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The Franchise of the Deep: Perisher

At one time the course on which we were embarked had been called the Periscope School; hence the grimly humorous contraction 'Perisher'.

Edward Young, 1952.¹

For all the costs, just what does the Perisher course produce? Arguably the world's finest quality submarine captains. Perisher is the Royal Navy's commitment to making sure that the men who command their submarines are as good as the boats themselves.

Tom Clancy, author of
The Hunt for Red October, 1993.²

What fascinates us [the French Navy] is the feeling that whatever you did before is at stake. Nothing counts before. Passing Perisher gives complete legitimacy. It's a way of redistributing all the life cards for a very specific thing. Perisher partly reflects the British spirit – this willingness to have the right man for the job.

Commander Rémy Thomas, French Navy,
15 April 2012.³

There is a certain strain in the English, delicate, fastidious, self despising, which draws some of them to the Arabs, drives them to adopt their code of chivalry, courtesy, and cruelty, and thus obtain the franchise of the desert.

Alan Bennett, 1991.⁴

The desert is like the sea because it doesn't care tuppence about you. You can be romantic about it. But the real thing is that it

doesn't have emotions. And it doesn't think twice before killing you.

Sir Rodric Braithwaite, former Chairman of the Joint Intelligence Committee (1992–3), 30 August 2012.⁵

This is our own private war over the weekend.

Commander Hywel ('Griff') Griffiths,
CO, HMS *Tireless*, 14 April 2012.⁶

A PRIVATE WAR HAS BEEN ARRANGED

To command a Royal Navy submarine is to be given the franchise of the deep – responsibility in modern times for between 120 and 160 lives, with a replacement cost, if the submarine is lost or wrecked beyond repair, of between one and two billion pounds. To acquire this particular commission from the Queen you have to pass the five-month Submarine Command Course, universally known as the Perisher, in your late twenties or early thirties; thereafter a boat will usually (though not invariably) be yours in your late thirties or early forties.⁷ It is a task and a duty granted to very few.

Each Perisher course normally consists of a group of four to six aspiring Commanding Officers, usually Lieutenants or Lieutenant Commanders, supervised by an experienced Commanding Officer, known as Teacher. While no two candidates have the same mix of skills and characteristics, when looking back at the Submarine Service's more successful COs it is possible to identify a number of common qualities. 'All accepted responsibility eagerly and were self-confident' wrote a former Teacher, Martin Macpherson. 'They were strong willed, tenacious and determined; they were brave; and they possessed great physical and mental stamina. They all cared passionately for their ships' companies, had a strong sense of humour and many were surprisingly modest. Their professional experience and training had developed quick calculating brains, the ability to delegate, presence, and "a good periscope eye"' – the ability to react instinctively and not lose sight of the tactical picture unfolding on the surface.⁸

Since its inception in September 1917, the Perisher course has constantly evolved to take account of developments such as the shift towards greater concentration on Cold War operational roles; the greater emphasis on Anti-Submarine Warfare; the introduction of nuclear submarines

with better speed, mobility and endurance; the demise of the Second World War straight-running Mark 8 Torpedo; the introduction of new weapon systems such as the Sub Harpoon and land attack Tomahawk Cruise Missile; the reduction in the number of Diesel Submarine Commands available for successful 'Perisher' candidates; the shift to an all-nuclear submarine fleet; and the requirement that all Executive Officers (second-in command) in nuclear submarines are Perisher qualified. The course has also had to provide newly qualified commanders with a multitude of fresh skills such as doctrinal and tactical knowledge and greater technical understanding of weapon and propulsion disciplines.⁹

While the format of the course has changed over the years and the size of the syllabus has steadily increased, the fundamentals of Perisher remain the same: in order to pass, a candidate must prove that he is able to operate a submarine both safely, effectively and aggressively, in a hostile environment, by completing a variety of tactical scenarios that cover the complete spectrum of submarine activity: everything from attacking a task force or other submarines, gathering intelligence, or landing members of the Royal Marine's Special Boat Service (SBS). 'There's a living thread that runs through Perisher' says Andy Bower, another former Teacher. 'The course is almost the beating heart of the UK Submarine Service. You're a guardian of the flame.' Every submarine officer (aside from engineers) aspires to command his own nuclear submarine. He will spend the early years of his career working towards it. If he fails, he may never set foot on a Royal Navy submarine again. If he passes he has earned the right to join an exclusive club.

Our treatment of Perisher here is in three parts. First, there is Hennessy's diary of the inshore weekend of the 2012 course which took place between 13 and 15 April in and around and largely under the Kilbrannan Sound, which separates the Kintyre peninsula, tipped at its southern end by the Mull of Kintyre, and the Isle of Arran (see map on p. 000). Secondly comes a short history of Perisher as it stood at the end of the Second World War, as those first post-war submariners equipped themselves for an entirely new conflict, the Cold War, between East and West. Finally there is the last, most intense weekend of the next course, in October 2013, capped by the celebratory 'Perisher Breakfast' in Faslane on 20 October 2013.

The point of entry to Commander Griffiths's 'private war' was Faslane on Friday morning, 13 April. Faslane is the citadel of the Submarine Service, north of Helensburgh towards the end of the Gareloch, a finger off the Firth of Clyde. Today it is bright and shining in the sun.

This scene has scarcity value. Faslane excels at cloud and rain, and in the Royal Navy's mental map of its bases Faslane is synonymous with a micro-climate that can go from sun to hail inside half an hour. Those whom Faslane has touched carry its cold and its damp in their bones.

We gather over lunch in HMS *Neptune*, the still new modern officers' so-called 'super mess', run for the Navy by Babcock International, which took over a great deal of dockyard and naval support work in 2007. Our group consists of: Captain Paul Halton, Flag Officer Sea Training (FOST in the ubiquitous acronymia of the UK Armed Forces and Ministry of Defence), a former CO of the hunter-killer HMS *Spartan* and soon to be posted to Afghanistan; Commodore Steve Garrett, Commodore of the Faslane Flotilla, former CO of HMS *Turbulent* and most recently the naval Captain seconded to the Cabinet Office to handle its nuclear-weapons responsibilities (including ministerial briefing) and as part of the firing chain that links the Prime Minister to the Trident submarine on patrol in the North Atlantic; and Commander Ryan Ramsey, who works for Halton, recently CO of HMS *Turbulent*, featured in the Channel Five television documentary which followed *Turbulent* from Devonport to the Straits of Hormuz on the Navy's regular Mediterranean/east of Suez deployment. All will be aboard *Tireless* tomorrow and overnight on Saturday/Sunday, in part to put still more pressure on the 'Perishers'. Ramsey will take over the course as Teacher on next year's Perisher. The other observers/guests are Commander Rémy Thomas, the equivalent of Teacher in the French Navy (the French are considering sending one submariner per year to Perisher, which would be quite a step given past difficulties experienced in arriving at *entente nucléaire*), Superintendent Thom McLaughlin from what was soon to become The Police Service of Scotland, who has a special interest in training, and Lieutenant Aidan Riley, a helicopter pilot from the Fleet Air Arm.

Garrett, Halton and Ramsey naturally have taken and passed Perisher in their time. It's a rite of passage no successful 'Perisher' forgets and it is recognized by, and has a cachet well known to, all the other navies of the world which operate submarines. How did they see themselves and the course that had eventually propelled them into positions of command?

Ramsey: 'The pressure is always self-induced to start with. They keep taking over as Captain. It's amazing to participate in, to do and to watch [Ramsey did Perisher in 2000 on HMS *Splendid* and HMS *Triumph*].'

Garrett: 'You have between ten and fifteen years of experience. You'll know tactics and doctrine. It's about learning your strengths and weaknesses . . . Commanders see massive potential in them. But it's the technical capacity . . . Some come on to the course too early. Now we say "You're not quite there. Go and get some more experience."'

Hennessy: 'What's special about submarine command?'

Ramsey: 'You're on your own.'

Garrett: 'Independence. We give an independence to our Commanders that's quite unique – like an eighteenth-century frigate going round the world – particularly if you're commanding an SSBN [Trident boat]. We can't tell Northwood what's broken or what we're doing tactically because of radio silence.'¹⁰

Ramsey: 'It's almost the last bastion of mission command.'

Hennessy: 'Does that make it easier or more difficult to command?'

Don't you have more responsibility than anyone else in their thirties?'

Ramsey: 'Yes. It's how you handle it.'

Garrett: 'It's the environment of the submarine. As a CO you always have in the back of your mind that you're in a hostile environment.'

Halton: 'There is a paranoia that can be used constructively. The good submariner, if he hears the ship transmitting on sonar, thinks "He's got you."'

Garrett: 'It's continuous risk assessment – all the things going on around you. Some guys will get their risk assessment blatantly wrong to achieve the mission. The aim is to live to fight another day.'

Halton: 'Sometimes you have to ask "Why is it too dangerous? Are they being too wet?'

Garrett: 'You need to know what rests on the mission – the whole war or is it just something that would be nice to know?'

Halton: 'Ultimately it's people and leadership. This weekend, they are still a fairly raw product – just two weeks into their sea phase. We're looking at how they conduct themselves; the standards they set.'

Hennessy: 'Is it a case of you don't know you can do it till you've done it?'

Halton: 'Absolutely . . . it's extremely difficult.'

Garrett: 'You add complexity . . . to go or no go. They often get wrapped up in that complexity.'

The conversation turns to Perisher itself.

Ramsey: 'I really didn't want to fail that course.'

Halton: ‘When I passed it, I thought, “I’ve made it” . . . it’s such a pivotal thing in the Submarine Service; part of the ethos.’

Garrett: ‘The course takes place in front of the junior rates. That’s the reason why it’s irrecoverable. But you need them to help you pass – you can’t slave-drive them. If you’re shouting at everybody you’re not doing it properly.’

Hennessy: ‘Is there any psychological testing involved?’

Garrett: ‘There’s no real psychological profiling before becoming a submariner. But it’s how adapted you are. Perisher does a lot of things. Self-education on stress management. They have presentations on that. Teacher did it. I think it should be done a lot earlier. Ideally, it makes people honest with themselves. We do it by teaching people how to operate within the rules – how fast and deep; what you do if a frigate is at hand. It also makes it quite clear that there are the boundaries. In the last phase, Teacher will let them operate outside these rules.’

The lunchtime conversation carries into the 107-mile drive to Campbeltown towards the Mull of Kintyre, where the party will spend the night before an early-morning rendezvous at sea with a ‘Trafalgar’ class SSN, HMS *Tireless*. Captain Halton explains that the Submarine Service needs eight Lieutenant Commanders to take Perisher each year and six of them, if possible, to pass. There were four starters (all Brits) on this Perisher and all four are still there. The Dutch and Norwegians are doing their versions of Perisher simultaneously, so three submarines will be prowling around Arran at the same time, but all the Brits will be on board *Tireless*. Ideally the Royal Navy needs to mount two Perishers a year but there won’t be enough submarines available to do that until the new ‘Astute’ class SSNs start coming into service. *Tireless* is the second oldest of the remaining ‘Trafalgar’ class submarines; her older sister, HMS *Turbulent*, will be decommissioned in July.

It’s still sparkingly bright and clear as we travel down the Kintyre Peninsula. To the west we see the two Type 23 frigates that will be hunting us tomorrow, HMS *St Albans* and HMS *Monmouth*. *Tireless* will be between them trying to do a periscope reconnaissance of an island off the Mull of Kintyre without the frigates finding her. The beautifully clear weather converts into awful conditions for the submarine, as the bright sun will glint off the periscope as soon as it breaks the surface.

Over dinner in Campbeltown talk ranges widely. Garrett says it’s the

first time the three navies have done Perisher together. Norway has six diesel submarines, down from fifteen in the Cold War. Ramsey talks about the return of board games on the boats (surprising in the age of DVDs, iPods and iPads). On his *Turbulent* patrol east of Suez they became obsessed with Uckers, the naval version of ludo.

‘I, my XO and two key Chiefs started playing again – it became our thing; obsessive. The messes became more talkative. It’s spread to other boats – the resurgence of board games in submarine life. There’s a special acoustics man who specializes in making Uckers boards.’

Ramsey’s *Turbulent* patrol lasted 286 days. On his last night on board he had a steak dinner and later a game of Uckers. ‘It really is addictive’ says Halton, ‘a spectator sport.’

Saturday, 14 April 2012, SS *Oronsay*,
Campbeltown Harbour, 7.30 a.m.

It’s bright and clear and the water is gleaming as we eat breakfast at the Craigard House Hotel in Campbeltown. Halton says, ‘It’s usually dark, wet, windy and early’ when they do the boat transfers. ‘I’m not sure why we do it to ourselves.’

We can see the two frigates lying outside the mouth of Campbeltown inlet. ‘Typical Perisher’, says Halton. ‘Frigates are there to make life difficult.’ On the way out to rendezvous with *Tireless*, *Oronsay* passes the NATO fuelling jetty, Davarr Island and its lighthouse to the right and the great rock of Ailsa Craig rising out of the sea to the south-east.

Tireless comes into view silhouetted against Arran. She looks a bit battered now but still exudes a certain swagger. The ‘Trafalgar’ class, after all, was the most sophisticated and highest achievement of the UK’s Cold War submarine construction and engineering enterprises – world-beaters in their time. *Tireless* is one of the so-called ‘special fit’ boats used to carry out the most sensitive of clandestine intelligence missions.

HMS *Tireless*, 8.00 a.m.

As you come alongside, with the backdrop of Arran, the old cliché of the sea monster seems very much not a cliché. We’re piped aboard and welcomed on the casing by her Captain, ‘Griff’ Griffiths, and by Teacher, Commander Andy Bower. We go down out of the chilly morning and into the cramped and womb-like warmth.

First chat in the Ward Room. Griffiths says ‘As a new CO, it’s a little

counter-intuitive to be hands off. This is my fifth time on Perisher, including my own in 2004.’ The boat is, I think, still on the surface, its movement scarcely perceptible. Griffiths says:

‘There is a very important relationship between me and Teacher. We’ve known each other for years. The Inshore Weekend takes place either side of Joint Warrior [NATO Exercise] so we’ll have two frigates, a minesweeper and helicopters – our own private war over the weekend. It’s a relatively challenging environment operationally. Teacher and I are very well used to the area, which mitigates some of the apparent risk. The risk of collision and grounding if you don’t know what you’re doing is quite significant.’

Overnight they had been doing surveillance. The Perishers will finish two weeks today, ‘after being actively hunted’.

Bower, asked what surprised him about the job of Teacher, replies: ‘The realization that for you, unlike the students, hours off to plan and sleep don’t happen.’

Griffiths plainly adores *Tireless*, which is due to go out of service in December 2013. [In fact, the boat survived until June 2014, see p. 000] ‘*Tireless* is a wonderful old girl, operating extremely well for me, but she does definitely need a refit.’

0730Z

We’re now running south-west towards the Mull of Kintyre. We turn our watches to Zulu time, the Coordinated Universal Time used by the military, so it’s just after 0730.

0745Z

We’re doing a periscope reconnaissance in the vicinity of Sanda Island. Griffiths explains that he has two watch leaders who routinely run the submarine for twenty-four hours a day on six-hour shifts.

Griffiths: Above them are the XO. One of us is available twenty-four hours a day. The Perisher students are practising our jobs. I will be on the chart [i.e. navigating]. I’m responsible for everything that happens on board. I do delegate conduct of the boat. I delegate conduct to Teacher. He will take conduct of much of the stressful element. I gave him conduct today just before the boat transfer. We have two parallel navigation operations to maintain safety.

Halton: 'On our submarines we have two [CO and XO] to enable continuing intensity of operations. Other NATO navies don't and the CO can be worn out. You can sit somewhere hostile for twenty-four hours a day. It's especially important for intelligence gathering.'

Garrett: 'That can be maintained for months at a time.'

Griffiths: 'The strength is in the people. Manpower, equipment, training and stability are the four pillars. But the key thing is the people. It's very much a family.'

Halton: 'Risks and pressures are quite difficult for a submarine. The human condition deals with it in different ways.'

Dan Knight: [*Tireless's* Executive Officer] 'It's a team trying to keep the platform safe.'

Griffiths: 'A hundred and thirty men stuck inside a steel tube have to be massively tolerant of each other.'

Garrett: 'There's rarely a lot of shouting on board or barking of orders.'

Halton: 'Professionalism transcends rank on board. Rank is there and exists but professionalism is all-important.'

Griffiths: 'It's a hugely technical beast. You just inhale this knowledge and it sits in you. It's built over time. The indefinable sixth sense.'

Knight: 'It's hairs on the back of the neck.'

Griffiths: 'There is a feel to the boat. Fifteen minutes ago we looked up at the speedometer as the movement of the boat changed suddenly. It's seat of the pants.'

Halton: 'Subconscious activity is going on all the time.'

Knight: 'You can walk into the Control Room and know something is not quite right.'

Griffiths: 'It's an instinct – a feel about the boat. You can feel when something's changed and it's not right. Particularly when we're in close proximity to shipping. I always look at the eyes of the guy who's on the periscope.'

Garrett: 'You feel the boat change . . . It's almost an internal clock. It might be thirty seconds or several hours or the absence of a piece of information.'

Halton: 'Ninety-five per cent is drills that make you reasonably good. But, in this business, success or failure is in small margins. The hairs on the back of the neck make all the difference.'

Griffiths: 'I learn stuff almost every day when the young men take me through the equipment. This is the best job I'm ever going to have.'

We talk about money. *Tireless* cost £380m [coming into service in 1985]. The figure now for delivering an SSN is about a billion pounds. It costs about £3.5bn a year to be a submarine nation. By 2020 it will be about £5bn.

Halton: 'It's a measure of our kudos as a nation.'

Griffiths: 'We maintain an SSN at very high state of readiness to protect the integrity of the UK at all times. *Tireless* gave it to *Turbulent* four days ago.'

Being at high-level readiness involves a ship, a submarine, a tanker and four Merlin helicopters.

We talk about the capabilities of a Royal Navy SSN. The only thing that limits the duration of a patrol is the amount of food on board – so global reach (ninety days' food – additional dry provisions to get the patrol to 110 days, maximum; fresh water is distilled from sea water). It is capable of carrying out a number of roles, ranging from intelligence gathering and surveillance, land attacks using Tomahawk Cruise Missiles, deployment of Special Forces, force protection of a surface task group, anti-submarine warfare, anti-surface warfare and counter-piracy operations.

Halton: 'An SSN gives tremendous political choice and freedom of manoeuvre. *Astute* is going to be able to use all those capacities together with no external support. It's almost the only platform that can deliver strategic effect without going nuclear.'

Control Room 0820Z

Tireless's vents have just been opened. We're diving. The planesman [responsible for driving the submarine] at the controls, operating what legend has it is the same steering column that was used on Wellington bombers during the Second World War, says: 'I have the submarine.'

One of the Perishers, Lieutenant Commander Andy Reeves, is in the Captain's seat. We're diving just off the Mull of Kintyre at a six-degree angle. HMS *Monmouth* and the minesweeper HMS *Brocklesby* are hunting us. We're at periscope depth – eighteen metres. We're going down to between twenty-five and thirty metres and then up to periscope depth. Leak checks made (all fine: no surprise but a mild relief). We dive quickly, but there's no such thing as a crash dive, as in the Second World War films. It takes between seven and eight minutes.

That time could be halved during an emergency using the speed of the boat.

Griffiths tells me: 'My job is to maintain the safety of the platform. That sixth sense and experience. I have in the back of mind at all times, what I will do if this happens? – the "so what".'

We're in the North Channel between Northern Ireland and Scotland. It's 'a two-lane motorway'.

Tireless's immediate task is to gain intelligence and any indications of activity centred on Sanda Island (a 'perirecce') to the south of the Mull of Kintyre.

0840Z

Periscope up. An anti-submarine Merlin Helicopter is sighted. The Control Room is very crowded (crew, Perishers, visitors, Halton, Garrett, Ramsey). The ship's company is a core of 110. There are 130 on board today.

Halton: 'The Perishers will be very aware we're here. They'll think we're watching them more than we are.'

I ask Halton about *Tireless's* and now *Turbulent's* role in protecting the 'Vanguard' class as the submarine at high readiness. 'It's layered defence' he says, 'Deterrence is the number one priority. It trumps everything else. It's in support of CASD [Continuous at Sea Deterrence; see p. 000]. It's layered intelligence and support . . . we do feel the loss of the Nimrods [RAF Maritime Patrol Aircraft designed to hunt submarines]. The Merlins don't have the legs.'

We have a brief chat about *Tireless's* armaments:

The submarine carries torpedoes and missiles. The torpedoes are called Spearfish. They weigh two tons and are equivalent to a 550 lb bomb. They explode underneath the target creating a bubble of gas which will break the back of a 50,000 ton ship.

The missiles are Tomahawk Land Attack Missiles (TLAM), each with a range of 1000 nautical miles. Given the near ubiquity of the sea, that means you can strike about 90 per cent of the world. The accuracy is measured in yards. The strike authority is Northwood. A Spearfish and a Tomahawk are about a million pounds each.

We talk about the previous phase of the course when the frigates race at the subs. It was done off Norway this time. A Royal Navy surface ship, a Type 42 destroyer, comes flying in at 30 knots. It's well controlled. The ships spin out at 300 yards.

Inshore is the most perilous – 5000 tons of submarine in 45 metres of water being chased by frigates and helicopters.

There's squeaking on the casing as the helicopter finds us with its powerful dipping sonar, known as 2089, which is lowered into the sea while the helicopter hovers above. You can hear the squeaking above the hum and the hiss of the air conditioning. Just before I'd heard a couple of muffled bangs. Simulated depth charges, I'm told.

Ramsey says, 'We'll be attacked quite a lot today. It's not a nice moment being detected, particularly if they can classify you as a UK SSN.'

The Merlin attacked us as soon as we dived. Depth 21 metres, speed 8 knots.

0950Z

We're on the way to Pladda Island now off the southern tip of Arran, which carries yet another similar reconnaissance mission. We suddenly descend to 30 metres to get more speed and to make the boat easier to handle. The squeaking stops. I'm told that Captain Sharpe, whom we had met in the Pool of London a few weeks earlier, is up there on HMS *St Albans*. He has apparently said of his and *St Albans*' task, 'We're here to fail the students.' This is one of the toughest days of the Perisher course until the final weekend. Halton and Garrett are adding pressure in the Control Room by making their presence felt.

1000Z

Tireless has escaped her pursuers and we're slowing down again, and Thom McLoughlin and I begin a tour of the boat with Ramsey and Nick Brooks, the engineer.

Ramsey: 'The hydraulics is the blood of the system.'

Brooks explains what the hydraulics do to maintain the system at pressure:

1. Main hydraulics, bulkheads, valves, raising masts and periscopes, foreplanes
2. External hydraulic system outside pressure hull, masts on bridge, sea water intake
3. Aft hydraulic plant, afterplanes, steering

We then inspect the heads. ‘We don’t shower very often.’ The submarine odour clings to everything, including the towels. Two of Brooks’s engineers do the crew’s laundry and they get an allowance for it. There are restrictions on water. The boat has two distilling plants. ‘We get rid of the water by pumping it overboard. It’s noisy so we minimize the use of water for a reason.’ It’s 1030 and the squeaking has started again.

The Junior Rates Mess is shared by sixty men. There’s a tray of apples, oranges and pears on the table.

The Galley is manned by two Chefs during the day. One night Chef. 24-hour cover. Four meals a day for 130 people. John, the Chef, says: ‘They base their morale on the food.’ Brooks adds: ‘Without daylight, I know what time of the day it is from the meals.’ ‘We’re creatures of habit’ says Brooks. ‘We have theme nights – Chinese, Italian and curry. Fish on Friday and a pizza night on Sundays.’

We move down the Two Deck passageway, the main thoroughfare of the boat. The furthest you can see is about twenty yards. It doesn’t feel claustrophobic to me; but it would to some. Brooks says that when you return to Devonport or Faslane ‘your eyes take time to adjust to the long distances. So you leave it for two days before driving [there are no rules, some do, some don’t]. There’s no sunlight so no Vitamin D so we bring vitamins to sea. There’s a calcium problem too.’

In the Escape Compartment, with its oxygen generators and escape tower and the torpedo loading hatch, we’re as far forward as we can get. The rescue submersible from Faslane can lock on to the escape hatch. There’s an air supply in the tower. Special escape suits in boxes. The other escape compartment is at the back in the engine room. It takes 3–4 minutes per person to get out.

As we move back McLoughlin says: ‘It’s a monastery of the deep.’ Above the ladders there’s a picture of David Cameron with a rather strange hairdo. It carries a caption:

AN IMPORTANT MESSAGE FROM THE PM

Don’t stomp up and down the ladders.

The PM has not been aboard *Tireless*, and he won’t know of his photographic role in this particular piece of the Defence of the Realm.

We see the Laundry, consisting of one washing machine and one tumble dryer. We then descend into the Weapons Storage Compartment, or the ‘Bomb Shop’ to use its informal name. The Spearfish and

TLAMs are about 23 feet in length. There are sailors (trainees) asleep next to the torpedoes. There are boxes of baked beans stored here, too. Squeaking again. It sounds particularly eerie down here in the Bomb Shop.

We climb out of the Bomb Shop and enter the Sonar Compartment. It is stacked full of computers. *Tireless's* towed array [a series of hydrophones towed behind a submarine on a cable], which is about 800 feet long, is fitted just outside the breakwater at Devonport when she sails from Plymouth (see p. 000).

We descend to the lower deck. There are four battery compartments, the Ship's Office, for administration and logistics, and the Garbage Ejector Compartment – tins go outside to the sea but not plastics. Hand weapons are locked in a safe. Air Purification space. CO₂ Scrubbers. Oxygen stays in; hydrogen goes overboard (compressed as a gas).

Control Room 1055Z

We're at Periscope Depth quite close to Pladda Island off the southern tip of Arran. The first perirecce of the Pladda lighthouse has been done. We're moving at 4 knots, 30.5 metres above the bottom. We'll do another periphoto later.

In the wider context of UK intelligence gathering this was quite a remarkable event. For in no other branch of the British intelligence trade are outsiders allowed to witness collection techniques in action. Yet here, unfolding bit by bit, was our country's capability for submarine-operated photographic, signals and electronic intelligence against a hostile power well endowed with anti-submarine capacity. It was a striking example of openness and loquacity on the part of Her Majesty's legendary 'Silent Service'.

The frigates and helicopter are still looking for us but the shallow water disrupts the sonar and makes it more difficult for them to pick us up. Teacher gives *Tireless's* position away to our pursuers by ordering the firing of a white smoke grenade. The Perishers can't be put under the stress required if the frigates can't find us. The Perisher has to decide to evade or go for speed. He takes a look through the periscope. Grif-fiths explains that we have to be careful about the angle of the boat. Thirty metres above the bottom is the limit: 'ordinarily it's forty-five metres. We get special dispensation for this.'

Griffiths says: ‘We’re just below periscope depth at ten knots. We call it “gulping” – taking a look with the periscope and speeding up. If we put the periscope up we leave a huge feather you can see for miles.’ If *Monmouth* sees us she’ll approach flat out at 29 knots. The Perisher students have to be able to calculate the distance of the approaching ship and ensure that they have a minute’s reaction time, the time it takes to get the submarine to a safe depth.

Monmouth charges and comes about 1500 yards from *Tireless*. There’s intense concentration all round in the Control Room.

Ramsey: ‘Teacher will fail the student if he thinks he’s unsafe. In Command, we’re trained to take risky decisions, not dangerous ones.’

Hennessy: ‘When did you get most stressed on Perisher?’

Ramsey: ‘On the first Inshore Weekend, funnily enough. i.e. this one. I made a mistake. My perioperator got me run over by a vessel. I was duty Captain. The stress you put on yourself.’

Hennessy: ‘Did you think you’d blown it?’

Ramsey: ‘Yeah.’

Conversation now with fellow weekend rider and Fleet Air Arm helicopter pilot, Lieutenant Aidan Riley. It’s his first time witnessing Perisher from inside a submarine. ‘A really good insight’ he says. He flies Merlins and we talk of what he would be doing if he was up there hunting *Tireless*:

‘There’s plenty of opportunity today to see the submarine visually. I would go for visual first and have my radar, which they can detect, turned off. I’d look for the feather-like periscope. It’s only a 12-knot wind so not many white horses. I’d tend to hover at about 120 feet to put the sonar in the water. Are we trying to find the sub or stop it taking a picture of Pladda light? I’d hover there. I’d prepare the bottom topography and tidal work. Where is he likely to be? Trying to get inside the mind of the submariner.’

1130Z

Teacher asks for a cup of cold coffee. He’s a strong, highly direct and hugely experienced man but no doubt he has his own moments of stress too.

1140Z

Probable picking up of *Monmouth*. It is *Monmouth* at 4700 yards, making 13 knots. This is a world of constant mental arithmetic. We listen to the sound of *Monmouth*'s shafts and blades.

1145Z

One of the Perishers, Lieutenant Commander Andy Reeves, gets on the Attack Periscope. The Trafalgars have two periscopes. The Attack is much smaller and therefore leaves a thinner feather on the surface. But it's not very easy to see through and doesn't have electronic sensors, which means that when you're in close to your hunter, you're more likely to be seen. The Search Periscope has really good vision, electronic sensors and GPS on top. It's big with a huge head. Normally an all-round look that picks up nothing should keep you in the clear for the next twelve minutes.

Once Reeves has finished his stint as perioperator, we snatch a conversation at the back of the Control Room. How long had he been at work today?

'Finished at 1110 last night. Got up at four. Took over at 0515. So six hours. I got about five hours' sleep which is quite a lot. It's part of the stress to try and take the sleep off you. The tireddest people I've ever seen are the Captains who have been on for three days. So it's to make sure that you can still think'

Reeves explains that this weekend's phase of *Perisher* involves 'a totally different way of thinking':

'When we came on board first we could operate the boat within the parameters set by the book. Now it's pushing navigation, counter-detection and avoiding collision and overall achieving of the aim. It's trying to teach you a balance between those three all the time. Everyone's got their own limits within which they work.'

It's good of him to talk when he's plainly had a seriously stretching morning and I'm struck by his directness, candour and self-awareness. I ask him if on *Perisher* he's found out new things about himself.

'I've not discovered anything new. But the traits of your personality come out. I'm way too self-critical. I've been told that since I was a child. That part of my psyche that says "bollocks", I almost have to put that on one side just to do it – thinking I'm not going to help the situation by shouting . . .'

Reeves describes for me the earlier, Norwegian phase of Perisher:

‘It was just off Bergen, in a fjord. There were three of them – at one point four – charging at you. It was a combination of visual and maths – going back to World War Two. “Eyes Only” we call it. My mental arithmetic was horrendous until last year. Last year I spent thirty minutes a day on mental arithmetic. That sort of stuff you can be taught. But if you can’t take decisions quickly enough, you’re never going to do it.’

This last requirement was to be a feature of the afternoon to come – once in a truly eccentric fashion, as we shall see. Decisiveness is perhaps the master-noun of Perisher.¹¹ Halton had told me earlier that morning that what Commanding Officers really need ‘is an ability to see through what’s important to cut through the trivia’.

1157Z

In the background we can hear an all-round look being taken on the Attack Periscope. I ask Reeves what have been the most stretching bits of Perisher so far. Without hesitation he replies:

‘It’s the first time in your career when you can’t ask someone else what to do. Quite a strange feeling. A lot of preparation is put into making you not panic. Yesterday we were 1400 yards from the Dutch warship. I was on the periscope at the time. Teacher noticed and the duty Captain noticed the change in our voice. Teacher said: “Don’t panic.” You assume worst case – that when you put the periscope down he’ll come at maximum speed.’

Reeves joined the Navy in 1998 and volunteered for the Submarine Service in 2002. He’s served on both ‘Vanguard’ class SSBNs and ‘Trafalgar’ class SSNs and was on *Turbulent* during her Libyan operations. So, he says, he’s been ten years in preparing for Perisher, ‘then all of a sudden, you’re making it happen at thirty-two years of age’. Teacher was his Captain on HMS *Vengeance*.

He lists the skills you need to get you to Perisher: mental arithmetic; being able to operate the periscope; dealing with the control; knowing about the TLAM; guiding the weapons; understanding the reactor and propulsion systems. ‘My contemporaries are not doing anything near to this in terms of independence and responsibility.’ He feels, he says, the ‘gravity of it’. He feels, too, ‘the lack of appreciation of what we do in the public’. ‘Annoying’, he calls it. A few months later, the 2012 Olympics threw up a vivid, if absurd, example of this. On 9 August *The*

Times led its front page with a story about the future funding for UK sport, ‘Britain must build on success of Olympics.’¹² It quoted ‘Fuzz Ahmed, who coached Robbie Grabarz to a high jump bronze medal. ‘It’s an irrelevant amount of money compared to a submarine. What would you rather have, Chris Hoy [who had just won a fifth gold medal] or a submarine?’ he added.’¹³

1220Z

A Close Quarters Drill. Turns out to be a small lobster-potting boat.

Reeves says the Navy is ‘a lot better now’ at letting people know what they do. He was, however, ‘amazed’ by the amount of the deterrent firing chain Richard Knight and I were allowed to record for our December 2008 BBC Radio 4 *Human Button* documentary (so was I). Impressive, honest man, Reeves. In addition to his naval service he has a wife and two daughters and is taking an in-service degree in marine surveying at Portsmouth University. You learn time management in the Submarine Service.

1230Z. Sonar Room

Broadband and narrowband are explained as I gaze, near mesmerized, at the screens. The broadband looks like a formation of Cirrus cloud that’s turned green, the narrowband more like grey scrambled egg. Broadband picks up general noise; narrowband will tell you what you’re up against. I’m shown where the lobster potter is, the mine-sweeper, *Brocklesby*, and *Monmouth*, which is coming in our direction at 12 knots. If *Tireless* were up against an Akula II submarine of the Russian Navy it would be but a very faint thin green line on the screen. You would not be able to hear it. But you could tell if it was reacting to the presence of another submarine (i.e. you). And the faster a submarine or a surface ship is travelling, naturally the noisier it is. ‘It’s more an art than a science’ says one of the Sonar operators.

1235Z

The Sonar Room picks up *Monmouth*’s Merlin.

1236Z

'She's back' they say. We're due to take another periscope photograph of Pladda lighthouse in about half an hour.

1240Z

The Merlin is about 9000 yards away.

1245Z

We're slowing down and going shallow. You can feel the boat going up.

1246Z. Control Room

Attack Periscope up.

1253Z

Sound Room says the Merlin has dropped a charge.

Garrett says: 'It's not that close. It's like hitting the sub with a hammer.'

1254Z

The Search Periscope goes up. The camera is on. Pladda light is one mile away.

1254Z +30 Seconds

I take a look through the Search Periscope. The white lighthouse is bright in the spring sunshine and its surrounding buildings are vividly visible.

0101Z

Search Periscope up. Another picture of Pladda light.

0127Z Ward Room

Teacher, Halton, Griffiths and Ramsey share thoughts on the morning.

Halton: 'It's a little bit casual for me. I'd like it crisper.'

He explains what he is looking for in his quartet of Perishers:

'This is all about them doing it under pressure. I'll occasionally put my hand on the tiller to steer them in the right direction. As we approach the final weekend I won't do that. If I have to intervene then it's a catastrophe for the student. Sometimes there's no right answer; it's shades of grey. No longer are you looking for reasons not to do things. You're looking for reasons to do things.'

Over lunch we talk about the Submarine Service in general. It's now just under a sixth of the entire Naval Service (about 3000 out of 28,000). Griffiths has all the figures at his fingertips. He's recently returned to operations after a spell in the Ministry of Defence Main Building where he worked on, among other things, the 2010 Strategic Defence and Security Review. He has a taste for policy but returning to operations is 'like coming home'.

Thinking about it later, that first Perisher morning had unfolded like a play – a play punctuated by drop-ins to various working parts of a 'Trafalgar' class submarine at sea plus a recitative of conversations about the submariner's craft, the nature of submarine leadership and the special individual and collective emotional geography that goes with the underwater trade in general and during a Perisher course in particular. As plays go, it's definitely a drama. Why? Because there's never that much depth beneath you and there are large chunks of grey-painted steel above constantly trying to put you off. And the thriller element of the play was to increase as the afternoon deepened.

The afternoon began with another tour of the working insides of *Tireless*, the aft end this time. There are definitely two weather systems in a 'Trafalgar' class submarine. The Control Room is an artificial version of the weather outside, i.e. a nice spring day in Scotland. When you go back over the nuclear reactor (the Trafalgars are powered by a PWR, or Pressurized Water Reactor) to the Manoeuvring Room and the Engine Room, you enter the tropics with temperatures nudging 25–30 degrees. When they are literally east of Suez, the temperature in the Engine Room can reach 60 degrees.

The Health Physics Lab is at this end and handles the radiological and medical life of this underwater village. The team is currently sampling the Control Room, testing oxygen, carbon dioxide, hydrogen and nitrogen levels. SSNs only take a doctor with them if 'we're covert for a length of time'. The Trident boats always carry one given their ninety-day patrols and the requirement not to break the patrol to get a

sick sailor off (though in these post-Cold War times, a submariner whose life was in danger would be evacuated by helicopter, with the submarine spending only the briefest time on the surface). The Medic on *Tireless* is a Petty Officer.

We're now in the domain of *Tireless*'s Chief Engineer, Lieutenant Commander Nick Brooks. He's thirty-five and joined the Navy as a direct entry graduate after taking a degree in Mechanical Engineering at Loughborough. Engineers are like gold dust in the Submarine Service. The boats can't sail without them and there's a growing market for trained nuclear engineers in the outside world as the UK moves towards constructing its next generation of civil nuclear-power stations. The Navy supplements their engineers' pay to increase the chances of retaining them. But it's not the money that keeps Brooks in the Service. 'There was a shortage of engineers in the late 1990s and early 2000s. But I wouldn't be here now, eleven and a half years later if I didn't enjoy it – the professional challenge; the camaraderie.'

Manoeuvring Room

The Manoeuvring Room is like a mini-control room in a nuclear-power station with its bank of dials. There are between five and eight sailors in here (with another three in the engine room), and it's manned twenty-four hours a day in port and at sea. Everything electrical and propulsive in *Tireless* is controlled from here. This the most baffling bit of the boat for a visiting layman without an engineering training as your gaze travels over the dials that measure pressures, temperatures and flows. In the middle rests the throttle control panel which converts orders from the Control Room into revolutions of *Tireless*'s two main turbines.

Every six months or so *Tireless*'s team train for a 'scram' on a simulator in either Devonport or Faslane. A 'scram' means the reactor has to be shut down to maintain core safety. The word 'scram' goes right back to the very first nuclear reactor that went critical, on 2 December 1942 in the West Stand Squash Court at the University of Chicago's Stagg Field sports ground which housed it. The great Enrico Fermi had a cunning plan to prevent disaster if the core overheated. Cadmium control rods would be dropped down from above. If it happened (which it did not), Fermi would shout 'scram' to a man above the pile holding an axe ready to cut the ropes supporting the cadmium. So 'scram' originally stood for 'safety cut rope axe man'.¹⁴ Nowadays, the control rods drop down automatically; axes are not required.

Overheating can be caused by equipment failure or by too much load on the reactor. On the right of the *Tireless* Manoeuvring Room is the Control Rods panel. If a scram occurs, lights flash red and a bell rings. The main engines might trip. The job is to minimize heat and to switch the submarine to battery power, produced by the diesel generators for a few hours and the entire boat goes on to half-lighting.

Tireless's engineers are reassuringly calm. 'This is the quiet end of the boat' says Brooks. 'There are normally only eight of us back here.' We move into his workshop with its lathes, drills and grinders. Here, too, is the white smoke signal ejector for use when Teacher wants to give away the boat's position to its pursuers. We inspect the gearbox. Sometimes, in the middle of the night, Brooks's people put potatoes in tinfoil and bake them on the throttles.

0325Z Control Room

Back in the cool though, things are hotting up. The boat is crossing a shallow stretch of water called 'The Bridge' between Arran and the Kintyre peninsula which is between 40 and 50 metres deep. The next task is intelligence recovery of the approaches to Campbeltown harbour. It's going to be tricky to pull it off because over 'The Bridge' the submerged geography takes *Tireless* into an underwater ravine with only just enough depth beneath the boat. Meanwhile, the hunters on the surface are now all after us – the two frigates, the minesweeper and the helicopters operating off the frigates. It's going to be a testing run to get that photograph and it's made all the harder for the Perishers because they are navigating without GPS (GPS would be turned off if this was for real). Griffiths does have access to GPS so he knows exactly where the boat is.

As the two frigates above go into their fast racetrack manoeuvre (describing an elongated circle to hunt the sub) and the Merlins dip their sonar buoys to ping the boat, the Perisher in the duty Captain's hot seat is Lieutenant Commander Sam Owen. As Owen tries to take evasive action it sounds as if one of the Type 23s is simulating the firing of a torpedo at us.

0415Z

You can feel the concentration and the concern rising in the Control Room. Griffiths and Halton are with the navigators. Griffiths looks up,

plainly anxious. Three months later, over dinner in London, I ask him about this. Griffiths says the approach to Davaar is ‘an ever-narrowing canyon. He [Owen] was driving himself closer and closer to danger because it’s very steep.’ ‘Were you worried?’ ‘I was. I vividly remember it.’¹⁵

In my notebook I record the depth between the bottom of the boat and the seabed becoming a problem as well as the sides of the canyon. A sailor intones the depth at regular intervals in the Control Room like the tolling of a bell. Teacher and Griffiths confer. This is the moment of maximum concentration. Griffiths tells Teacher he’s not prepared to carry on with this bit of the mission. Thanks to GPS, Griffiths knows exactly how close we are to the canyon wall. Sam, the Perisher, does not and thinks we are in a safer place than we really are. Davaar light will remain unphotographed. We’re turning back north and heading for ‘The Bridge’. ‘Quite a lot of risk around’, I suggest to Ramsey. ‘Yeah. The one who has the greatest risk is the Captain [i.e. Griffiths]. It’s very impressive how he’s carrying himself through this.’ Ramsey recalls that on his Perisher HMS *Triumph* actually hit the bottom. ‘Captain Phil Buckley handled that amazingly.’ ‘Was it you?’ ‘It wasn’t me. I slept through it.’

0425Z

The tension has eased. The pursuers are heading south. We’re going north. *Monmouth* is transmitting but she’s further away than she was.

0530Z

Owen and I have a chat about the aborted Davaar operation in the Admin Office. ‘The world according to Owen’, he calls it. It’s plainly been a strain but he’s recovered pretty well. He drifted a bit after Bangor University, working on building sites, but he’s clearly found himself in the Navy and was on HMS *Tireless* in 2004 when she went under the ice to the North Pole. He realizes this patch of Perisher was not his finest hour:

Owen: ‘I don’t think that run went well. The comfort I’d find in that is they’re not designed to run well.’

Hennessy: ‘But you kept calm.’

Owen: ‘It’s the swan approach. It’s fairly clear what happened. The unnerving bit is not controlling the target. It was *St Albans* doing the

racetrack. The problem was had she turned towards us and charged us. It would have forced us into an emergency action going deep. That would have been rubbish.'

Hennessy: 'Was this the toughest bit of Perisher so far?'

Owen: 'Yes . . . Captain Halton is Teacher's boss. It's a bit rubbish when you do a bad run when he's on board . . . three and a half hours is an awfully long time not to take a photo. What we basically did was drive ten miles underwater not to take a photo.'

Owen recognizes that he delayed too long in deciding to abort the Davaar run: 'If I was going to self-critique it's that I should have stuck to my guns ten minutes before when I didn't think we could do it. My instinct and gut feeling was that it probably wasn't going to happen. The maths said we could. But I should have baled out. If we had gone in and taken the photo we would have been detected and attacked again.' Though he wonders if Teacher used the white smoke to give his position away, Sam is not downcast by the afternoon's experience. I ask him about Perisher generally.

Owen: 'It's brilliant. You never get to do this again.'

Hennessy: 'Will you be all right?'

Owen: 'I like to think so. I know I can lead men in a submarine.'

The four Perishers know each other very well by this stage and Sam says they are firm friends:

'Whatever happens individually on the course we'll always be friends because of that shared experience. In service there are about sixty to a hundred Perisher-qualified officers. It's a fairly elite club. Ten, maybe twelve, of them are seagoing. The old Russians knew who had been on Perisher.'

Owen thinks the entire Submarine Service is pretty special:

'It's the camaraderie of it. There's an operational element to whatever you do . . . We know it's bloody hard to do. It's got some of the largest *esprit de corps*, a lot of band-of-brothers; the lads' professionalism . . . And these 'T' boats can still compete against the best in the world and it's the people who enable us to do it. *Tireless* is home. We were one of the real sneaky boats. *Turbulent* was the other. Ryan took her on some pretty crunchy patrols.'

As Owen grappled that Saturday afternoon with the depth of the Kilbrannan Sound, the canyon on the approach to Davaar Island and

the surface attacks, all of which combined to box him in, not to mention an increasingly anxious Captain Griffiths, Captain Halton, Commodore Garrett and Teacher Bower watching his every move and non-move, I managed a few snatched conversations about submarine life in general with the young men in the Control Room:

‘It can be very dull: ninety per cent boredom; ten per cent abject fear.’

‘The mates carry you through.’

‘The removal from sunlight and society does things to people.’

‘Makes you value your time when you’re at home!’

‘The Bombers [the Trident boats] have a very specific job to do and they do it very well.’

‘These submarines are a lot more flexible – practising beach surveys, terrorist training camps.’

‘For the Submarine Service, the Cold War was the golden age – North Atlantic, Norwegian Sea, Cold War ASW, protecting the Bombers. We were very good at it.’

I have a chance to talk to Ramsey about the characteristics of each submarine. ‘Every boat’, he says, ‘has a personality. *Turbulent* was a can-do boat, pretty aggressive. Every CO before me was aggressive. *Tireless* and *Turbulent* are real sister ships, doing the same things but in a different style.’

Ramsey reflects on the way submariners have to learn to live together in an immensely confined space: ‘If the world was like submarines there would be no need for submarines.’ He thinks we are cutting it fine with our Armed Forces: ‘180,000 people and two per cent of GDP to protect sixty million people. The Navy could fit into Stamford Bridge and leave room for the away fans.’

Short visit to the W/T Room

All the communications channels are explained. Very Low Frequency is the primary instrument for receiving traffic. *Tireless* trails a 3000-foot-long buoyant wire aerial to pick up signals. ‘T’ boats have an email capability that families can use. The ‘V’ boats don’t ‘because as soon as they leave the wall, they are on operations’.

Control Room

Another chat with Alex, the Logistics Officer. He confirms something I always notice on submarines. ‘ABs [the seamen] are a lot more

independently minded on submarines. They are given much more responsibility. They take on things. They're not fazed by anything.' The duty Captain is now Lieutenant Commander Neil Botting, a geology graduate from Imperial who has served on 'Vanguard' class SSBNs and 'Trafalgar' class SSNs (he was on *Triumph* during the Libya Campaign). His task at the moment is surveillance of our pursuers and the western coastline of Arran, working towards a periscope reconnaissance of the King's Caves.

A Touch of Protein

Suddenly a rating clammers down the ladder from the Control Room to the Galley carrying a plate on which is resting a piece of raw steak. I ask Ramsey what on earth is going on? It turns out that Botting had been dithering in the Captain's chair. It was too much for Halton, who sent a sailor down to the Galley to get the steak. Halton thrusts it at Lieutenant Commander Botting with the words: 'You need some red meat. Decide! Decide!' Ramsey captured on film a rather sheepish-looking Botting holding the plate. Ramsey thinks this protein moment is a first in the history of Perisher. Later I ask Halton about it:

'He was being wet. He needed some red meat to improve his aggression levels. He was getting a lot of hassle. I tried to lighten it a bit. It's a fascinating, people-watching thing.'

It strikes me as a literal example of the elders of the tribe bleeding the young ones. How refreshingly different from the techniques and qualities of most modern HR practice.

A few weeks later, at a Promotions party in the Ministry of Defence Main Building, I recount the 'protein moment' on *Tireless*. 'Ah', says Captain Andy McKendrick, the former CO of HMS *Vengeance*, 'the theatre of Perisher.'¹⁶ Rear Admiral Ian Corder, Commander Operations at Northwood, is on *Tireless* two weekends later, the last of the course. Later he tells us he had a similar moment to Halton's, reminding the dithering Perisher (he didn't say which one) he was 'driving a sports car not a Lada'.¹⁷

This attitude towards command is admired all over the world. During a visit to a UK-based US intelligence installation shortly before travelling to Faslane, the subject of Perisher's specialness came up in conversation with a group of ex-submariner Russia-watchers. What's the difference between your submarine commanders and the British? 'Balls, balls' came the unhesitating reply. The explanation? Partly that

the US Navy has become more risk averse. But even when it was less so during the Cold War, the Royal Navy's SSNs would take more risks when up against the Soviet Navy probably, our admiring allies thought, because we had so few boats compared to the American Navy and wanted to bring as much intelligence material to the shared table as possible.

Ward Room

Halton, Garrett and Ramsey gather to discuss the Perishers. Owen, for all his tough afternoon, is judged 'safe and effective'. Ramsey tells me Teacher didn't use any smoke on the Davaar section. McLaughlin, who was sitting for a good while between Teacher and the duty Captain, noticed 'that the tension touched everyone'. Later, Ramsey has a session with the four Perishers. He tells me about it early on Sunday morning: 'It was all about making the best of it. Example. Direction. Risk. Communication. Teamwork. They've got two weeks to go now.' And it's plain they still have a lot to do.

This is the first time I've slept overnight on a submarine. I'm put up in the three-man cabin; one of two adjoining the Ward Room. There are three bunks on top of each other with almost no headroom clearance. I'm given the middle one and getting in requires a degree of athleticism I haven't had to find for years. If my things had been put on the top bunk I don't think I would have been able to manage it. Got to bed about eleven. No film in the Ward Room so quite quiet. Slept remarkably well given that I haven't been so confined since spending the night with the Royal Marines in a Norwegian mountain snow hole somewhere north of Narvik in January 1978. The movement of the boat is soothing, sometimes rocking gently from side to side and really pleasant when it rises gradually and smoothly to periscope depth and descends again to its normal 30 metres (surveillance exercises went on through the night.)

Sunday, 15 April 2012

Wake up shortly after 0530Z. Wash, but forgo a shave. Cup of tea in the Ward Room then up to the Control Room just after six. *Tireless* is now off the northwestern tip of Arran, and soon to do a 'sensor drop' at the mouth of the small sea loch, Lochranza. For Perisher purposes this is an enemy coastline protected by hostile warships. For 'sensor'

read 'mine' in war circumstances. Reeves is duty Captain. *Tireless* has just gone deep to simulate the laying of the sensors. There's a frigate around somewhere to the southwest in Kilbrannan Sound. Ramsey tells me it's the navigational constraints close to a narrow inlet that produces the stress in a Perisher 'sensor drop'.

There's a slight shudder as the sensors are ejected and my ears feel the pressure differential. (The sensors aren't really ejected. It's just water shots through the torpedo tubes.) Another shudder as another simulated sensor goes out. One more to go then a swift exit from the scene. Luckily the frigate is going south and *Tireless* is going north so there's no sonar contact. *Tireless* is taken up to have a look round on the periscope. It's as well to check the sensors have been 'dropped' in the right place. If they're more than 100 metres down they might not work. At 0620Z a fix is taken through the periscope. The sensors have been placed effectively to cover the harbour entrance and the frigates evaded. Andy Reeves has done the job well.

It turns out that overnight *Tireless* suffered a mechanical defect while I was deep in sleep. A valve needed to be fixed in one of the main engines so the Perishers got some sleep.

Captain Griffiths now has a moment to talk to me more widely about *Tireless*'s private weekend war:

'When you're in extremely shallow water, you can't go underneath to avoid a collision. It was concentrating the mind [as we approached Davaar Island yesterday afternoon] because we couldn't duck underneath if we'd been charged. If it does happen you have to aggressively change tack. In training, in the final analysis, we can stick the fin out of the water and talk to the frigate.'

Griffiths's concern and the affection for *Tireless* are apparent once more:

'She's not a machine. She's far more than a machine. She's a home. She has a life of her own – a being with a personality. They're all temperamental. They all have slightly different ways. Little foibles. Each one has to be coaxed to get the best out of her. The boats settle into the water in a different way. My people know the foibles and how to play to the strengths.'

This is the submarine equivalent of anthropomorphism and deserves a Latin name all its own. It reminds me of how engine drivers would talk about the personality of their locomotives in the days of steam. No wonder virtually all the former COs turn up when one of these boats is finally decommissioned.

0650Z

Ward Room. Time for a huge, fried farewell breakfast from the Galley. Nick Brooks, the Chief Engineer, kindly comes in to tell me that West Ham beat Brighton 6–0 yesterday afternoon while we were preoccupied with the Kilbrannan Sound canyon. The internet brings in the football results and the news summaries for the boat.

0712Z

The crew stands by to surface. There is a thump as the air goes into the vents.

0728Z

I'm on the fin of *Tireless*. Griffiths lights up a cigarette. It's a beautiful, exquisitely bright morning off Arran, the air chilly but delectable. We're moving gently at 3.5 knots in a calm sea and pointing towards the Cumbrae Gap on the Firth of Clyde between the Isle of Bute and the Ayrshire mainland. To the right are Goat Fell and the mountains of Arran in silhouette.

There is an outburst of camaraderie as the weekenders take their leave of Griffiths and *Tireless* before transferring to the *Eva*, a fast craft which sweeps us off towards the Cumbrae Gap, the Gareloch and Faslane at 23 knots (which has to come down to 7 knots before we creep past Helensburgh to avoid swamping the yachts). As *Eva* approaches Faslane, the MOD Police launch comes alongside and puts a man aboard to check our passes.

Faslane is bright in the sun with the huge grey shape of HMS *Bulwark* ready to take part, as is *Tireless*, in the next phase of the NATO exercise Joint Warrior off the northwest of Scotland. Up against the wall is HMS *Turbulent*, which five days ago took over from *Tireless* as the boat at a high state of readiness to protect the deterrent and the UK generally. Ramsey, her former CO, gazes at her like a lover. *Turbulent*, nearly thirty years old, has but three months to go before her decommissioning ceremony, whereupon *Tireless* will become the old lady of the surviving 'Trafalgar' class. HMS *Vanguard* is in Faslane, berthed alongside the huge ship lift, and will relieve HMS *Victorious* when she returns from patrol. The mountains above Arrochar, unlike *Victorious*, look benign today.

Afterwards

Three of the four 2012 Perishers passed: Chris Gill, Sam Owen and Neil Botting. Andy Reeves did not. He left the boat on the penultimate day. I was saddened to hear this, but Reeves has great qualities and will do good things. Who made it and who did not was, I suspect, around the Submarine Service in a flash, probably even before Teacher and his successful students sat down for the legendary Perisher breakfast when *Tireless* returned to Faslane.

We left the course before witnessing any of the above. However, the following year, in October 2013, we boarded another ‘Trafalgar’ class submarine, HMS *Triumph*, to witness another group of Perisher students, Lieutenant Commander Louis Bull, Lieutenant Commander Ian Ferguson, Lieutenant Commander David Burrill and Lieutenant Commander Ben Haskins, complete the final days of the course under Teacher, Ramsey. They and their predecessor cohort presided over a slightly different course from the one played out on HMS *Tireless* in 2012. After witnessing the 2012 sequence first hand, Ramsey, Captain Halton and Rear Admiral Corder felt that parts of the course needed to better reflect the world that the Submarine Service had been operating within over the past few years and was likely to do over the decades to come. The course continues to evolve, but its core principles remain the same.

HMS TRIUMPH, 19 OCTOBER 2013

0725Z

Triumph’s CO, Commander Dan Clarke, greets us warmly on the casing. Down into the bright friendly snug of the Ward Room. The steward has hot tea in our hands in thirty seconds. A record in the competitive hospitality stakes. Bacon and sausage butties swiftly follow. The Submarine Service specializes in comfort-food welcomes. It’s plain this is going to be quite a final day. The Perishers are about to have the lot thrown at them and they are very, very tired. They have not slept for more than four hours at a stretch for three and a half weeks. However fierce the malign, multiple combinations that are about to assail them, the surviving four will have to convince Admiral Matt Parr, Commander Operations, Northwood; Captain Chris Groves, Captain Flag Officer Sea Training; and Ramsey that they have the poise and

judgement under pressure to balance effectiveness of mission with the safety of the boat. It's a question of cope or fail. They can be removed right up to the last minutes. Every Perisher, with just under twelve hours to go, knows that.

The last few days have been stretching. Commander Sarah West on HMS *Portland*, a Type 23 frigate, has been particularly relentless and resourceful and she's up there lurking – a brilliant adversary whose tactics are difficult even for the old sweats on *Triumph* to read. At one point during the previous weekend, *Triumph* came up to periscope depth to find *Portland* close by. Ramsey instantly took over from the Perisher in the Captain's chair and put the boat into a steep dive.

Triumph is about to participate in Europe's largest military exercise, Joint Warrior, a UK tri-Service multinational exercise involving numerous warships, aircraft, marines and troops. For this particular exercise the UK and Ireland had been turned into something called the 'Wallian Archipelago' and the waters of the west of Scotland into the equivalent of a Middle Eastern flashpoint. The cause of the flashing, as it were, is a country called Pastonia whose borders are largely, though not wholly, coterminous with those of Scotland (running across from south of Ayr in the west to south of Berwick-upon-Tweed in the east). To the south of Pastonia lies Dragonia (whose state line runs from just north of St David's in West Wales to near Grimsby on the North Sea coast). To the south of Dragonia is Avalonia. Ireland, north and south combined, is called Ryania (whether after the airline or the Teacher is unknown).

The NATO countries (continental Western Europe) are deeply worried by the civil war in Pastonia and its consequences for the non-NATO Wallian Archipelago in general. Pastonia is breaking up into two: territory controlled by the Government of Pastonia, the GOP (based in Glasgow), and the far Left Peoples' Republic of Pastonia, the PRP (headquartered in Edinburgh). At one point in the exercise, Edinburgh Castle, the PRP's Ministry of Defence, is destroyed by a cruise missile launched from HMS *Triumph* under the waters between the Isle of Skye and southwest to the south of the Little Minch. The GOP remains the internationally recognized authority in Pastonia. The PRP is actively trying to destabilize Dragonia, its neighbour to the south, through funding and supporting the Free Dragonian Brotherhood, which is a far-left-wing terrorist group active throughout the Wallian Archipelago. At the very centre of the Pastonian civil war are Skye, the

other Western Isles and the Isles of Arran and Cumbrae. The Free Dragonian Brotherhood has terrorist groups in the area as well.

0810

The crew are wholly at ease with the ‘Wallian Archipelago’ scenario and talk about it during the day. ‘The shape of the North Channel is very similar to the Straits of Hormuz’ says one *Triumph*’s officers.

- The tasks will unfold like this: From now until about 1130, *Triumph* will concentrate on the two Cumbrae Islands and Kilchattan Bay on the Isle of Bute, surveilling possible beach landing sites for Special Forces, detecting surface-to-air missile launch sites and taking a look at what intelligence indicates is a ‘nest of terrorists’ on Little Cumbrae. The frigates and the Merlin helicopters will be giving them a hard time throughout.
- Between noon and 1430, *Triumph* will concentrate on Brodick Bay in the middle of Arran’s east coast. Intelligence suggests there may be a dirty bomb factory on the outskirts of Brodick and that a shipment of WMD might be about to leave from Brodick (the real-life ferry from Brodick to Ardrossan, unknown to its serene autumn Saturday afternoon passengers, will simulate this – though, no doubt, they will wonder why two Type 23 frigates are racing around).
- Between 1500 and 1800, concentration will switch to Lamlash Harbour to the south of Brodick, where intelligence suggests there are WMD sites and military raiders which may need to be taken out by Special Forces or cruise missiles.
- Intelligence also suggests that leading Free Dragonian Brotherhood terrorists are active in these installations or close by. Each has a code name: ‘Selector 1’, ‘Selector 2’ and so on.

The Perishers know that, in addition to their executing these tasks (of which they have notice and for which they will have prepared), Teacher will throw in reams of the unexpected.

Earlier in the week Ramsey had built in an episode which the crew were still talking about. A young sailor had been chosen for his acting gifts and secretly primed that, at a certain time, he must throw a wobbler and take a hostage on the boat. And one of the Perishers would have to negotiate with him while the rest of the boat carried out their tasks as best they could. The young sailor locked himself into the

Wireless Telegraphy Room, taking one of the WT operators hostage. Then he threatened to wreck the equipment with a wrench. He broadcast music over the submarine's internal speakers. He insisted on ice-cream all round for the crew. He demanded (and succeeded) in getting a line through to his mum's phone. Mum was naturally hugely surprised and not a tad alarmed at hearing her boy was under water and in a bit of trouble. It took an hour and a half to talk him down and out of the WT Room. By general agreement, he deserved an Oscar. His legend will live on in the accumulated Perisher 'dits'.

There are careers ahead which will see those who succeed on Perisher today through to retirement. These will be the Captains of the Royal Navy's latest nuclear submarines, the 'Astute' class (they will hear the boat to which they are to be assigned this evening). And the pressure is continuing to pile in upon them. The intensity of it can most vividly be illustrated when Bull was in the Captain's Chair in mid-afternoon off Brodick. Not only was it stretching for Louis, but the sequence was a graphic reminder to the non-submariners aboard of just how many things can go wrong with these boats (and this was but a fraction of them).

This is what it felt like in *Triumph's* crowded Control Room.

1440

We're at periscope depth about three miles off Brodick. One of the Type 23s is on us. We can hear its sonar squeaking. Suddenly the klaxon sounds 'Emergency. Emergency.' Bulkhead shutdown. *Triumph* effectively stops. Damage control reports come in. 'Emergency. Emergency. Major steam leak on starboard side.' More squeaking from the frigate's sonar. 'Casualty. Casualty in the Aft Escape Platform.' More squeaking. 'Major steam leak aft.' A steam leak on this scale means the boat loses about two thirds of its propulsive power. Working conditions will be pretty dire aft.

1445

Contact with a hostile submarine: 'Belligerent intent' (i.e. it might be about to launch a torpedo at *Triumph*). *Triumph* simulates the launch of a Spearfish torpedo towards the hostile submarine, which is 2500 yards away.

1449

‘Emergency stations. Emergency stations. Hydraulic burst in the Bomb Shop.’ Bull, as acting Captain, halts the launch of a second Spearfish. We’re down to just two torpedo tubes. The others have ‘defects’.

1453

‘Electrical failure. Electrical failure.’ They are trying to work out the cause.

1455

‘Fire. Fire in Five Berth.’ Everyone puts on their breathing apparatus. You have to do this inside the three minutes it takes for smoke to circulate throughout the submarine. It makes doing your job at least 20 per cent harder. The Control Room resounds to the hissing noise of the oxygen and the crew breathing and talking to each other through the apparatus. Stress is building on stress – five emergencies running simultaneously. The combined concentration in the Control Room is almost off the Richter Scale.

Bull has coped well. He comes down to the Ward Room for a breather. He confirms the five things Teacher metaphorically speaking, has hurled at him. He got the photos he was tasked to acquire:

- The Brodick Ferry (unknowingly masquerading as a carrier of weapons of mass destruction).
- The Brodick jetty, where they had been embarked.
- The grey building on the rim of the town, where the dirty bombs had been put together.

Bull, an enthusiast by nature, is still remarkably chipper. Without self-pity he says: ‘I’ve been nine hours in the Control Room. I’ve not eaten. I’ve had quite a lot of caffeine.’

He still doesn’t know if he’s going to pass but he’s truly glad he’s on the last stretch with just over three hours to go to Teacher’s summons. Bull has a wife and three kids in Glasgow. He and his wife have had a pact that they wouldn’t communicate over the last month of the Perisher and they’ve stuck to it.

Ferguson is back in the acting Captain’s seat. Plainly Teacher wants a last look at his capabilities. The final sequence involves identifying

WMD stores and military radar sites behind Lamlash to the south of Brodick and to guide Special Forces toward the location of key 'selectors', i.e. terrorists. You feel for Ferguson. You really want all four to pass. It would be ghastly to stumble as the clock ticks towards seven and the legendary Perisher Sunday morning breakfast is almost within touching distance.

At 1845 Ramsey comes into the Ward Room (now a Perisher-free zone) to tell us all four have passed. Relief and pleasure all round. The room is prepared for the very special rites of passage for the October 2013 Perisher quartet. Just after seven in the evening, one by one they are brought into the Ward Room by Lieutenant Commander 'Bing' Crosby, HMS *Triumph*'s Executive Officer. One of the Ward Room tables is draped in the White Ensign. The other bears the champagne glasses. The Cava (it was an era of austerity, after all) lies chilling in the galley fridge.

Ramsey leaves him in suspense for a few moments more. 'How do you think you did?' he asks. Each exhausted Perisher, face tense, anxiety palpable, manages to get out a few modest words as best he can. Ramsey pauses once more. Then out goes his hand as the magic, confirming words follow. 'Congratulations, Captain.' Applause from the rest of us – then the new 'Captain' is taken out of the Ward Room before the next one arrives. He doesn't know if his fellow Perishers have made it or are about to be put off the boat with their kit and a bottle of Teacher's Whisky for the lonely journey up the Firth of Clyde to Largs, almost certainly never to set foot on a submarine again. Failure brings the cruellest rites of passage.

But they had prevailed after an utterly stretching last day crowded with incident. The handshakes are over and the tension eases. Now a protracted celebration with that Cava in the Ward Room; with beer and Havana cigars on the *Eva*, the boat taking us all back to Faslane. As the *Eva* slices through the dark northwards to a cold and wet and dripping Faslane, Ramsey unburdens. This was his last Perisher. He is due to hand over as Teacher and leave the Navy. 'Tonight it's really mixed emotions. It's as if half my life is done. I'm never going to feel that team cohesion again. I've gone out on a massive high. I've loved the Submarine Service from start to finish.'

There was more late-night drink in the Super Mess when we arrived back at Faslane, followed by a few hours' sleep and then, early in the morning on Sunday, 20 October, we gathered once again for the Perisher Breakfast to complete the rite of passage as all anxiety fled, the

relief, the camaraderie and the warmth of the food and the bliss of the booze took hold. There are fourteen of us in the Blue Room, just off the Mess overlooking the water. The food and drink are heavy duty for the morning:

Starter:

Smoked Salmon and Smoked Mackerel served with bread and a mustard dill sauce

Traditional Perisher Breakfast

Pan Fried Steak

Bacon

Sausage

Grilled Tomatoes

Portobello Mushrooms

Potato Sauce

Scrambled Eggs

Dessert

Stewed Apples blended with natural yoghurt and toasted oats.

Coffee

Wines

Port

Admiral Parr distills the significance of passing for the Perishers. Last night in the Ward Room he told them that it did not mean they could now ‘walk on water’. This morning he tells them they will be confident as Commanding Officers that they will know what to do when things happen; if they have a feeling something is not quite right with the boat, they must follow that instinct and ensure that things are checked.

The atmosphere is jolly – but not raucous. There is a dash of seriousness. It’s a big thing happen to Bull, Ferguson, Burrill and Haskins. Within a few days their names will be inserted on the big board beside the staircase of the Super Mess in Faslane with all the other Perisher-reared submariners who have formed the thin deep-blue line of Commanders since the First World War. All four know where they are going. Haskins will succeed ‘Bing’ Crosby as *Triumph*’s Executive Officer. Burrill will become XO on *Astute*. Ferguson will become XO on one of *Vanguard*’s two crews. Bull will join *Artful* as XO and see the boat out of Barrow and into its sea trials.

No other club, however exclusive, has a rite of passage to match Perisher's. It's that blending of risk-taking, decisiveness and effectiveness with the crews while still keeping within the boundaries of safety, plus signs that you have that indefinable 'sixth sense', which is so very striking. Commander Rémy Thomas, the French equivalent of Teacher who was a French officer on Perisher 2013, was eloquent about this once we were ashore. 'French COs' he said, 'are more scientific. They are all engineers. The Royal Navy are more warriors. On board we have discussions between experts – the CO and the engineer. The Royal Navy is a dialogue between a warrior and a scientist. In France it's between two scientists. We have all this basic culture in nuclear science. And you are paranoid – in a good away – about protecting your secrets.'

It's easy once you have experienced it, to understand how Perisher has acquired its coating of legend. It is one of the most famous military courses in the world. It's both a training and an initiation rite, all performed in front of an entire crew. Those who pass feel they are a special breed. They never forget their own Perisher and rerun it in their heads like an old movie. It is a theatre whose play, though based on a richly historical plot, grips imaginations anew every year when each set of selected Perishers prepare for the private war that will determine their careers.