

Royal Navy wargames 1900-1915

Imperial Russian Navy wargames, 1880s-1914

Imperial German Navy wargames, 1876 to World War I

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Start of 'official' naval wargames

Games designed for official use, and played by officers

- **Imperial German Navy**—*Seekriegsspiel* from 1876; some tactical details apparently inspired by unofficial games published by RN officers (Castle and Colomb). Rule-sets not yet found/published
- **Imperial Russian Navy**—**tactical** games developed 1880-84 and from late 1890s; **strategic** games by Nicholas Naval Academy staff and students, under auspices of Main Naval Staff c.1896-1904 and Naval General Staff 1910-1913. Some rule-sets survive
- **US Navy**—Naval War College and its students—from 1887
- **Royal Navy**—Royal Naval War College staff and students, at the request of the Admiralty—from c.1900

Activity both drew on, and fed back into, wider strategic thinking and planning by naval leaderships

Both to explore wider strategic issues, and part of the officer-players' own professional development

Surviving copies of RN rules

Some survive in official files at TNA; others in officers' papers at e.g. Greenwich and at Churchill College

- **Rules for Tactical and Strategic War Games** compiled at the Royal Naval College, Greenwich” Admiralty, Intelligence Department report 773, **August 1905**
- **“Rules for Tactical and Strategical War Games”** Royal Naval War College, Portsmouth, No.2, **October 1906**
- **“Instructions for Tactical and Strategical War Games”** Royal Naval War College, Portsmouth, No.30, **September 1910**
- **“Rules for Tactical Exercises, July 1913”** Royal Naval War College, Portsmouth

Records show there were other iterations, including:

- No.15, **“Rules of War Game”** (2nd edition), September **1908**
- No.26, **“Search problems,”** May **1909**
- No.36, **“Instructions for Tactical & Strategical Games,”** September **1911**

The last pre-War rule set issued in January **1914**, as No.42

Surviving RN game write-ups—i

- **“Précis of Strategical War Games carried out at the Royal Naval College, Greenwich, **January to May 1902**”** Admiralty, Intelligence Department report 675, November 1902 part published in Seligmann, Nägler and Epkenhans, *The Naval route to the Abyss: the Anglo-German naval race 1895-1914* (Navy Records Society, 2015)
- **“Précis of Strategical War Game carried out at the Royal Naval College, Greenwich in the early part of **1903**”** Admiralty, Intelligence Department, report 706, October 1903; and **“Remarks on the First War Game of 1903”**
- **“War Games and sketches of war operations” “Précis of war game played at Portsmouth Naval War College, lasting from **November 1906 to January 1907**” “Short summary of other war games, Great Britain v. Germany—November 1905, January 1906, March 1906”**

Surviving RN game write-ups—ii

- **1910 wargames at Chatham:** “Supplementary rules for war game” and “Diary of the War Games played at Chatham to Xmas 1910”
- **1911-12 Naval War College ‘Search Problems’:** “Suggested headings for appreciations of Search Problems” Naval War College, Portsmouth, Autumn Session, 1911; and scenarios for Search Problems 1, 3, 7 and 10
- **1912 Naval War College amphibious attack wargames**
- **1915 Wargames in the Grand Fleet:** War game, 22-23 June 1915; July 1915 game
- **Wargame in the Battle Cruiser Fleet:** Reports from the Battle Cruiser Fleet, July-August 1915
- Undated Battlecruiser—or Grand—Fleet wargame briefing

Types of games

Royal Navy

- Large **STRATEGIC GAMES** played on maps over several real days, encompassing longer periods of game time, and playing out contacts as tabletop engagements
- **TACTICAL GAMES**—tabletop battles, sometimes in a linked sequence
- **'SEARCH PROBLEMS'** (from 1910): locating an enemy squadron, the game ending at the point where the enemy was in sight
- **AMPHIBIOUS OPERATIONS**—possibly not so common

We know these games were integral to RN's Naval War College courses; surviving papers indicate some (perhaps many?) stations or squadrons used at least the tactical games, and—at least in the case of the Grand Fleet and 10th Cruiser Squadron—used them in wartime

Imperial Russian Navy and **Imperial German Navy** played both **TACTICAL** and **STRATEGIC** games

Rules evolution—RN

- ~1890s: Discussions between Fred Jane and Captain (later Rear-Admiral) **Henry John May** about Jane's rules
- Captain **William King-Hall** devised a tactical wargame c. January 1900; first game used at the Naval College
- Detailed **gunnery rules** existed by 1902; to Jane's regret, the RN (and indeed other navies) didn't adopt his firing system
- Rules reflected Navy's experience and assumptions about tactics, weapons, powerplant performance...
- Over time, some details were omitted (e.g. obsolete guns), **ranges** at which practical fire was possible significantly increased, and **more details** of destroyers', submarines' and radios' performance were included, reflecting awareness of **major technical developments** in all these areas
- By WW1, major games' **gunnery** was estimated by umpires, not laboriously calculated by players *or* umpires. Speeded up game, but depended on correctness of assumptions: e.g. that fleets' gunnery was of comparable standard

Game evolution—RN

- Major **strategic** games: planned by Admiralty and Naval War College staff; players (mainly NWC students) drew on **Naval Intelligence** reporting for technical data
- Games could be played over **many days**
- **Results** were reported back to the Admiralty—in great detail in early 1900s; just highlights in later years
- **Tactical** games could be organised similarly, but were also planned by local commands/formations, sometimes specifically for local needs: e.g. **10th Cruiser Sqn wartime games** pitting German raiders or U-boats against 10th CS' blockading AMCs
- Occasional—NB amphibious landing—games also involved military personnel
- **Grand Fleet** played plenty of large-scale games in WW1, though details of only a few seem to have survived

Game evolution—RN

1903 NID report noted challenges inherent in large strategic games

- **focusing on combat at the expense of trade protection:** “Neither this nor any other previous war game has thrown any light on the protection of trade... So far as is known, no navy at present exercises its ships in peace in the attack or defence of trade...”
- **ensuring rapid communication of news about the enemy**—e.g. Jutland showed this was very much a real-world problem
- **difficulty of simulating protracted conflicts:** “the strategic war game is of no use whatever in familiarising us with the conditions of a prolonged naval war. Each side is morally bound to do something in the few days that the war[game] lasts, so that there is almost an abnormal amount of activity, and none of the long periods of waiting that are so characteristic of naval warfare”

Some later games explored surprise **night torpedo** attacks, use of **AMCs** against trade, **mine-laying** during battle, and use of **Zeppelins** for reconnaissance

- **1915** Battlecruiser Fleet game revealed **initiative** problem which was to prove all too real a problem at Jutland and other engagements

Game evolution—Russia i

- The first Imperial **Russian**—and **German**—tactical games were developed from simple ‘hobby’ games designed by RN officers
- Some early tactical games were used to test various armament **dispositions**
- **Tactical** game had at least two major iterations: first was based on reverse-engineering of Colomb game; later one drew on Jane’s tactical rules, but had significant **modifications** (N/K in detail), including gunnery and logistics
- **Strategic** game also went through various iterations, c1897, 1902, 1911, 1912 at least. Games could be played over *many weeks*, or **even months**
- Like RN games, Russians used War College students as players, *but also as researchers*, preparing detailed studies for which Russian naval intelligence presumably didn’t have staff
- **Strategic games vs. Japan before Russo-Japanese War** revealed it’d be a very tough naval conflict, better avoided, but failed to persuade the Tsar
- No Russian rules yet published, but some game-data on ships appeared in a 1905 book by one of the rule-writers (Captain N L Klado); **copies of the rules themselves survive in a naval library**, so should one day become accessible

Game evolution—Russia ii

- **Army** officers also participated in strategic naval games—notably those with relevant experience; and Navy officers in some Army games

Known strategic games covering possible war with:

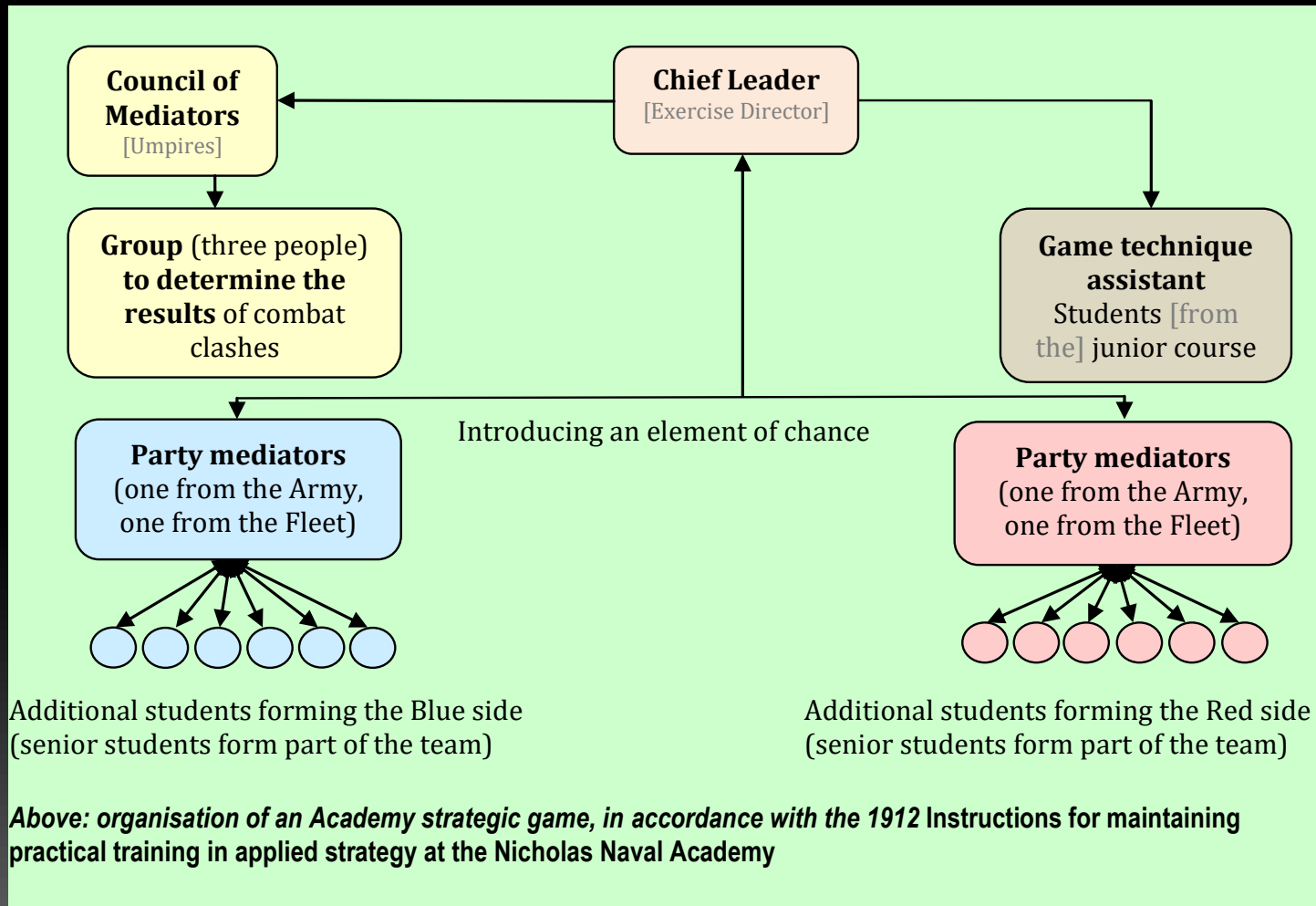
- 1895-96: **Japan**
- 1896-97: **Germany**
- 1897-98: **Britain** in Pacific, Indian Ocean and eastern Mediterranean
- 1899-1900: **Japan**
- 1900-01: **Germany**
- 1901-02: **Ottomans**—and maybe also **Britain**, focused on the Bosphorus
- 1902-03: **Japan** in 1905
- 1903-04: **Germany**
- 1910-11: **Sweden**
- 1911-12: **Germany** in the Baltic in 1915
- 1912-13: **Austria-Hungary**, **Italy** and **Ottomans** in Black Sea and (via deployment of Baltic Fleet) Mediterranean in 1918

The first women involved?

- “We painted the plans and diagrams ‘all hands in,’ and sometimes the wives came along and painted too...”
[“Some notes on the early days of the Royal Naval War College,” *Naval Review*, 1931]
- Reference to a war course first appears in the Navy List for October 1901; first course was probably held some time in 1902, and was “conducted by May himself without any assistance except that of his daughter **Miss May**”
[“Reminiscences of the War College and early Senior Officers’ War Courses,” *NR*, 1931]

Sadly we don’t know which daughter it was: **Constance Frances** [1884-1951], Melita Anna [1886-1959], Marjorie Bessie Joan [1888-1961], Elsie [1891-1962] or Hyacinth [1892-1978], or which parts of the preparation/wargaming she was involved in helping

1912—organisation of the Imperial Russian Navy's games



Lessons for modern games—i

- Some of first tactical games emerged from ‘hobby’ games (**Russia**, **Germany**) or designed via discussions between professionals and a hobby-game designer (Captain May/Fred Jane in **UK**)
- Senior officers’ role in encouraging early use by ships or squadrons (**Alexander Mikhailovich** in **Russia**; Kaiser’s brother **Prince Heinrich** in **Germany**)
- But professional games’ designers were increasingly keen to model weapons, engineering and logistics data, discarding hobby details where less accurate (e.g. **UK** and **Russia** *not* copying Jane’s gunnery rules)
- Early **UK** rules v. detailed—made games slow—organisers were very aware of natural tension between detail/accuracy and playability
- **UK** and **Russian** games, at least, saw important role for **umpires**
- Games understandably reflected **contemporary perceptions** of risk, and sometimes worst-case thinking about enemy activity

Lessons for modern games—ii

- As games became more sophisticated, they increasingly formed part of many officers' **professional development** (Britain, US, Russia, Germany)
- The largest games were organised by **naval colleges**, generally at the request of the highest naval authorities (**UK Admiralty**, **Russian naval staffs**)
- Naval colleges' role meant that officers who didn't attend were *likely less exposed* to the games
 - Players in **British** and **Russian** strategic games tended to range from Rear-Admirals to Commanders
 - But more junior officers could get involved in individual Squadrons' or Command's games
- Games drew on naval **intelligence** materials (e.g. **Britain**), used student-players as collators (**Russia**), or include players with **first-hand experience** of issues (e.g. Russian military attachés who had served in the game's theatre of operations)
- Game **results were fed back** to senior officers and policy-makers

Lessons for modern games—iii

Some games tried to model anticipated scenarios

- E.g. 1913 **German** tactical game by their Torpedo Research Establishment modelled a scenario similar to August 1914 **First Battle of Heligoland Bight**, where German torpedo boats and light cruisers faced British battlecruisers near the German coast (*but in the game the Germans were the ambushers; in the actual battle they were the ones taken by surprise*)
- Three **Russian** strategic games before 1904 modelled a war with Japan, accurately reflecting that this would be hard-fought with no guarantee of Russian victory (*but failed to persuade policy-makers*)
- At least two major **Royal Navy** games in 1915 modelled fleet action in North Sea

In the process there were occasional revealing discoveries

- E.g. one of 1915 **RN** games revealed a disturbing lack of initiative, spotted and recorded by an able staff officer—*all-too-prescient about a problem that became very apparent at Jutland in 1916*



Sources follow:

Sources on RN games: TNA

ADM 116/1043B—“Case 0073: War Plans 1907-1908”

ADM 137/1958, ff.43-64—“Secret Packs of the C-in-C, Grand Fleet 194-1918, volume LXXVIII.” Including “War Game, 20 [*in fact 22-23*] June 1915”

ADM 137/2020, ff.52-61, 87-90—“Orders and Memoranda... issued by the C-in-C Grand Fleet..., 1915 July-December. Includes HF 0037/18 of 9 July, “Narrative of War Game, 22-23 June” and HF0037/23 of 17 July, “Tactical war game to be played on *Benbow*”

ADM 137/2831—“Trade Division records: losses of merchant ships...; Memo... on possible losses to British commerce in an Anglo-German war, May 1914”

ADM 174/378—“Plymouth Dockyard correspondence and papers: papers on naval subjects compiled by NID” 1901-04

ADM 203/100—“RN War College: officers attending, essays and lecturers.” 1906-1924. Timetables showing wargames, and lectures about them

ADM 231/37, /38, /44—“Naval Intelligence reports.” Some rules/write-ups

T 1/11214/12324—“Admiralty: organisation of staff and instruction at the Royal Naval College, Greenwich, and Royal Naval War College, Portsmouth”

Various officers’ articles in *The Naval Review*, up to 1931

Sources on RN games: other archives

Caird Library

BTY/7/2—papers of Admiral of the Fleet Earl [*David*] Beatty

DEW/1—papers of Vice-Admiral Kenneth G B Dewar

CBT/6/11 and /13/2—papers of Sir Julian S Corbett

DANN/189, /205, /229—papers of Captain Tristan Dannreuther

HTN/116B—papers of Admiral Sir Frederick Tower Hamilton

NOE/13C—papers of Admiral Sir Gerard Noel

RIC/4/2/2—“Remarks on tactical exercises” } from Vice-Admiral

RIC/12/1—“Education and Training, 1903-4” } Sir Herbert

RIC/12/4—“Staffwork and Training, 1905-18” } Richmond’s papers

Churchill College

DRAX/1/18, DRAX/1/28 and DRAX/1/41—papers of Admiral the Hon. Sir Reginald A R Plunkett-Erle-Drax

[*until 1916, Commander the Hon. Reginald Plunkett*]

Printed sources on RN games

Articles in *The Naval Review*

Richard BROOKS, *Fred T Jane: an eccentric visionary* (Jane's Information Group, 1997)

Toby EWIN, "The Royal Navy's first wargames, 1900-1915," *MORS Journal of Wargaming* 1:1, 2024

James GOLDRICK and John B HATTENDORF, ed.s, *Mahan is not enough: the proceedings of a conference on the works of Sir Julian Corbett and Admiral Sir Herbert Richmond* (Naval War College, 1993)

Simon HARLEY, "War Course attendance at Greenwich from 1900 to 1904," *The Mariner's Mirror* 103:4, Nov.2017—later years listed on DREADNOUGHT PROJECT website

Andrew LAMBERT, *The British way of war: Julian Corbett and the battle for a national strategy* (Yale University Press, 2021)

———, "Sir Julian Corbett and the Naval War Course," in Peter Hore, ed., *'Dreadnought' to 'Daring'* (Seaforth, 2012)

———, "Sir Julian Corbett, naval history and the development of sea power theory," in N A M Rodger et al, ed.s, *Strategy and the sea: essays in honour of John B Hattendorf* (Boydell, 2016)

Chris MADSEN, "Rear Admiral Henry John May and Fred Jane's 1898 naval war game," *The Northern Mariner* 30:3, Fall 2020—includes transcript of Jane's 1898 rules

———, "Rear Admiral Henry John May and the Royal Navy War Course 1900-1904," *The Northern Mariner* 31:3, Fall 2021

Sources on Imperial German Navy

- ADM 137/4714—“Kriegspiel der TVK Schiffe 1913”
- Dirk BÖNKER, “Maritime warfare in an age of global Empire: German military approaches in a transatlantic perspective” (pdf)
- ———, *Militarism in a Global Age: naval ambitions in Germany and the United States before World War I* (Cornell UP, 2012)
- Ivo Nikolai LAMBI, *The Navy and German power politics 1862–1914* (Allen & Unwin, 1984/Routledge, 2020)
- Tobias Raphael PHILBIN, *Admiral Hipper as naval commander* (PhD thesis, KCL, 1975)
- Prof Jorit WINTJES, “‘Sharp like cut iron’—Albrecht von Stosch and the beginning of naval wargaming in the German navy,” *The Mariner’s Mirror* 110:1, February 2022

Plus references in Admiral Erich Raeder’s autobiography and Cdr Georg von Hase’s *Kiel and Jutland*.

Sources on Imperial Russian Navy

S V DOMOSHENKIN, Sergey Valerievich KULIKOV, V N LEPAEV, “ ‘For the success of the Russian Fleet’s actions, it is necessary to have the fullest possible information’: **the place and role of naval geography and naval statistics in the Nicholas Naval Academy’s strategic games**” (*Voенno-Istoticheskiy Zhurnal* [Military History Journal] 2018, no.4)

[Captain II Rank] **Nicholas KLADO**, *Naval conflicts North Pacific 1904-1905; two Russian accounts of the Russo-Japanese War at sea: The Russian navy in the Russo-Japanese War and Battle of the Sea of Japan* (2014; reprint of books first published 1905 and 1906)

Captain II Rank **Sergei Valerievich KULIKOV**, “ ‘The most precious study guide in strategy and military geography’: **naval games in the academic study of the national fleet’s personnel in 1896-1929**” (*Voенno-Istoticheskiy Zhurnal* 2019, no.2)

———, “Materials of naval games as a source on the history of the Russian Navy at the turn of the eras (1910–1929),” in Dr V G Smirnov et al, ed.s, *Elagin readings IX*, RGAVMF, 2018

———, “**Tactical naval games** in the combat training system of the Imperial Russian Navy 1880-1914,” in Dr V G Smirnov et al, ed.s, *Elagin readings X*, RGAVMF, 2020

Nicholas PAPASTRATIGAKIS and **Dominic LIEVEN**, “**The Russian Far Eastern Squadron’s operational plans**,” in John W Steinberg et al, ed.s, *The Russo-Japanese War in global perspective: World War Zero* (BRILL, 2005)

Nicholas PAPASTRATIGAKIS, *Russian Imperialism and naval power: military strategy and the build-up to the Russo-Japanese War* (I B Tauris, 2011)

Vladislav PRASNIKOV, Marta DOBEYAKOVA, S V KULIKOV, “**Strategic naval games at the Nicholas Naval Academy on the eve of the Russo-Japanese War of 1904-1905**” (*Voенno-Istoticheskiy Zhurnal* 2020, no.9)

Sources on US Navy—NWC

- Thomas B BUELL, “The innovators and crusaders,” *Naval War College Review* [NWCR] 37:5, September-October 1984
- Philip A CROWL, “Education versus training at the Naval War College 1884-1972,” *NWCR* 26:3, November-December 1973
- John B HATTENDORF, R Mitchell SIMPSON, John R WADLEIGH, ***Sailors and scholars: the centennial history of the US Naval War College*** (Naval War College Press, 1984)
- Trent HONE, “Exploring the options: the development of USN tactical doctrine, 1913–23,” *NWCR* 72:4, Autumn 2019
- David KOHNEN, Nicholas JELLICOE and Nathaniel SIMS, “The US Navy won the Battle of Jutland,” *NWCR* 69:4, Autumn 2016
- A D MCEACHAN, “Letters and lectures of Captain Little,” *NWCR* 24:6, Feb. 1972
- Francis J MCHUGH, “Eighty years of war gaming,” *NWCR* 21:7, March 1969
- US NAVAL WAR COLLEGE, ***Rules for the conduct of the War Games (not for general distribution)*** (Government Printing Office, Washington DC, 1901)
- US NAVAL WAR COLLEGE, ***Chart Maneuver Rules, 1922 (not for general distribution)*** (Government Printing Office, Washington DC, 1922)

Sources on US Navy—other

- John CURRY and Chris CARLSON, ed.s, *The United States Naval War College 1936 wargame rules* (History of Wargaming Project, 2019); has extracts from 1922 rules, too
- Norman FRIEDMAN, *Winning a future war: war gaming and victory in the Pacific war* (US Naval History & Heritage Command, 2017)
- John M LILLARD, *Playing war: wargaming and US Navy preparations for World War II* (Potomac Books/Univ. of Nebraska Press, 2016); main focus is on the 1920s- 1930s
- Captain **W McCarty LITTLE** USN, “**The Strategic Naval War Game or Chart Maneuver,**” *Proceedings of the US Naval Institute* 38:4, December 1912.
- Francis J MCHUGH, *The US Naval War College: fundamentals of war gaming.* (4th Watch Publishing, 2019)
- Ronald SPECTOR, *Professors of War: the Naval War College and the development of the naval profession* (University Press of the Pacific, 2005)
- A D ZIMM, “Build the limit: the American ‘maximum battleship’ designs of 1916-1917,” *Warship International* 12:1, 1975; outlines how US wargame rules calculated battleship strength