

*The weekly **SIA All Round Look Newsletter** editor uses a Meltwater media analysis tool to filter media articles of interest for distribution to SIA Members and ARL Newsletter recipients. A synthesis of information of interest. The operational term ‘All Round Look’ applies to the use of the periscope to conduct a 360 degree sweep of the sea surface to establish the proximity – and potential threat to the safety of the submarine, of vessels visible through the periscope. A gathering of information of critical interest.*

The following article, by Dr David Parry (a perisher graduate and author of ‘Perisher: A Hundred Years of the Submarine Command Course’) looks at the genesis of the operational ‘All Round Look’.

THE GENESIS OF THE ‘ALL-ROUND LOOK’ (ARL)

It is difficult, nay, impossible, to put a finger on exactly when the ALL ROUND LOOK, or ARL, came to be anything other than curiosity as to what is happening when fighting a submarine, but there are one or two indicators as to its development.

The first is the March 1904 Manoeuvres which had an unwritten agenda to find the antidote to the submarine with a series of set piece actions at the end of which it was concluded that destroyers could intimidate submarines by steering directly for their periscopes.¹ This was a masterpiece of creative umpiring, for during the first day the submariners had used some dummy periscopes (a trick that would be used again in the sea of Marmara during the First World War). The destroyers were deceived until they realised there was no periscope ‘feather’, so the submariners then used white collars to simulate the wake.² Unsurprisingly, a Naval Review edition challenged the Manoeuvres, with being predetermined.³

Sadly, the *AI* (Lieutenant Loftus Mansergh) was lost on the last day of the Manoeuvres while attacking the cruiser *Juno* because periscopes, and the finer points of ‘periscope eye’ like the rigours of the ARL, were in their infancy and she was run down and sunk by the liner *Berwick Castle*.⁴ Mansergh was a star CO — “*Mansergh, the Captain, was one of the best of my captains of the boats*” — and his crew had been hand-picked by Bacon. Mansergh, the crew and the boat’s loss were therefore certainly lamented.⁵ Following the event, an additional lower hatch was added in the conning tower, a practice that survives to today together with the procedure for shutting the upper and lower ‘lids’. The innovation soon proved its value when the *A9* collided with the coaster *Coath* off Plymouth in February 1906 and the ‘lower’ lid’ prevented any water entering the boat following the damage to the conning tower.⁶

Despite the ‘feather’ subterfuge and inchoate tactics against destroyers at high speed, Lieutenant Francis Cromie in the *A3*⁷ showed the ability of a submarine to penetrate a screen without being attacked by a screening destroyer, an action which no doubt added to the umpires’ conclusion that

*“it may be considered as most conclusively proved by these Manoeuvres that submarines are a powerful and deadly addition to the defence of any port, fortified or mercantile, and that submarines must be provided for the defence of all our important ports, if we are to effectively deny the waters of these ports to our future enemies, and, moreover, makes invasion impossible.”*⁸

A detrimental ramification of the loss of the *A1* was that it led to all research and counter attacks being stopped until 1910 when a committee was finally set up to consider defence against submarines.⁹ Despite the stoppage of research, it is reasonable to assume that the loss of the *A1* brought home the understanding and importance of the ARL. One clue comes from the C-class submarines. At this time all submarine periscopes were provided by the Dublin-based optical designer Sir Howard Grubb who had patented Bacon’s ideas to produce the forerunner of all future optical periscopes in 1901.¹⁰ Rather than being fixed like the early Bacon efforts in the Holland boats, Grubb’s periscopes were raised and lowered and began to be fitted from the C-class onwards, the first to have two periscopes:

*“The reason for this is because the range of vision of this instrument is barely 60 degrees, and thus [...] it is impossible for the officer in command of the submarine to keep constantly in view a certain portion of the surface when the vessel is submerged. The two periscopes obviate this difficulty”.*¹¹

Both periscopes were hand raised.

“one for the Captain, a 12-13 feet long periscope fitted through the conning tower, and the other, a 21 foot, periscope just aft of the conning tower with an external standard for the first time, for the look-out man continuously sweeping the horizon”[author’s emphasis].¹²

This realisation of the importance of the ARL, although perhaps not the frequency, is confirmed by Captain Harry Oram who, as Captain (SM), was to escape from the *Thetis* when she sank in Liverpool Bay in 1939. Oram took the Periscope Course in 1919 when he did his ARL every 10 minutes or so.¹³ Another confirmation is G Hackforth-Jones telling of his Periscope Course and the ARL in 1926.¹⁴

Even though the irregularity of the ARL continued, it is surprising how some officers passed Perisher. The later Vice Admiral Sir Arthur (Baldy) Hezlet omitted any ARL for five consecutive attacks in the attack teacher but he passed (he must have performed much better

during the sea-attacks) and went on to be a most successful CO winning the DSO and DSC and appearing in two of his own ‘Giant Killers’ lists in his *opus magnum* of submarine operations in WW2, for the sinking of the *U859* in September 1944 and the Japanese cruiser *Ashigara* in a brilliant action in June 1945 in the *Trenchant*¹⁵ — showing that Perisher attack teacher records were no guarantor of a COs operational performance.

Irregularity followed post-war when the Perisher was now at a more leisurely pace than its wartime frenzy.¹⁶ The focus of the course was still on periscope attacking, considered an art for which there was little prescription, if any, about how often you should look at a target or an escort or indeed do an ARL. Judgement was very much with the student, his appreciation of the surface picture, and his ability to get into an attacking position with minimal mental arithmetic demands. Students would endeavour to avoid having to leave periscope depth, unless it was absolutely necessary for escort-screen penetration, for asdics were still poor and blind attacks in their infancy if practised at all. The ARL similarly depended on a student’s situational awareness with the log keeper keeping the time interval. Teacher’s aim was to inculcate into the student an intuitive understanding as to how often to look at a target or escort to remain safe without over-exposure of the periscope. This gave Paul (Johnnie) Murray-Jones something of a shock when an escort, re-joining its formation, ran over his Perisher submarine periscope standards while he was conducting an attack as Duty Captain. When re-joining a formation, the rule was that the ship rejoining should stay clear of the exercise submarine, so a Board of Inquiry decided that the fault lay with the CO of the escort rather than the lack of an ARL by Murray-Jones.¹⁷ (Commenting, that this would not be the case today I received a telephone call from a most irate Murray-Jones who thought the whole idea of the onus being on the submarine CO ridiculous.) This ‘art of attacking’ was to change, however, when Sandy Woodward became teacher and although he did not immolate the ‘art’ of attacking, his revolution replaced the ‘periscope eye’ with the binary influence and exactitude of time on a stopwatch. No longer could a range be left to the reading of a slide rule, no longer could the threat of an escort be left to judgement, no longer could an ARL be inspirational. Now, observation at exact, time-limited and regulated intervals prevailed, dependent, for the ARL, on the surface picture, the threat and the visibility.

¹ Nicholas A Lambert, *Sir John Fisher’s Naval Revolution*, (Columbia SC: University of South Carolina Press, 2002), 83-4.

² Admiral Sir Reginald Bacon, *From 1900 Onward*, (London: Hutchinson, 1940), 74.

³ Anon, The influence of the submarine on naval policy. *Naval Review* 1913-1-3; CAC CBR0014/FISR 1/12 Captain Sydney Hall to Admiral Lord Fisher, July 1913.

⁴ John Merrill, *Looking Around: A Short history of submarine periscopes*, (Bushey Heath: Strong, 2002), Note 5 states that A1's periscope was non-rotatable and that may have contributed to the accident. His assertion, however, is not qualified and Bacon, in his earliest periscope experiments, realised the requirement for rotation.

⁵ Bacon pp.74-74

⁶ Murray Fraser Seuter, *The Evolution of the Submarine Boat, Mine and Torpedo, from the Sixteenth Century to the Present Time*, (London: J. Griffin, 1907), 158.

⁷ Later Captain Cromie. An unsung hero, he commanded the British submarine flotilla in the Baltic Sea only to be murdered on the staircase of the British Embassy in Petrograd (St Petersburg) in 1918 acting as the de facto British representative in Russia.

⁸ TNA ADM 1/7795 *Umpires' report on manoeuvres between home fleet and submarines*

⁹ Gibson and Prendergast, RH and Maurice, *The German Submarine War 1914-1918*, (London: Constable, 1931), 24 cited in Brassey's *Naval Annual*, 1919, 131

¹⁰ Merrill, *Looking around*, 15.

¹¹ Charles William Domville-Fife and Ommaney Hopkins, *Submarines Of The World's Navies*, (London: Frances Griffiths, 1911), 23.

¹² RNSM BR 3043, The Development of HM Submarines, 22-3.

¹³ H K Oram, *Ready For Sea*, Bungay, (Futura: 1974), 201

¹⁴ G Hackforth-Jones, First Command in *Best Stories of the Navy*, (London: Faber & Faber, undated)..

¹⁵ Vice Admiral Sir Arthur Hezlet, *British and Allied Submarines Operations in World War II Volumes 1 and 2*, (Royal Navy Submarine Museum, 2001), 365-6.

¹⁶ Vice Admiral Sir Hugh Mackenzie, *Sword of Damocles*, (Stroud: Alan Sutton, 1995), 161.

¹⁷ Murray-Jones interview.