual*⁹⁰ and some military manuals.⁹¹ The Commentary to the *Air and Missile Warfare Manual* prefers to draw no further distinction and notes that such aircraft can be simply thought of as state aircraft.⁹² One example is a transport aircraft. If the aircraft was owned and operated by the military with only national markings and no military markings, the aircraft would be a state aircraft for the purposes of the *Chicago Convention* (as an aircraft being used in military service) but would not be a military aircraft for the purposes of the law of armed conflict.⁹³

The markings, or lack thereof, on RPAs provide a useful way to illustrate the above points. Publicly available pictures of RPAs operating in Afghanistan show that the practice of the United States of America, the United Kingdom, and Australia on markings varies from platform type to platform type — with some platforms bearing military markings and others having no such markings.⁹⁴

89. ICAO Study, *supra* note 10, ¶ 5.2.6.

90. SAN REMO MANUAL, *supra* note 10, §5(13)(k).

91. UK MINISTRY OF DEFENCE, *supra* note 30, ¶ 12.5.

92. MINISTRY PROGRAM ON HUMANITARIAN POLICY AND CONFLICT RESEARCH, *supra* note 30, at 52.

93. U.S. AIR FORCE JAG SCHOOL, *supra* note 24, at 23-24.

94. For the USA see: Image of a Global Hawk, THE OFFICIAL WEBSITE OF THE U.S. AIR FORCE, <http://www.af.mil/shared/media/photodb/photos/061003-F-7441T-003.jpg> (last visited May 9, 2011); Image of a Raven, THE OFFICIAL WEBSITE OF THE U.S. AIR FORCE, <http://www.af.mil/shared/media/photodb/photos/070706-f-6751b-204.jpg> (last visited May 9, 2011); Image of a Reaper, THE OFFICIAL WEBSITE OF THE U.S. AIR FORCE, <http://www.af.mil/shared/media/photodb/photos/090127-F-7383P-001.JPG> (last visited May 9, 2011). For the UK see: Image of a Reaper, MINISTRY OF DEFENCE, <http://www.mod.uk/DefenceInternet/Templates/LargeImageTemplate.aspx?img=/NR/rdonlyres/99A0430A-A361-47C2-9E26-07DD0B8F71B5/0/reaper.jpg&alt=Reaper%20UAV> (last visited May 9, 2011); Image of an Hermes 450, MINISTRY OF DEFENCE, <http://www.mod.uk/DefenceInternet/Templates/LargeImageTemplate.aspx?img=/NR/rdonlyres/DD6ECD25-DE1B-4F41-9A03-092EF12B92FB/0/3.jpg&alt=Hermes%20450%20unmanned%20air%20vehicle%20at%20an%20airfield> (last visited May 9, 2011). For Australia see: Image of a Scan Eagle, AUSTRALIAN GOVERNMENT – DEPARTMENT OF DEFENCE, http://www.defence.gov.au/opEx/global/opcatalyst/images/gallery/20061222/20061206adf8205214_0011.jpg (last visited May 9, 2011); Image of a Scan Eagle, AUSTRALIAN GOVERNMENT – DEPARTMENT OF DEFENCE, <http://www.defence.gov.au/news/armynews/editions/1174/images/14%20-%20UAV%20launch%20pad.jpg> (last visited May 9, 2011); Image of a Scan Eagle, AUSTRALIAN GOVERNMENT – DEPARTMENT OF DEFENCE, http://www.defence.gov.au/op/afghanistan/gallery/2010/20100201c/20100125adf8246638_374.jpg (last visited May 9, 2011); and Image of a Scan Eagle, AUSTRALIAN GOVERNMENT – DEPARTMENT OF DEFENCE, http://www.defence.gov.au/op/afghanistan/gallery/2010/20100201c/20100125adf8246638_370.jpg (last visited May 9, 2011). See also Image of a Heron, NATIONAL DEFENCE AND THE CANADIAN FORCES, <http://www.cefc-comfec.forces.gc.ca/pa-ap/potd/photos-eng.asp?id=346> (last visited May 9, 2011) (The Heron is also operated by Canada in Afghanistan, and can be seen here showing the distinctive maple-leaf mark).

Indeed, there is even variation among the same type.⁹⁵ Publicly available pictures of the Australian Scan Eagle on one occasion show a low-visibility kangaroo (a standard military marking on Australian Army military aircraft), but this marking does not appear on the other pictures.⁹⁶ Based on this small sample, what can be deduced is that the majority of the RPAs have markings, but some of the smaller RPAs are not marked.

The reasons for this are not known; however, a few observations can be made. First, the conflict in Afghanistan is, at most, a non-international armed conflict.⁹⁷ Accordingly, military aircraft operating in Afghanistan are not required by the law of armed conflict to be marked. Second, the manner of operation of the RPA may be evidence of State practice towards an evolving customary international law norm that smaller RPA that are not armed need not be marked. If this is an accurate assessment, such practice makes operational sense. There is a point at which markings no longer serve a useful purpose. The United States Air Force currently operates an RPA called Wasp III with a wingspan of only 72.3 cm and a length of 25.4 cm (weighing 453 grams).⁹⁸ A RPA called the Defly Micro is under development that is just “3 grams and has a size of 10 cm from wing tip to wing tip.”⁹⁹ Any marking on such RPA, even if “as large as possible,”¹⁰⁰ would be practically unobservable in flight.

VI. CONCLUSION

Markings on aircraft are important indicators of an aircraft’s status. Particularly in peacetime, international law makes a distinction between civil and state aircraft. During an international armed conflict, the primary distinction is between military aircraft and other aircraft. Where an RPA is used in military service, an RPA can be a state aircraft, a military aircraft, or both.

Whether an aircraft is a state aircraft is principally a functional test. Strictly speaking, an aircraft need not have any particular markings to have the status of a state aircraft. Nonetheless, the lack of markings is likely to prejudice the finding that an aircraft is a state aircraft — particularly by States other than the operating State. For example, where an aircraft lacks national markings, a State may have problems with successfully asserting the rights usually associated with state aircraft (e.g. sovereign immunity from foreign search and inspection).

An aircraft can only have the nationality of one State and there is no concept of a state aircraft having the “nationality” of an international organization.

95. *Id.*

96. AUSTRALIAN GOVERNMENT – DEPARTMENT OF DEFENCE, *supra* note 94.

97. Margaret L. Satterthwaite, *Rendered Meaningless: Extraordinary Rendition and the Rule of Law*, 75 GEO. WASH. L. REV. 1333, 1408 (2007).

98. *Factsheets: Wasp III*, U.S. AIR FORCE (Nov. 19, 2009), <http://www.af.mil/information/factsheets/factsheet.asp?id=10469>.

99. *Delfly Micro*, DELFLY, <http://www.delfly.nl/?site=DIII&menu=home&lang=en> (last visited May 5, 2011). While it has been referred to here as an RPA, the goal is for fully autonomous flight. As such, it will ultimately be a misnomer to call it *remotely* piloted.

100. HRAW, *supra* note 51, art. 7.

However, an aircraft can have the nationality of one State while at the same time displaying markings showing its relationship to an international organization.

Unlike for state aircraft, the law is much clearer on the requirement that aircraft have markings in an international armed conflict for that aircraft to have the status of a military aircraft. This is important, because in an international armed conflict, only military aircraft should exercise belligerent rights. The law of marking for military aircraft is customary in nature, and the law may be evolving toward not requiring such markings on small RPA where the size of the RPA means that any markings will be so small as to serve no practical purpose.