



DRDC Toronto No. CR-2004-141

**COMMAND STYLES IN THE CANADIAN NAVY
PRELIMINARY INVESTIGATION**

by:

Robert D.G. Webb, Lora E. Bruyn, and A. Roy Keeble

Humansystems® Incorporated
111 Farquhar St., 2nd floor
Guelph, ON N1H 3N4

Project Manager:
Kim Iwasa-Madge
(519) 836 5911

PWGSC Contract No. W7711-017703/001/TOR
Call-Up 7703-14

On behalf of
DEPARTMENT OF NATIONAL DEFENCE

as represented by
Defence Research and Development Canada - Toronto
1133 Sheppard Avenue West
Toronto, Ontario, Canada
M3M 3B9

DRDC Scientific Authority
Ross Pigeau
(416) 635-2045

7 April 2004

© HER MAJESTY THE QUEEN IN RIGHT OF CANADA (2004)
as represented by the Minister of National Defense
© SA MAJESTE LA REINE EN DROIT DUE CANADA (2004)
Defense Nationale Canada

Abstract

This report examines the concept of Naval Command Styles based on a review of readily available literature and interviews with four naval commanders. The work resulted in the development of a definition of Command Style, a concept map and broad recommendations for decision support systems (DSS). The document review identified four main overlapping concepts (Decision style; Leadership style; Delegation style; and Orders style) and four groups of factors affecting the choice or appropriateness of a given style (the characteristics of the Commander, the Team, the Context, and the Organisation). Interviewees compared three mission scenarios varying in risk, tempo and familiarity and identified their likely style for each scenario and rated the importance of the different factors to the choice of style. Interviewees readily recognised the concept of a command style and results suggest a core style that contrasts a goal or intent oriented approach with a task or action oriented approach. Reported styles tended to become more task oriented with inexperienced teams and increased risk, tempo and stress. DSS implications include the need to focus on the command team rather than the commander alone and to be adaptable to support team information exchange needs related to each style i.e. both goal and task oriented. For instance, as a common team mental model develops, team information exchange may need to become more goal based. Research questions include the following. Which styles are more effective and why? What factors affect the suitability and choice of style? Can styles be trained? How are different styles best supported?

Résumé

Le présent rapport examine le concept des styles de commandement naval, d'après une étude des documents courants et des interviews auprès de commandants navals. L'étude a abouti à l'élaboration d'une définition du style de commandement, d'une carte conceptuelle et à la formulation de recommandations générales pour des systèmes d'aide à la décision (SAD). L'examen du document a cerné quatre concepts principaux qui se recouvrent (style de décision, style de leadership, style de délégation et style d'ordre) et quatre groupes de facteurs touchant le choix ou la pertinence d'un style donné (les caractéristiques du commandant, l'équipe, le contexte et l'organisation). Les interviewés ont comparé trois scénarios de mission variant selon le risque, la cadence et la familiarité. Ils ont, de plus, déterminé pour chaque scénario le style qui vraisemblablement leur convenait et évalué l'importance des différents facteurs qui ont influencé ce choix. Ils ont d'emblée reconnu le concept d'un style de commandement, et les résultats supposent un style essentiel qui oppose une approche orientée but ou orientée intention à une approche orientée tâche ou orientée action. Les styles qui font l'objet du rapport tendaient à devenir plus orientés tâche lorsque l'équipe était inexpérimentée et que le risque, la cadence et le stress augmentaient. Les SAD impliquent le besoin de se focaliser sur l'équipe de commandement plutôt que sur le commandant tout seul et de s'adapter afin de satisfaire les besoins d'échange d'informations liés à chaque style, c'est-à-dire style orienté but et style orienté tâche à la fois. Par exemple, à mesure qu'un modèle mental d'équipe se développe, il se peut que l'échange d'informations parmi l'équipe ait besoin de devenir plus orienté but. Les questions de recherche qui se posent sont les suivantes : Quels styles s'avèrent plus efficaces et pourquoi? Quels facteurs influencent la pertinence et le choix d'un style? Peut-on personnaliser les styles? Comment peut-on appliquer différents styles au mieux?

Executive Summary

This preliminary study of naval command styles was conducted for DRDC-Toronto under PWGSC Contract No. W7711-017703/001/TOR (Call-up: 7703-14) and completed in April 2004.

The goals of this work were to:

- Describe and define naval command styles.
- Develop a concept map for command styles.
- Identify broad implications for Decision Support Systems (DSS).
- Make recommendations for research.

The work included a review of readily available documents; interviews with naval commanders; development of a concept map and preparation of a Power Point (PPT) report.

The document review identified four main overlapping style concepts (Decision style; Leadership style; Delegation style; and Orders style) and four main groups of factors affecting the choice or appropriateness of a given style (the characteristics of the Commander, the Team, the Context, and the Organisation).

Based on this review, an initial concept map was developed and four naval officers with ship command experience interviewed separately, each for about four hours. Interviewees reviewed three mission scenarios that contrasted tempo, familiarity for the command team, and degree of risk and identified the style(s) they would adopt for each scenario. Interviewees also rated the importance for choice of style of the different factors identified during the document review. Based on the results of the interviews, the initial concept map was refined and extended.

The PPT report (with notes) describes the document review, the scenarios and interview approach, the results of the interviews, the refined concept map, a draft definition of Command Styles, conclusions and recommendations.

Bearing in mind the small sample, in summary, the main conclusions were that command styles:

- Were readily recognised as a concept by all interviewees.
- Contrast a goal or intent based with a task or action based approach.
- Show differences in personal “default” style.
- Are changed by Commanders to match the scenario.
- Become more task oriented with inexperienced teams and increased risk, tempo and stress.
- Overlap with but are not identical to “Leadership” concepts.
- Have implications for selection, training and support systems for Command teams.

Some broad implications for DSS related to Command style were that DSS should:

- Focus on the command team not solely the commander.
- Support team decision making, mission and resource management.
- Permit tailoring to support a goal or task based style – as the situation requires.
- Be adaptable to contextual factors.

Proposed research questions include the following. Which styles are more effective and why? What are the main factors affecting the suitability and choice of style? Can styles be trained? How are different styles best supported? Are styles unique to naval command? Specific research questions are included in the report.

Sommaire

Cette étude préliminaire sur les styles de commandement naval a été menée pour le compte de RDDC Toronto en vertu du contrat no. W7711-017703/001/TOR (commande subséquente : 7703-14). Elle a été terminée en avril 2004.

Les travaux visaient les buts suivants :

- Décrire et définir des styles de commandement.
- Dresser une carte conceptuelle pour les styles de commandement.
- Cerner les principales implications relatives aux systèmes d'aide à la décision (SAD).
- Formuler des recommandations pour les recherches.

Les travaux comportaient une étude des documents facilement disponibles; des interviews auprès de commandants navals; l'élaboration d'une carte conceptuelle et la préparation d'un rapport en PowerPoint (PPT).

L'étude des documents a abouti à l'identification de quatre concepts de style principaux qui se recouvrent (style de décision; style de leadership; style de délégation et style d'ordre) et quatre principaux groupes de facteurs influençant le choix ou la pertinence d'un style donné (les caractéristiques du commandant, l'équipe, le contexte et l'organisation).

D'après cette étude, on a dressé une première carte conceptuelle et interviewé séparément quatre officiers navals expérimentés en matière de commandement de navire, pendant environ quatre heures chacun. Les interviewés passaient en revue trois scénarios de mission qui opposaient la cadence, la familiarité en ce qui concerne l'équipe de commandement et le degré de risque. Ils ont par ailleurs déterminé le style ou les styles qu'ils adopteraient pour chaque scénario. Ils ont également évalué l'importance que jouent dans le choix d'un style les facteurs identifiés lors de l'étude des documents. D'après les résultats des interviews, on a élargi et raffiné la première carte conceptuelle.

Le rapport en PPT (voir notes) expose l'étude des documents, les scénarios et la méthode d'interview, les résultats des interviews, la carte conceptuelle raffinée, une ébauche de définition des styles de commandement, les conclusions et les recommandations.

Compte tenu du petit échantillon, on peut en résumé conclure que généralement, les styles de commandement :

- étaient reconnus d'emblée par les interviewés comme un concept
- opposent une approche orientée but ou orientée intention avec une approche orientée tâche ou orientée action
- montrent les différences dans le style personnel par défaut.
- sont adaptés au scénario par le commandant
- deviennent plus orientés tâches quand les équipes sont inexpérimentées et que le risque, la cadence et le stress sont accrus
- recouvrent les concepts de « leadership » mais n'y sont pas identiques.
- ont des implications pour la sélection, la formation et les systèmes d'aide concernant les équipes de commandement.

Certaines implications générales touchant les SAD liés au style de commandement étaient que les SAD devraient :

- se focaliser sur l'équipe de commandement et non sur le commandant tout seul
- contribuer à la prise de décision, à la mission et à la gestion des ressources de l'équipe
- permettre la personnalisation afin d'appuyer un style orienté but ou orienté tâche – selon la situation
- être adaptables aux facteurs contextuels

Les questions de recherche proposées comprennent les suivantes : Quels styles s'avèrent plus efficaces et pourquoi? Quels sont les facteurs principaux qui influencent la pertinence et le choix d'un style? Peut-on personnaliser les styles? Comment peut-on appliquer différents styles au mieux? Les styles sont-ils uniques au commandement naval? Des questions spécifiques à la recherche sont incluses dans le rapport.



Table of Contents

Power Point Presentation	1
Annex A: Interview Materials	A-1
<i>Command Styles Phase I Questionnaire</i>	<i>A-2</i>
<i>Command Styles Phase II Questionnaire</i>	<i>A-6</i>
<i>Interviewer Script</i>	<i>A-11</i>
Annex B: Interview Notes	B-1
<i>Interview Notes Phase I</i>	<i>B-2</i>
<i>Interview Notes Phase II</i>	<i>B-12</i>
<i>Interview Notes Phase III</i>	<i>B-16</i>

Command Styles in the Canadian Navy: A Preliminary Investigation

Bob Webb
Lora Bruyn
Roy Keeble

Humansystems® Incorporated
Guelph, Ontario

Prepared for:
DRDC Toronto
March 2004



©Humansystems® Incorporated

1



Agenda

- **Project Outline**
 - Objectives, Tasks, Approach, Participants.
- **Results**
 - Literature, Interviews, Questionnaires
- **Discussion**
- **Concept Map**
- **Conclusions**
- **Future Research**



Project team combined experience of service in army and navy (as instructor / assessor of ship's command teams), and experience in C2 and decision making research in army and navy for DRDC-Toronto including attendance at around 20 very large and small military C2 training exercises that included both a planning phase and an implementation phase.

Project Objectives

- Describe and define naval Command Styles
- Develop a Concept Map for Command Styles
- Identify broad implications for Decision Support Systems
- Make recommendations for research



Taken from the Statement of Work for this project.

Project Tasks

- Review background documents
- Develop preliminary concept map
- Interview naval commanders
- Refine concept map based on interviews
- Determine implications for command advisor
- Recommend future research



Taken from the Statement of Work for the project

Background Documents

- 2003 - Command style and team performance in D3M tasks
- 2003 - Synthesizing two approaches to decision making in C2
- 2002 - Re-conceptualizing Command and Control
- 2002 - NATO Best Code of Practice for Command and Control Assessment
- 2001 - What is a Commander?
- 2001 - Diversity and Shared Team Mental Models in the Military
- 2001 - Contemporary Issues in Command and Control
- 2001 - Common Intent: A Review of the Literature
- 2000 - Research Challenges for the Human in Command
- 2000 - Redefining Command and Control
- 1999 - Can business learn from the military?
- 1998 - Literature Survey for Issues in Naval Decision Support.
- 1995 - Naval Doctrine Publication 6: Naval Command and Control

©Humansystems® Incorporated

5



Requirement was to use known or easily available documents. No formal literature search. Quick web search.. The most significant new document is the first one (Clancy et al).

DRDC Valcartier and Staff College Toronto : No response despite several e-mails / phone calls.

Clancy, J.M., Elliott, G.C., Ley, T., McLennan, J., Omodei, M.M., Thorsteinsson, E.B., & Wearing, A.J. (2003).
Command style and team performance in dynamic decision making tasks. In Schneider, S., & Shanteau, J. (Eds.). *Individual differences in decision making*.

Pigeau, R. & McCann, C. (2001).

What is a Commander? In P. Essens, A. Vogelaar, E. Tanercan, & D. Winslow (Eds.). *The human in command: Peace support operations*. Amsterdam Holland: Mets & Schilt.

Knouse, S.B. (2001).

Diversity and Shared Team Mental Models in the Military. (Report No. DEOMI-RSP-01-03). Defense Equal Opportunity Management Institute, Patrick AFB, FL. (DTIC No. ADA403424).

Office of the Chief of Naval Operations and Headquarters United State Marine Corps (1995).

Naval Doctrine Publication 6 Naval Command and Control. Washington, D.C: Department of the Navy.

Pigeau, R. & McCann, C. (2002)

"Re-conceptualizing Command and Control." *Canadian Military Journal* Vol. 3 (1) (Spring 2002), pp. 53-63.

NATO 2002

Best Code of Practice for Command and Control Assessment.

Pigeau, R. & McCann, C. (2000).

Redefining Command and Control. In R. Pigeau & C. McCann (Eds.), *The Human in Command* (pp.163-184). New York: Kluwer Academic/Plenum Publishers.

Pigeau, R. & McCann, C. (2000).

Research Challenges for the Human in Command. In R. Pigeau & C. McCann (Eds.), *The Human in Command* (pp.387-409). New York: Kluwer Academic/Plenum Publishers.

English, Allan D. (2001).

Contemporary Issues in Command and Control. *2001 Air Symposium*, Canadian Forces College, Toronto, ON.

Barber, P. (1999).

Can business learn from the military? *Management Focus*, 13. Cranfield University School of Management.

Bryant, D.J., Webb, R.D.G., Matthews, M.L., Hausdorf, P., 2001.

Common Intent: A Review of the Literature. *DRDC Contractor's Report No. CR-2001-041*

Bryant, D.J., Webb, R.D.G., Mclean, D.N., 1998.

Literature Survey for Issues in Naval Decision Support: Phase I & II. *Reports to Department of National Defence*.

Bryant, D. J., Webb, R.D.G. & McCann, C. (2003).

"Synthesizing two approaches to decision making in C2." *Canadian Military Journal*, Vol 4 (1) (Spring 2003), pp. 29-34.

Style related concepts

- **Leadership**
 - Autocratic, Transactional, Charismatic
 - Authoritarian, Democratic, Laissez-faire
- **Command**
 - Authority (personal / legal),
 - Competence (physical, emotional, intellectual),
 - Responsibility (extrinsic, intrinsic)
- **Command style**
 - Direction, Plan, Influence
 - Action oriented vs Intent oriented (D3M)
- **Orders / Delegation Style**
 - Detailed orders vs Mission objectives
- **Common Intent**
 - Explicit vs Implicit
- **Command Intent**
 - Maneuverist, Auftragsstaktik.
- **Team Mental Models / Team Cognition**
 - Goals, Roles, Tasks, Members, Context
- **Decision making**
 - Analytic (plan) vs Recognition Primed (action), CECA

©Humansystems® Incorporated

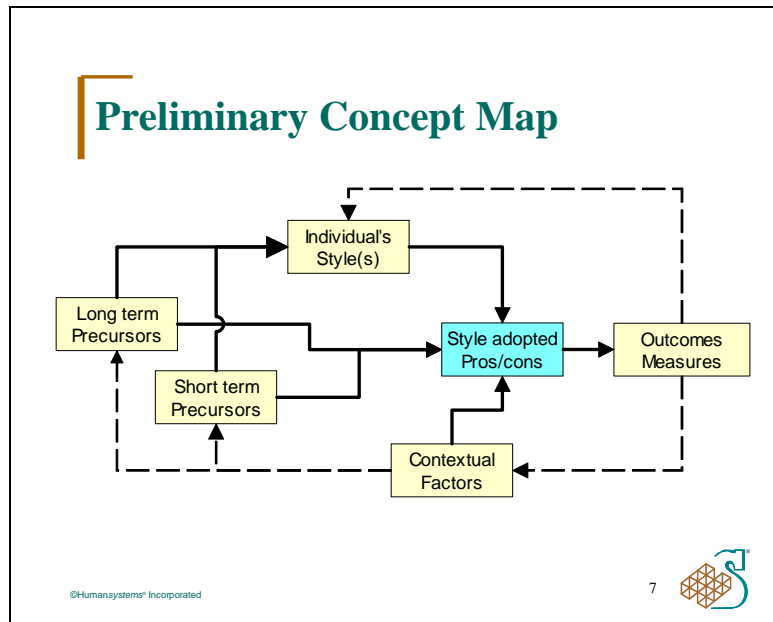
6



Many overlapping / intersecting concepts and terminology. A few attempt rigorous definition or propose systematic testable interactions. Some are primarily military command philosophies leading to managing procedures and staff or leadership training - to overcome the challenges of battle ("fog of war", co-ordination of large bodies of troops, etc). Others are primarily theoretical / conceptual models. Temptation is to dismiss variations as just re-stated leadership concepts but this is too simplistic.

Problem also with separating "command" from the "commander". This seems particularly true for the navy where the mystique or tradition of the all powerful, all responsible ship's captain with very centralised decision making is very strong. This is both a benefit and a challenge. Benefit = helps separate "leadership" from "command" because subordinates in a ship's crew are expected to "lead" but never "command" (except when they are sent on detachment such as a cox'n of ship's boat / boarding party / helo). Challenge = reinforces idea of sole decision maker when the reality is that decisions emerge from the deliberations of the ship's Command team.

While some work recognises contextual factors, their analysis, if any, remains at a global level (e.g. the effect of "stress"). But the idea that different combinations of organisation (e.g. research vs military), stress (fatigue, anxiety), tempo (time available), resources (computational, human) are necessarily or best met by different styles of leadership, decision making, etc, comes across. There is also the implication that leaders (or commanders) need to be able to match their style(s) of decision-making / interaction / communication/delegation to different circumstances. This implies that styles can be learned or trained and are not thought of as a fixed attribute of personality.



This is the starting point: simple set of initial “bins” to catch the different ideas and serve as a starting point. “Bins” gradually filled as worked through the documents, held brainstorming discussions among the project team. Bin contents point form - very rough - see below. Model further developed as progressed, e.g with time frames for “long” and “short” term. Final iteration shown at end of presentation.

Long term: Personality - Training -Experience - Planning - Culture - Org level - Command philosophy (Auftragstaktik, Manueverist, etc) - Socialisation / Dialogue - Common Intent / Team mental model(s) - Communication medium (radio, face to face) - Decision support System capability - Info sources - Org structure/ level (type / level of comd (boat, ship, task group, size of team.)

Short term: *Team and Cdr attributes* - Technical Diversity - Experience (individual / together) - Shared Situation Awareness - Personnel Turnover - Perceived Risk (probability x severity) - Team Structure - Trust in each other - Stress / fatigue.

Context: - Risk - Mission type (OOTW, warfare) - Tempo (time available for making decision / giving orders) - Task complexity - Info reqts (a lot / a little / uncertainty) - Resources / support available (Information, Analysis, time, human expertise).

Individual styles (?): - Delegation style - Decision making approach (analytic vs intuitive) - Leadership approach (Charismatic vs consensual) - Communication style (goals, task, progress feedback, level of detail, etc) - Mental models (team / individual) - Tacit knowledge -Authority, competence, responsibility (Intrinsic vs Extrinsic). Potential Styles available - Orders style - Decision Style - Risk Style - Delegation Style - Leadership Style - Auftragstaktik / Maneuverist - Command by direction - Command by plan - Command by influence.

Possible Outcomes:- Learn something -Variation in Team / Individual task performance (speed, error) - Mission success measures -Within team relationships change (e.g. trust) -Team mental models change - Common intent changes - Workload changes - Resource utilisation changes - Communication patterns change (type of information sought / sent / person(s) contacted / queries).

Interview Approach

- **Structured Half Day Interviews**
 - Not focus groups
- **Four Experienced Naval Commanders**
 - Selection of participants
- **Three Phases:**
 - Phase I: Compare and rate three scenarios
 - Phase II: Ratings / Discussion of potential factors
 - Phase III: Open Discussion based on Phase I and II.



Limited number with naval command experience available.
Cross section chosen based on personal contacts of ex naval team member
Interviews chosen to maximise interaction with each Commander.
Interview crafted to get interviewee to reflect on contrasting scenarios and then compare and contrast their assessment in discussion with the interviewees. Same with rating / discussion of potential factors affecting choice / development of command style.

Participants

- Four participants
- Surface and submarine command experience

Mean years service	25
Min	19
Max	35
Mean years in Command	3.25
Min	2
Max	4



No notes

Three Scenarios

- A: Single Ship, Low Risk, Routine Mission, Slow Tempo,**
Fishery Patrol in Canadian Waters
- B: Task Group, Moderate Risk, Operational Mission, Medium Tempo**
Task Group Patrol in Potentially Hostile waters. No warfare duties.
- C: Task Group, Higher Risk, Operational Mission, Medium Tempo**
Task Group Patrol in Potentially Hostile waters. ASW duty for Task Group.
- D: Surface Action Group, High Risk, War Mission, Fast Tempo**
ASW action in Hostile waters. Air threat imminent. Battle damage. Casualties.



Considered several scenarios as basis for review and discussion during interview. Tried to fuse several dimensions. Level of stress, tempo, risk, intrinsic complexity, familiarity of mission, and number of assets for which the Cdr is responsible. Ranged from Cdr responsible for single ship/simple mission, through single ship risky/complex mission to multiple ship/asset complex mission. Last option (“greyed”) considered and not included because of time restrictions. Use of option D might have extended the range of ratings by Cdrs for different styles.

May have been some ambiguity in application of ratings with respect to “Command within own ship” versus “Command of other commanders” (of ships, a/c, etc). Maybe there is another dimension to consider over the assumed stress, tempo, risk, complexity, number of assets such as “familiarity with asset capability”. In other words, as while one might become more task oriented to one’s own subordinates, one is (simultaneously) goal oriented for other asset Cdrs. Given temporary command over, say a MPA, or another ship, then one is reluctant to get into task details with the commanders of those assets - for one reason or another (e.g. lack of familiarity with how they do their work, reluctance to interfere with the authority of the commander of another ship or a/c, trust that any other commander knows what they are doing or they would not be the commander, etc.)

Four Scales

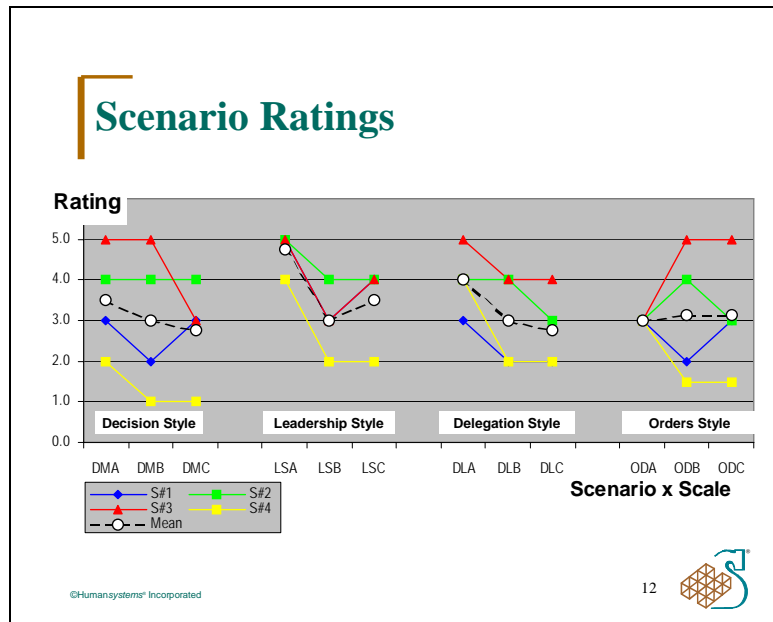
Rate Scenarios on Five Point Scales

- **Decision Making Style:**
 - (1) Analytical, Step by Step ----- Intuitive, Experience based (5)
- **Leadership Style:**
 - (1) Decides without team input ----- Consensus through Participation (5)
- **Delegation Style:**
 - (1) Does not delegate ----- Delegates to team (5)
- **Orders Style:**
 - (1) Task oriented ----- Goal oriented (5)

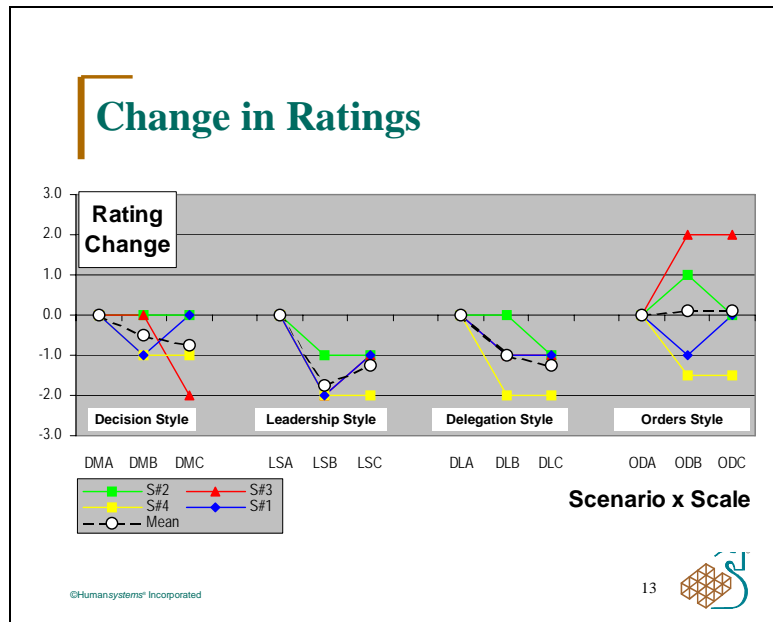


Distilled four style related scales from available literature. Goal to get Cdr to think about issues as they made their ratings, and then use their chosen rating(s) to focus discussion and probe the reasoning behind their ratings. The ratings also encouraged the Cdrs to compare scenarios and separate out features of different scenarios.

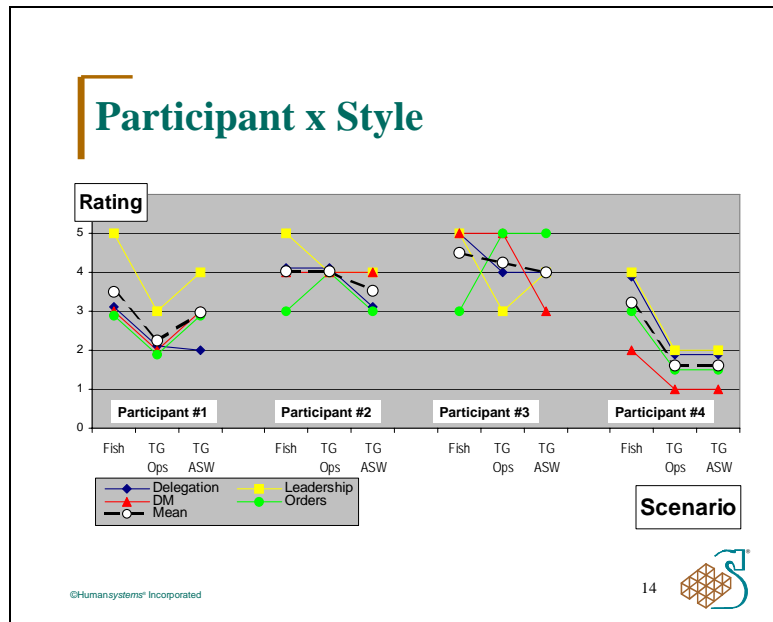
Description of “Decision making style” may need clarification. One participant unwilling to view this as a dimension from “analytical” to “intuitive”. Rather - believed that he always used “analytical” style and simply compressed the analytical process to fit the time available - and sometimes near instantaneous. Didn’t pursue during interviews but could be that compression achieved by less participation among team, or by dropping elements of the “analysis”.



N= 4. Sample size too small to attempt stats. Graph shows the ratings for each scale for each participant (S#) for each scenario (A: Fishery Patrol, B: TG ops, C: TG ASW) together with the average rating. With exception of Orders Style, and although with considerable individual variations, as scenario tempo, complexity and risk increases participants tend to make their own decisions based on their experience, be less participative, and delegate less. Generally, the differences from scenario A to B or C appear more marked than the differences between B-C. The trend for Orders style is less clear.

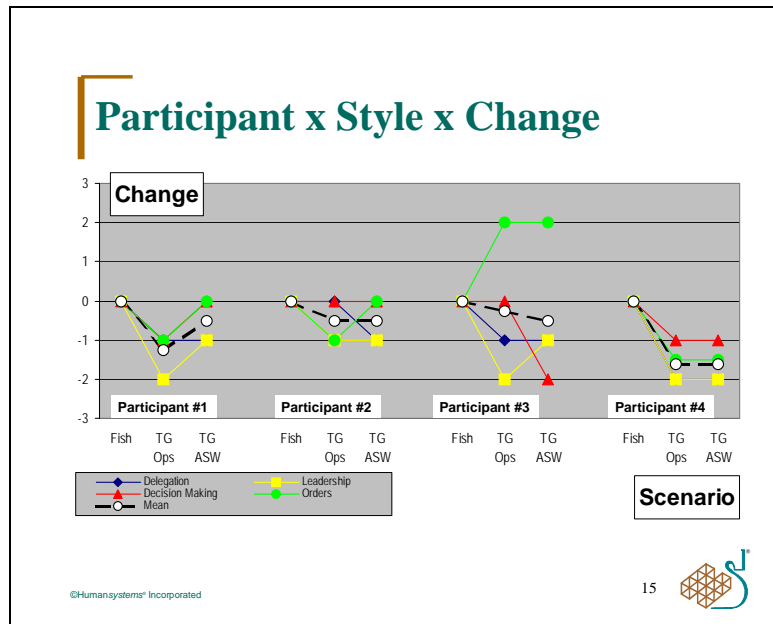


N= 4. Sample size too small to attempt stats. Shows the change in ratings for each scale for each participant (S#) for each scenario (A: Fishery Patrol, B: TG ops, C: TG ASW) together with the average rating. Same trends as previous slide: participants tend to make their own decisions based on experience, be less participative, and delegate less. Orders style contradictory. Differences between A - B or C seem more consistent than differences B-C.



N= 4. Sample size too small to attempt stats. Shows the ratings for each participant for each scale for each scenario (A: Fishery Patrol, B: TG ops, C: TG ASW) together with the average rating. Participant #3 appears the least consistent. For the others, consistent trend to delegate less, be more task oriented, less participative, and more likely to make own experience-based decisions for TG scenarios than for Fishery patrol scenario.

The differences between the two TG scenarios are interesting. Seems to be that, when in command of other assets rather than only own ship, Cdrs may revert to a more participative, goal oriented style. Possibly because, with respect to other assets, have to command other commanders (their equals) rather their subordinates. Also, less likely to be familiar with the capabilities / methods of operation of some of the assigned assets (e.g. a/c).



N= 4. Sample size too small to attempt stats. Shows the change in ratings for each participant for each scale for each scenario (A: Fishery Patrol, B: TG ops, C: TG ASW) together with the average rating. Participants are consistently show a negative trend except for Orders style for Participant #3 (who becomes more likely to give orders in the form of goals when in command of other assets (presumably to those assets)). For the others, consistent trend to delegate less, be more task oriented, less participative, and more likely to make decisions based on their own experience for TG scenarios than for Fishery patrol scenario. However differences between TG scenarios are not clear or marked. This may be due to of the presence of other assets “under command” in scenario C.

A possibility worth exploring is that the style adopted with respect to the other assets is different from the style adopted to members of own ship command team. This may be one style for command of subordinates in own ship, and another style when commanding other commanders. These two styles may have to co-exist at the same time.

Characteristics of Commander

Characteristics of Commander	#1	#2	#3	#4	Avg
1. Emotional capabilities	1	1	1	1	1
2. Trust in team members	1	1	1	1	1
3. Situation awareness	1	1	1	1	1
4. Communication skills	1.5	1	1	1	1.13
5. Level of Fatigue at the time.	1.5	1	1	1	1.13
6. Stress level at the time	1.5	1	1	1	1.13
7. Personal authority of Cdr	1.5	1	1		1.17
8. Personality	1	1	1	2	1.25
9. Operational experience	1.5	2	1	1	1.38
10. Workload at the time	1.5	2	1	1	1.38
11. Understanding of the mission	1.5	2	1	1	1.38
12. Intellectual capabilities	1	2	2	1	1.5
13. Capabilities of team members	1	2	2	1	1.5
14. Own experience in Command	1.5	2	2	1	1.63
15. Training (general naval)	2	2	1	2	1.75
16. Training for Command	2	2	1	2	1.75
17. Technical capabilities	1.5	2	2	2	1.88
18. Familiarity with team members	1.5	2	2	2	1.88
19. Understands system / assets	1.5	2	2	2	1.88
20. Personal background	2	2	2	2	2
21. Educational focus	2.5	2	2	3	2.38
22. Educational level	2	3	2	3	2.5

1 = Extremely important
2 = Somewhat important
3 = Not at all important

NB:
No rank within equal scores

©Humansystems Incorporated

N= 4. Sample size too small to attempt stats.

Shows characteristics of Commander rank ordered by average rating.

Green highlighting shows characteristics rated by at least 3/4 of participants as “1” (Extremely important) in terms of impacting a Commander’s style in any situation.

No highlighting = 3/4 participants rated characteristic as “2” (Somewhat important)

Yellow = in between.

NB cannot differentiate among equally scored items e.g. #1,2,3.

Rating “3” (Not at all important) very seldom used! Maybe because of bias in original item selection.

“Other” was offered and encouraged - but none provided by participants.

Training and education of Cdr rated as least important but still “Somewhat important” by 3/4 participants.

Characteristics of the Team

Characteristics of the Team	#1	#2	#3	#4	Avg
1. Trust in Commander	1	1	1	1	1
2. Training as a team	1.5	1	1	1	1.13
3. Situation awareness among team	1.5	1	1	1	1.13
4. Technical capabilities	1	2	1	1	1.25
5. Training of individual members	1	2	1	1	1.25
6. Stress levels at the time	2	1	1	1	1.25
7. Capabilities of team members	1	1	2		1.33
8. Operational experience of team	1.5	2	1	1	1.38
9. Levels of fatigue among team	2	1	2	1	1.5
10. Workload at the time	2	2	1	1	1.5
11. Familiarity with other tm members	1.5	2	1	2	1.63
12. Understanding of the mission	1.5	2	2	1	1.63
13. Understanding system / Assets	1.5	2	1	2	1.63
14. Personalities	2	1	2	2	1.75
15. Intellectual capabilities	2	2	2	1	1.75
16. Emotional capabilities	2	2	2	1	1.75
17. Familiarity with Commander	2	2	1	2	1.75
18. Communication skills	2	2	2	2	2
19. Education	2.5	2	2	3	2.38
20. Personal backgrounds	2.5	2	3	3	2.63

1 - Extremely important
 2 - Somewhat important
 3 - Not at all important

NB:
 No rank within equal scores

©Humansystems® Incorporated

17



See previous slide

Some items same approximate ranking as for Cdr (trust, situation awareness, stress, education, personal background) . Some reversed (personalities, emotional capabilities, training, technical capabilities).

Note: Participants defined “emotional capabilities” of commander as being able to control their emotions when under stress.

Characteristics of the Context

Characteristics of the Context	#1	#2	#3	#4	Avg
1. Time available	1	1	1	1	1
2. Severity of risk	1	1	1	1	1
3. Probability of risk	1	1	1	1	1
4. Battle vs exercise	1	1	1	1	1
5. Risk to friendly assets	1	2	1	1	1.25
6. Type of risk	1	1	2	1	1.25
7. Decision complexity	1	1	1	2	1.25
8. Information availability	2	1	1	1	1.25
9. Unfamiliar type of mission	1.5	2	1	1	1.38
10. Mission planning vs execution	1.5	2	1	1	1.38
11. Tempo of operation	1.5	1	1	2	1.38
12. Tactical complexity	1.5	1	2	1	1.38
13. Level of uncertainty	1.5	1	2	1	1.38
14. Nature of ROE	1	2	2	1	1.5
15. Relative capability of enemy	1.5	2	1	2	1.63
16. State/availability of technology	1	3	1	2	1.75
17. Comd level (ship, SAG TG)	1.5	2	2	2	1.88
18. Serviceability of assets	1.5	2	2	2	1.88

1 = Extremely important
 2 = Somewhat important
 3 = Not at all important

NB:
 No rank within equal scores



See previous slide.

Extremely important = Time available, risk, battle (vs exercise), complexity, information

Contrasting views on “technology” #16 (that is rated from 1-3 by different participants)

Characteristics of the Organization

Characteristics of the Organization	#1	#2	#3	#4	Avg
1. Command structure	1.5	1	1	1	1.13
2. Responsibilities assigned	1	1	2	1	1.25
3. Authority assigned to position	1.5	1	2	1	1.38
4. Asset mix assigned	1.5	2	1	2	1.63
5. Roles of team members	1.5	2	2	1	1.63
6. CF selection process for Cdr	2	1	2		1.67
7. Organizational culture of navy	2	2	1	2	1.75
8. Organizational culture of arm	2	2	1	2	1.75
9. Naval command philosophy	2	2	1	2	1.75
10. Naval tradition / history	2	2	1	3	2

1 = Extremely important
2 = Somewhat important
3 = Not at all important

NB:
No rank within equal scores



See previous slide

Contrasting views on naval tradition.

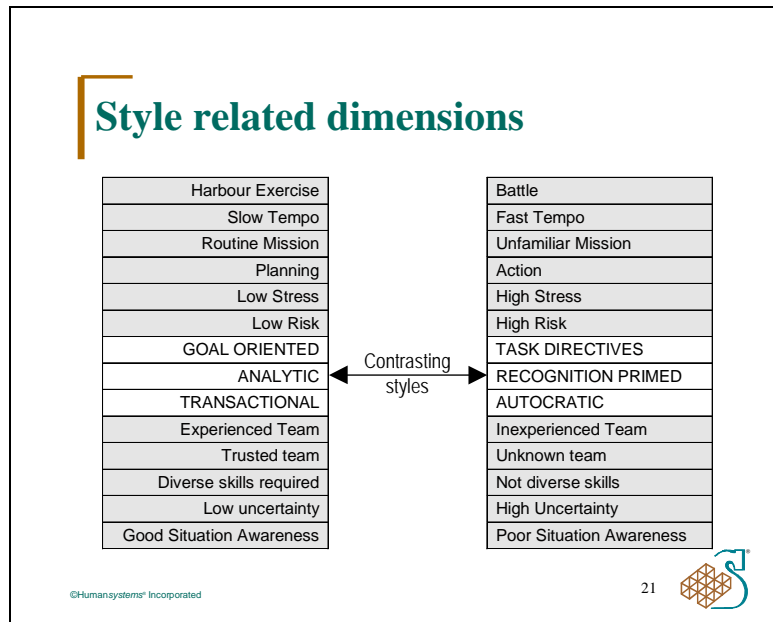
Need more on significance of command structure and responsibilities assigned (#1 & 2).

Highly Important Factors

Commander	Team	Context	Organization
Emotional capabilities	Trust in Commander	Time available	Command structure
Trust in team members	Training as a team	Severity of risk	Responsibilities
Situation awareness	Situation awareness	Probability of risk	
Communication skills	Technical capabilities	Battle vs exercise	
Level of Fatigue.	Training of team mbrs	Risk to friendly assets	
Stress level	Stress levels	Type of risk	
Personal authority		Decision complexity	
Personality		Information availability	



All “green” items (i.e. of most importance) from previous 4 slides put side by side.

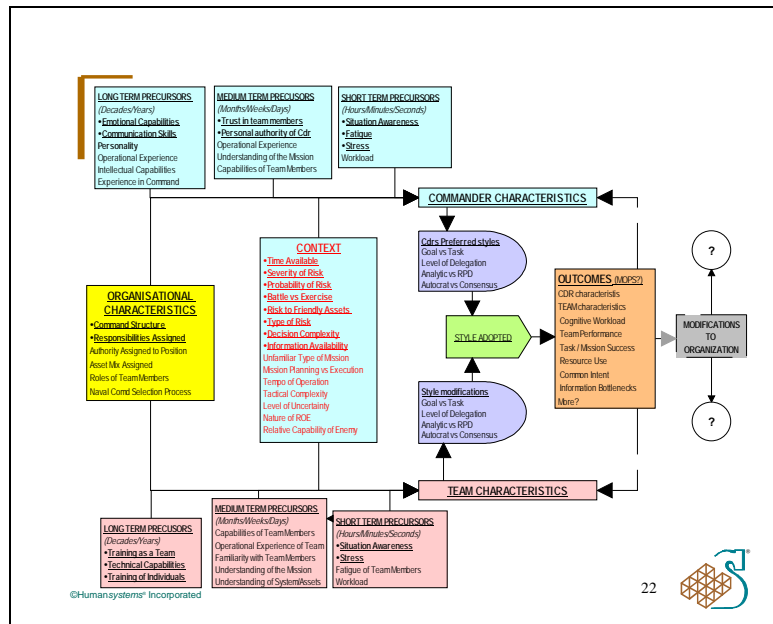


For discussion purposes only, diagram shows representative polar “anchors” of contextual factors (grey) and styles (white) . Not intended to be exhaustive.

Two contrasting examples to test the face validity.

Example A: During a low risk, slow tempo exercise (as opposed to battle), with plenty of time, performing a familiar mission, with an experienced and trusted team involving diverse technical expertise, with good situation awareness within the whole team, experienced commanders might be more likely to adopt a goal rather than a task oriented style, to delegate more, and to be more participative in their leadership approach. In otherwise similar circumstances, but faced with a complex unfamiliar mission, the main driver of decision making style might be the amount of time available.

Example B: During battle, under stress, with high risk, a fast tempo of events, performing an unfamiliar mission, with an inexperienced and unknown team, and poor situation awareness, commanders might be more likely to be task rather than goal oriented, to make quick decisions based on intuition and experience, and to be autocratic in their leadership approach.



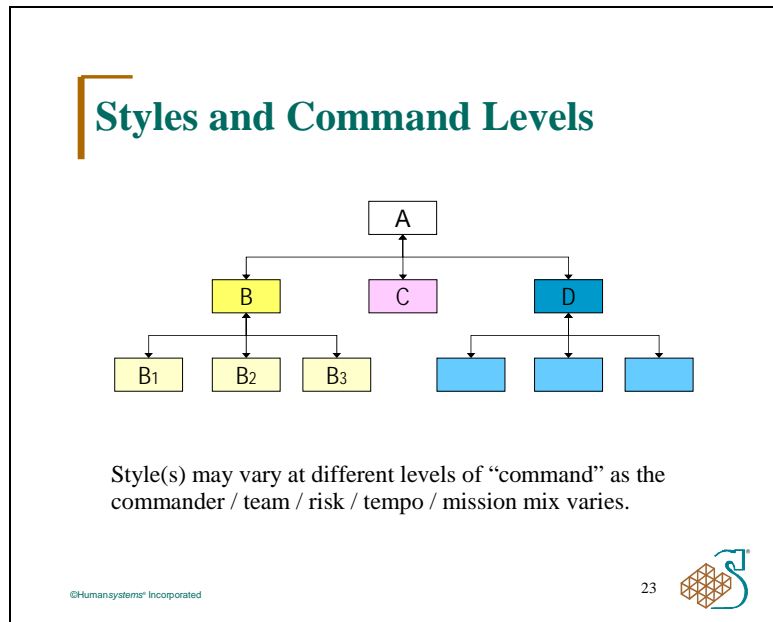
Final iteration of conceptual map. Box contents limited to factors rated as “Extremely Important” by 3 or more participants (underlined) or by at least 2 participants (not underlined).

Team characteristics separated from Cdr characteristics. Long term, medium term, and short term precursors assigned a rough time frame (not mutually exclusive). Organisational precursors and contextual factors (interactive with short term factors) shown separately.

Cdr related characteristics are seen as leading to the style repertoire possessed by the commander with a basic or “default” style for each different commander, and an awareness and assessment of the situation and the team. Then, based on the Cdr’s awareness and assessment of the team and its capability to deal with the situation, the Cdr will consciously or unconsciously modify his/her default style to meet current demands.

The outcome of this combination in terms of its impact on the situation and its impact on different team members will be detected by the Cdr and the team members and reacted to in one way or another with short term adjustments to deal with the here and now, and longer term learning for the future. (see diagram in notes. Cdr A = default style towards goal based but has a wide style repertoire. Cdr B = default further towards task style and has a narrower style repertoire.

Speculatively, depending on the scale of the success / failure, any lessons learned may be fed back into the navy as a system, with subsequent modifications to long term precursors (such as training and selection of commanders and teams) and organisational factors (such as assignment of responsibilities). Also very speculatively, could consider the possibility of “resistance to change” as a component of a person’s style.



This diagram illustrates that in one organisation such as within a ship, or within a task group, there may be a need for different “command” styles at different organisational levels. Depending on the combination of circumstances, such as the tempo of events, and the experience and capabilities of the team, personality of the Cdr, styles may change as move from level to level.

For example, the Captain on the bridge may need to give goal based directions to one department and task based directions to another. Within a subordinate team, the team “commander” (say the ORO) may have to operate at a task level for an inexperienced SWC and goal based for an experienced ASWC, while the engine room team may be able to operate at a goal level because of yet other differences in tempo, task and team.

Good example of where communication / directive style may change is in dealing with battle or other damage when cross specialist communication v. important, and time v. limited. Cdr has operational / safety goals to fulfil/prioritize that depend on tasks performed by technical specialists in ship, with only limited cross training between Cdr and specialists. Therefore dependent on good understanding and communication.

Potential Measures (partial)

Area of Measurement	Impact on?			
	Cdr	Team	Context	Org
Cognitive workload / bottlenecks	X	X		
Communication (<i>patterns, content, timeliness</i>)	X	X		
Situation Awareness (<i>Detect, understand, predict</i>)	X	X		
Task Performance (<i>Speed, accuracy</i>)	X	X		
Errors (<i>Identification, Correction</i>)	X	X		
Stress level / Fatigue	X	X		
Learning (<i>New style(s), new / improved skills</i>)	X	X		
Trust (<i>Motivation + capability</i>)	X	X		
Common Intent / Team mental models	X	X		
Team dynamics / affect	X	X		
Mission outcome(s) (<i>Goals achieved, resources used</i>)			X	
Team structure (<i>Function allocations</i>)				X
Resource management goals / methods				X
Changes in training goals / methods				X
Changes in selection criteria / methods				X

©Humansystems® Incorporated

24



Partial list of potential measures of impact of different command styles. Details TBD. Areas divided by potential impact on the commander, on the team, on the context, and on the organisation. Not much opportunity to discuss with participants. Needed to identify existence / consequences of different styles.

For example: Do Cdrs who are more task oriented and take on more decision making themselves bear a greater cognitive burden to acquire and maintain situation awareness of subordinates, monitor their task progress, assign resources among subordinates, and communicate with subordinates. If so, what are consequences for both Cdr and the subordinates. Does a task oriented Cdr reach or exceed their cognitive / communication capacity earlier. Will this create communication bottlenecks, back ups and delays as team members have to wait to provide information, or for direction. (*One participant claimed task style lead to less information bottlenecks. Also that task style resulted in better insertion of experience of Cdr and therefore more likely a successful mission outcome.*)

Does error probability increase as situation awareness decreases? Does the Cdr have to switch attention more frequently, and catch up with awareness as switching occurs? Does timeliness of instructions suffer, depending on the tempo of activities for different subordinate areas. Does the task Cdr monitor and decide at both the goal and the task level?

Is the consequences for the team of a task oriented Cdr that tm members use less of their available cognitive capacity? Is there a requirement to communicate task related rather than goal related information as style changes? Do subordinates have less control over resource management for different styles- what are the consequences?

Is work load higher or lower for the Cdr / tm mbrs for different styles. Does the task oriented Cdr need a better grasp of task related details in each area of expertise under command - and what is the impact on team performance within technically diverse teams or for situations where technically diverse information must be fused (e.g. Damage Control)?.

Other outcomes will include changes in team common mental models (- understanding of each others roles, tasks, capabilities); social dynamics, such as trust, confidence, willingness to communicate, etc.

Learning / training related measures? Do different styles affect rate or level of skill acquired by individuals in the team or the team as a whole for different tasks (e.g. formulating a plan, pushing/pulling information).

Command Style Definition??

“The Commander’s distribution of decision making activities within a hierarchical team organized at two or more levels.”

– **Action oriented** = Commander centric

- **Commander:** *Assesses situation, generates intent, determines tasks, assigns tasks to team(s), allocates resources, monitors task progress, provides task based feedback, revises intent/tasks.*
- **Team:** *Performs tasks, reports task progress, receives task based feedback.*

– **Intent oriented** = Team centric

- **Commander:** *Assesses situation, generates intent, communicates intent, (reviews team plans), monitors intent achievement, provides intent based feedback, (reviews revised plan?).*
- **Team:** *Determines tasks, requests resources (negotiates resource conflicts?), performs tasks, monitors task results, reports goal progress, receives goal based feedback., revises plan.*

– **Changes in style** can occur over time and at successive organizational levels depending on the characteristics of the commander, the team, the mission, and the situation or context.

– **Delegation** can occur of delimited components of *legal authority* and *extrinsic responsibility* based on the *competence, personal authority* and *intrinsic responsibility* of the subordinate(s) relevant to the mission.

©Humansystems® Incorporated

25



Offered as a point of departure for discussion. Places emphasis on Decision making. An alternative: The manner adopted by a commander to

Need to emphasize “command” as a team process, but not to remove the unique role of the a “Commander” of a ship. Need to deal with the distinction, especially salient in the navy, between being in permanent “command” of a ship, temporary command of a TG/SAG(etc), and being responsible for a task or mission. (Here, “Legal” and “Liability” issues need further work.)

Want to retain idea that choice / appropriateness of style result from mix of characteristics of team leader, team members, role / mission, organizational structure and current context.

Chose to base the definition on the decision cycle (can vary greatly in length from days to minutes or seconds) and the split of that cycle among the command team (TBD). Chose to restrict to a hierarchical organizational structure representing typical military organization.

Could drop the “commander” from the definition and just be “*The distribution of decision making activities....etc*”

Attempted to define “Delegation” in terms Pigeau and McCann’s “command” concepts of authority, responsibility, competence.

Broad DSS Implications

- Focus on command team as a whole, not individual commanders.
- Support team decision making, mission and resource management process.
 - Offer support for both analytical and recognition primed decision making.
 - Do not solely provide recommended decisions.
 - Provide embedded training in team decision making and mission management process
 - Enable users to assess trust in support provided (information, recommendations, etc)
- Provide tailorable, inter-linked communication / information exchange among all team members, based on style within team.
 - Goal based style: provide goal tracking and feedback.
 - Task based style: provide task based information.
- Adaptable to contextual factors.



Kept this at a higher level because of the lack of insight into the DSS requirement provided.

Several important points here though.

Important to focus on “command” as a team process rather than on one all important “commander”. Literature on military command contradictory - tends to exalt the individual “commander” but also to repeatedly emphasise the team aspects of command. More balance needed. A more balanced perspective seems to be emerging, partly because of the increasingly diverse skills and technical knowledge required in modern warfare: no single person can master or encompass the complexity - and need to identify the functional aspects of “command” to be addressed by technology.

To accommodate both goal oriented and task oriented styles different types of information will need to be communicated, fused, and presented. Since the style may vary from situation to situation depending on the nature of the task and the fit with the current experience and skills of the team, the DSS must allow customisation.

Decision process is what needs support, from planning to implementation. This implies a “critiquing” approach rather than a recommendation approach, though this may change according to the phase of the mission (planning vs action). Need to fuse conceptualisations such as CECA with team based concepts.

Main Conclusions

- Concept of “command style” readily recognized by interviewees.
- Mainly: *Goal/consensus/analytical vs task/directive/intuitive.*
- Differences exist in basic personal style.
- Basic personal style modified by mentors / role models / experience.
- Experienced Commander able to choose style.
- Reported style(s) change with scenario.
- Under stress, basic style likely to re-emerge.
- More task oriented as risk level, tempo and stress rises
- Choice/appropriateness of style affected by team and context.
- Style overlaps with but not identical to concepts such as Leadership.
- Implications for selection, training, and support system design.



Methods: Drop, Add, Modify

•Interviews:

- Ask interviewees to treat interview content as confidential.
- Do not reveal identity of interviewees to each other.
- Randomize order of questionnaire sections.
- Add “filler” factors as cross check.
- Ask for key differences between scenarios related to style change.
- Include subordinate team members (e.g. HODs, Command team).
- Interview Sea/Land trainers about Command styles.
- Personality questionnaire. Link to preferred style.
- Survey larger sample.
- Extend range of scenarios to include battle SAG.

•More objective observational studies

- Needed to confirm self report data.
- Use team training simulators e.g. ORTT.
- Archive select ORTT data for subsequent data mining.



Shows changes to be considered to method / additional sources of useful information.

Research Questions

- Which command styles are more effective and under what circumstances?
- What are the main factors affecting the suitability and choice of command style?
- Are command styles trainable?
- How are different command styles best supported?
- Is “naval” command unique?



Research Recommendations

- Extend literature search / review for specific “style” related work.
- Extend / deepen analysis of overlapping concepts.
 - Command, Leadership, Common Intent, Command Intent, Trust, Team Cognition.
- Examine style differences during planning / action phases of mission.
- Extend / deepen analysis of decision support implications.
 - Relate to decision cycles such as OODA loop, D2R, OPP.
- Develop MOPs for command style outcomes.
- Analyze recent changes in styles since 1980’s: pattern, reasons.
- Extend analysis of more important factors.



Annex A to Command Styles in the Canadian Navy Preliminary Investigation: INTERVIEW MATERIALS

This Annex contains the Phase 1 scenarios and questionnaire, Phase 2 rating scales, and interviewer script used during the interviews.



PHASE 1: QUESTIONNAIRE

SITUATIONAL EFFECTS ON COMMAND STYLE

The following pages include a description of three scenarios, each followed by a rating scale. Please read through each scenario and complete the accompanying rating scale.

Based on your experience, please indicate what the “ideal commander” would do or what style he/she would adopt by circling the most appropriate number for each style listed.

If there are items that you think should be added to the list of styles, please write them in the “other” sections, if you wish.

Please note that the term “team” is used to indicate the people through whom the Commander works to direct their assigned assets for the scenario in question.

Scenario A: Single ship, routine operation

HMCS HALIFAX, with embarked helicopter, is just arriving on the Grand Banks for a 10-day fishery patrol. One DFO officer is embarked and he will be boarding approximately 3 vessels per day to conduct routine inspections. He is hoping to find and board the Estai, a Spanish trawler that Canadian fisheries officials classify as a Vessel of Interest, which was sighted in the vicinity two weeks ago by a PAL surveillance flight. The *Northern Desire*, a patrol vessel chartered by the EU to monitor fishing activity in the NAFO jurisdiction, is approximately 60 miles to the East and is reporting its position to the MOC every 6 hours. HALIFAX is to maintain and report a RMP to MOC Halifax and support the DFO officer. HALIFAX is at normal readiness.

Scenario A						
STYLE	RATINGS					NOTES
Delegation Style	1 Cdr takes on responsibility himself and doesn't delegate	2	3	4	5 Cdr delegates to team	
Leadership Style	1 Cdr makes decisions on his own without input from team	2	3	4	5 Cdr achieves consensus through participation	
Decision making Style	1 Cdr uses a step-by-step systematic process to make decisions	2	3	4	5 Cdr makes decisions based on experience and intuition	
Orders Style	1 Cdr gives orders to the team in the form of specific tasks and actions	2	3	4	5 Cdr gives orders to the team in the form of goals; team decides on most appropriate actions	
Other						
Other						
Other						

Scenario B: Ship in Task Group, Operations, No Warfare Commander Duties

HMCS TORONTO, as part of an international task group, is in a patrol area 20 miles off the coast of Iran, due south of the coastal city of Bandar-e-Maqam. Other members of the task group include frigates from the US, UK, the Netherlands, Italy and Germany. The task group is enforcing a UN resolution to restrict all maritime trade in and out of Iran. This is in reaction to Iran's recent return to hard line fundamentalism and lack of cooperation regarding the monitoring of its WMD programs. The task group has monitored routine patrols by various Iranian warships, including Combattante II patrol boats with C802 missiles and Alvand class frigates with Sea Killer SSMs. In addition, SU 24 Fencer, MIG 29 Fulcrum and F5 Tiger aircraft from the Iranian Air Force have frequently flown toward TG ships but have to date remained inside their own territorial airspace. Two days ago a small fast boat just inside of Iranian TTW fired upon the American ship's RHIB with small arms. The RHIB briefly returned fire; no one was hurt in either boat. Due to the spacing of the patrol areas, TORONTO is normally 8-12 miles from the nearest TG ship. The CTG is embarked in the RN frigate. TORONTO holds no warfare commander responsibilities.

Scenario B						
STYLE	RATINGS					NOTES
	1	2	3	4	5	
Delegation Style	Cdr takes on responsibility himself and doesn't delegate				Cdr delegates to team	
Leadership Style	Cdr makes decisions on his own without input from team				Cdr achieves consensus through participation	
Decision making Style	Cdr uses a step-by-step systematic process to make decisions				Cdr makes decisions based on experience and intuition	
Orders Style	Cdr gives orders to the team in the form of specific tasks and actions				Cdr gives orders to the team in the form of goals; team decides on most appropriate actions	
Other						
Other						
Other						

Scenario C: Ship in Task Group, Operations, With Warfare Commander Duties

HMCS TORONTO, as part of an international task group, is in a patrol area 20 miles off the coast of Iran, due south of the coastal city of Bandar-e-Maqam. Other members of the task group include frigates from the US, UK, the Netherlands, Italy and Germany. The task group is enforcing a UN resolution to restrict all maritime trade in and out of Iran. This is in reaction to Iran's recent return to hard line fundamentalism and lack of cooperation regarding the monitoring of its WMD programs. The task group has monitored routine patrols by various Iranian warships, including Combattante II patrol boats with C802 missiles and Alvand class frigates with Sea Killer SSMs. In addition, SU 24 Fencer, MIG 29 Fulcrum and F5 Tiger aircraft from the Iranian Air Force have frequently flown toward TG ships but have to date remained inside their own territorial airspace. Two days ago a small fast boat just inside of Iranian TTW fired upon the American ship's RHIB with small arms. The RHIB briefly returned fire; no one was hurt in either boat. Due to the spacing of the patrol areas, TORONTO is normally 8-12 miles from the nearest TG ship.

The CTG is embarked in the RN frigate. TORONTO holds the duty of ASWC. One Iranian Kilo class SSK has been unlocated for 4 days and could be anywhere in the vicinity. The CTG has made it clear that until the Kilo is located ASW is the primary threat and TORONTO may allocate any TG asset to the ASW problem, keeping CTG informed.

Scenario C						
STYLE	RATINGS					NOTES
Delegation Style	1 Cdr takes on responsibility himself and doesn't delegate	2	3	4	5 Cdr delegates to team	
Leadership Style	1 Cdr makes decisions on his own without input from team	2	3	4	5 Cdr achieves consensus through participation	
Decision making Style	1 Cdr uses a step-by-step systematic process to make decisions	2	3	4	5 Cdr makes decisions based on experience and intuition	
Orders Style	1 Cdr gives orders to the team in the form of specific tasks and actions	2	3	4	5 Cdr gives orders to the team in the form of goals; team decides on most appropriate actions	
Other						
Other						
Other						



PHASE 2 QUESTIONNAIRE: FACTORS INFLUENCING COMMAND STYLE

Based on your experience, please rate the importance of each item in this questionnaire in terms of how it might affect a Commander's Command Style in any situation.

Please use the simple rating scale shown on each page. Indicate the rating that most applies to each item by placing a ✓ or X in the appropriate column.

There are four sections to this questionnaire:

- Characteristics of the Commander
- Characteristics of the Team
- Characteristics of the Organisation
- Characteristics of the Context

Please complete each section in sequence but feel free to review any section once you've done a first pass of the entire questionnaire.

If there are any items that you feel belong in more than one rating category, please put a ✓ or X on the line between two ratings.

This is not a test, and there are no right or wrong answers. Our purpose is to promote and focus discussion after completion of the questionnaire. Once it is completed we would like to discuss your answers with you to understand better the thinking that lay behind them. To ensure there is time for this, we would like you to go through the questions in a timely way, but please feel free to ask questions or make comments as you go along, and to make brief notes to help with the discussion to follow.

	Extremely Important	Somewhat important	Not at all important	NA	Notes for discussion
Characteristics of the Commander					
1. Personality					
2. Intellectual capabilities					
3. Emotional capabilities					
4. Technical capabilities					
5. Communication skills					
6. Educational level					
7. Educational focus					
8. Training (general naval)					
9. Training for Command					
10. Personal background					
11. Personal authority of Cdr					
12. Level of Fatigue at the time.					
13. Operational experience					
14. Own experience in Command					
15. Stress level at the time					
16. Workload at the time					
17. Other					
18. Other					
19. Other					
Commander's Awareness (Perception / Understanding / Mental model / Familiarity with)					
20. Trust in team members					
21. Familiarity with team members					
22. Capabilities of team members					
23. Situation awareness					
24. Understanding of the mission					
25. Understanding of the system / assets					
26. Other					
27. Other					
28. Other					
Comments on this section:					

	Extremely Important	Somewhat important	Not at all important	NA	Notes for discussion
Characteristics of the Team					
Note: "team" indicates the people through whom the Commander directs assets under command (e.g. own ship, SAG, task group, warfare assets).					
29. Personalities					
30. Intellectual capabilities					
31. Emotional capabilities					
32. Technical capabilities					
33. Communication skills					
34. Education					
35. Training of individual members					
36. Training as a team					
37. Personal backgrounds					
38. Levels of fatigue among team					
39. Operational experience of team					
40. Stress levels at the time					
41. Workload at the time					
42. Other					
43. Other					
44. Other					
Team Members' Awareness (Awareness / Perception / Understanding of , Mental model, Familiarity with)					
45. Trust in Commander					
46. Familiarity with Commander					
47. Familiarity with other team members					
48. Capabilities of team members					
49. Situation awareness among team					
50. Understanding of the mission					
51. Understanding of the System / Assets					
52. Other					
53. Other					
54. Other					
Comments on this Section:					

	Extremely Important	Somewhat important	Not at all important	NA	Notes for discussion
Characteristics of the Organization					
55. CF selection process for Cdr					
56. Authority assigned to position					
57. Responsibilities assigned					
58. Asset mix assigned					
59. Roles of team members					
60. Command structure					
61. Organizational culture of navy					
62. Organizational culture of arm					<i>e.g. submarine vs surface command</i>
63. Naval command philosophy					
64. Naval tradition / history					
65. Other					
66. Other					
67. Other					
Comments on this section:					



	Extremely Important	Somewhat important	Not at all important	NA	Notes for discussion
Characteristics of the Context					
68. State/availability of technology					
69. Unfamiliar type of mission					
70. Mission planning vs execution					
71. Risk to friendly assets					
72. Time available					
73. Tempo of operation					
74. Severity of risk					
75. Probability of risk					
76. Type of risk					
77. Tactical complexity					
78. Comd level (ship, SAG TG)					
79. Decision complexity					
80. Serviceability of assets					
81. Nature of ROE					
82. Level of uncertainty					
83. Information availability					
84. Relative capability of enemy					
85. Battle vs exercise					
86. Other					
87. Other					
88. Other					
Comments on this section:					

Interviewer Script

Briefing (approx 15 min)

1. Thank you for coming
2. Introduction
 - From HSI - small consulting company in Guelph involved in several research projects for CF on behalf of DRDCs
 - My background – several projects in the navy – investigating information requirements and information flow within HALIFAX Class Ops Room
 - Roy's background – **ROY**
 - Tasked by DRDC Toronto to investigate command styles in within the Canadian Navy
3. Purpose of study
 - To try to define command styles and explore command style within the Canadian Navy
4. Method
 - 3 phases – first two a little more structured – questionnaires, last phase open discussion
 - Informal – free to ask questions as we go along, lots of time for discussion in last phase so we will try to move through the first two phases quite quickly
 - Entire interview will be no more than 3 / 4 hours with a standeasay about halfway through
 - Roy and I will be switching such that each of us takes turn leading and taking notes
 - We would like to audiotape the interviews. Do you have any concerns with that?
5. Risks
 - This study has received clearance by the human ethics committee at DRDC-Toronto and, as such, need to make you aware of risks associated with interview and precautions we've taken to mitigate risks
 - Primary risk is that participants may be compromised or embarrassed in some way by inappropriate disclosures of the opinions or information they provide during the interview.
 - Risk will be mitigated in the following ways:
 - Request that you keep any example described during the interview generic without providing personal or other identifying information
 - Keep all interview records anonymous and personal data separate from the interview records, cross referenced by code only



- Provision of personal and career related information optional
- Keep interview records in a secured place and restricting access to members of the project team only
- Limit reports to aggregate data and not reporting individual results
- Conducting individual interviews rather than focus groups

6. Rights

- Given that your participation is voluntary, you do not have to participate in the interview and have the right to terminate the interview at any time without reason

7. Questions?

Provide participants with Information Letter and Voluntary Consent

Phase I – Critical Situation Analysis (approx 55 min)

Discussion on Command

- What is command? Does it only apply to a ship's captain? What is the relationship between different commanders?

Discussion on command style

- What does command style mean to you? What determines a commander's command style? Does command style vary with level of command?
- The literature we reviewed has suggested that command style is closely tied to leadership style, however there are also components of decision-making, delegation and orders style. However, the literature has not identified issues such as the relative importance of these styles or how situational factors effect command style. You may or may not agree with what the literature suggests, which is fine. Because there is so much still unknown, we have developed scenarios to try to expose some of these issues.

Provide interviewees with situations/questionnaires. Roy provides brief description on questionnaire then reads through first scenario.

At this point we would ask that you to complete the rating below the scenario description. Please base your responses on your personal command experience.

Roy provides reads through second scenario.

At this point we would ask that you to complete the rating below the scenario description. Please base your responses on your personal command experience.

Roy reads through third scenario.

At this point we would ask that you to complete the rating below the scenario description. Please base your responses on your personal command experience.

Could you please compare the situations presented in terms of command style and identify command challenges of each.

Could you identify likely differences in performance outcomes as a consequence of using different command styles in the different situations?

Roy reviews participant responses and leads discussion accordingly.



Phase II – Ratings of Potential Style Precursors (approx 55 min)

Earlier we briefly described what the literature suggests about command styles. Another uncertainty in the literature is the role of factors that may influence a Commander's command style. We have attempted to identify several factors that we feel may influence command style and we would like to get your input, as experts. We have developed a questionnaire that lists several factors that may or may not influence command style. The factors have been divided into four sections – Cdr characteristics, Team characteristics, Organizational characteristics and Situational/context characteristics. You may or may not agree with the factors that you see listed in this questionnaire. Please know that there are no right or wrong answers, we really just want your honest input. Please work through the questionnaire in sequence and as quickly as possible. If need be, you may go back to certain questions once you have completed a first pass of the entire questionnaire. Please feel free to ask any questions as you go along. If there is anything that comes to mind about any of the items as you're completing the questionnaire, feel free to write it down and we can discuss it later.

Participants complete questionnaire

Were there any factors that stuck out in your mind? Were there any factors that you completely did not agree with or didn't even understand why they were on the questionnaire? Was there a particular category of factors that you think have the greatest influence on a Cdr's command style? What about the least influence on a Cdr's command style? Does it make sense to you that there are both long term (e.g. training) and short term (e.g. level of risk of mission) factors that influence a Cdr's command style?

Phase III – General Discussion of Command Styles in the Navy (approx 55 minutes)

Roy leads open discussion based on participant responses in Phases 1 & 2

Questions to be asked:

- How command / command style is cultured in the Canadian Navy?
- Is command style relatively constant or dynamic?
- Is there such a thing as a “default” command style that commander’s fall back on in high workload situations?
- Are there specific command styles that seem to work best in certain situations?
- Next steps – “if you were doing this study, where would you go next?”
- Is there any way we could have improved the process of this interview for you?

Potential Discussion Points:

- Implications of a decision support tool for command styles (i.e. could it change your command style?)
- Review and comment on concept map
- SAR scenario



Annex B to Command Styles in the Canadian Navy Preliminary Investigation: INTERVIEW NOTES

This Annex contains the interviewee responses and interviewer comments for questions asked during Phase 1, Phase 2 and Phase 3 of the interviews.

PHASE 1 – Critical Situation Analysis

What is command?

Subject #1

Unique responsibility

Nothing special about someone in command

Part of machine/team that has to be fulfilled

To move team in whatever direction it needs to go

“exercise of judgement, responsibility, execution of orders that come from somewhere else” that you have to put together and go along with

Element of vested authority provided to you b/c of experience, dedication to team, but also something that comes down from top. Must fill requirements that objectives of org carried out

Very much a middle-man; caught between two bodies and make them come together – your superiors and your team

Subject #2

The art of persuading people to do what they may not want to do. Science of achieving mission or aim. Responsibility to take ship into harm's way and to meet aim. Authority ties in as well. Can't exercise authority without responsibility.

You can't be a good cdr if you're not a good leader. There is not one style that is better than the others, it's what works best for your team. Good cdrs make their leadership style work.

Subject #3

Ultimate authority over a bunch of people to complete a mission. Command is more than giving charge – responsible for every aspect – health, morale, etc. “Commander next to God”.

Subject #4

Responsibility to lead ship to achieve a task or mission. Implies responsibility of people, equipment but also to make decisions on accepting risk personally and to other people on their behalf and putting people in harm's way.

Interviewer Comments

The terms responsibility and authority are unanimous. Relate to the attainment of a mission. Idea that a commander is a middleman – between superiors and team. Make decisions on risk on behalf of others.

Does it only apply to a ship's captain?

Subject #1

Elements that are exercised by others; issue of executive officer acting on your behalf. Components of job exercised by others on your behalf but you still have authority

ORO when at sea – control of ships movements, sensors and weapons to him

There are elements, you tend to define them and write them down.

Ques – how do others understand limits of authority?

Captains standing orders but together by every commanding officer – start with that.

From there, use daily instructions, night orders to adjust orders as required.

Amend orders as required but start with basis

Shared understanding – you develop a certain understanding of your subordinates and they of you. This is passed along from one to the other through dialogue that happens over time. Also from experience in working together.

Always default to written order

Sometimes leads to confusion – onus of both to ensure it's clarified as soon as possible.

Subject #2

Yes. Leadership, authority and responsibility can be down to ordinary seaman. Commander delegates authority to fire weapon. Responsibility for it and what it may cause is cdr's alone. Focus is on legal or formal aspect of command although not fond of making things a legal issue. What you do impacts on them.

Subject #3

When boarding officer away, he is in command, when coxyn away, he is in command. Will not do too much outside of what you expect b/c you've trained him. Inside the ship, command only applies to captain of ship.

Subject #4

As a CO you need to be able to delegate so absolutely. Delegation is frequent and an important tool b/c can't operate 24/7. Without delegation can't empower anyone else to get things done. Responsibility to take action is a very common thing. You're delegating decision making authority to a very low level. The principles are still there and rules still apply no matter what level. Most important is to delegate to right people.

Interviewer Comments

Yes, but others exercise elements of command on CO's behalf. Most obvious is when CO delegates Control to the XO, ORO, OOW or NAVO (Control of ship's movements, tactical employment, weapons and/or sensors). As well, when there are "away teams", such as the Boarding Team, the person in charge will exercise an element of command on behalf of the CO. But it is always the CO's "ticket" on which they are exercising command. CO cannot delegate away responsibility.

Two interviewees differ on whether command applies to small team leaders within the ship on a more regular basis. One says clearly that it does not, but another equates command with leadership,

which I think is different, otherwise everyone is a commander. This same officer seems to contradict himself when he says that the end results of what anyone in the ship does is the CO's alone. He brings up the legal issue of the CO's ultimate responsibility. I was surprised that this legal and accountability issue wasn't brought up more by the commanders.

A couple bring up the issue of expectations. The actions of people to which elements of command has been delegated are controlled by:

- issuing standing written orders (Captain's Standing Orders and Battle Orders)
- amplifying these orders in writing when required in specific circumstances
- developing a common understanding of CO's expectations and the point at which you call him despite having control

Delegating to the "right" people. A CO can delegate control to the XO or to an ORO, why one over the other at any given point? Some CO's don't feel comfortable with their XOs or one or both OROs.

What is the relationship between different commanders?

Subject #1

Is this process mirrored between superior cdrs and ship's captain?

There are different elements – structure of comd sent down, have PDR (Personal Development Report) for example (expectations)

Commodore has next level of comd above the ship – have similar orders that you are expected to read and sign off on; also boundaries of when he is expected to be called

There is also a more generic framework that you rely on

There is an element of it but not as rigid.

Is this only at sea?

Differences b/w commodore to ship comd and ship comd to subordinates – legalities with respect to vessel not just people involved (for ship's cdr)

Due diligence.

Subject #2

Superior cdr tells me what he wants done not how to do it. Guidance provided in standing op tasks, daily command calls, monthly meetings. Optasks communicate “nuts and bolts” and are sent out ahead of time in multi-national situation. Thinks superior comd would treat subordinates according to their capabilities. Look at what certain ships have done and who they have on board. Some officers are more detailed type, micromanager. I wouldn't be that way b/c my brain isn't that big. I get a feeling about something and that's good enough for me.

Subject #3

Cdr has closer relationship with his subordinates than superior cdr b/c he is physically closer. He uses augfragstaktik?

Strategy. In first two ships, delegated b/c I trusted them. Lots of similarities but you would expect that there would be more general guidance from superior cdrs.

Subject #4

Cdr of ship has more requirements placed on him than higher level. More mission critical decisions being made. More staff input and planning horizon further out for higher level. Moral responsibility is the same at operational and tactical level.

Immediacy is the biggest thing and ability to act at the tactical level. My experiences working with a TG cdr, the relationship was collaborative. However, it was my call to take the risk or not. Relationship between ship's captain and his boss should be private.

Interviewer Comments

There is an element of the trust that a superior commander (CTG) would place in subordinate commanders (ships' captains) due to their position and the level of trust and competency they have proven to get command in the first place.

They expect the superior commander to provide written guidance in the form of OPTASKs (and any personal discussions/meetings), but then to let the COs get on with it with a certain degree of autonomy in the details.

One interesting aspect was the point about the legal responsibility a CO has over the physical ship itself. They have legal liability for incidents such as environmental pollution (oil spills) that commanders of groups of ships do not have so directly. In these cases, the CTG will differ final decisions to the ship's CO. Likewise, in peacetime the CTG will most likely differ decisions related to physical risk to the ship's CO.

What does command style mean to you?

Subject #1

Issue of whether or not you are working for a screamer, someone who delves into the weeds, someone with more people skills, someone very technical in nature, autocrat, dictator.

Elements of each of those in everyone.

Subject #2

Leadership style. Several different leadership styles and you have to decide where you're more comfortable. Technically oriented vs. personalities. I'm more comfortable with personalities. You can be a commanding officer and your leadership be poor. Leadership is very important part of command and will determine how successful you are.

Subject #3

Very important. Style is as individual as a fingerprint. You have to do it your way. It is an individual thing. My style varied with circumstances. Style in first command different from second command b/c of circumstances I was in. You maintain the same macro style but change certain elements of it. I try to change the circumstances to suit my command style as opposed to frequently changing your style. You have to change your style to bring it to where you want to be. The range of commanding officers in our navy is not large.

Subject #4

Don't want to define command style. There are many approaches to the command relationship.

Interviewer Comments

Most touch on aspects of the 4 elements we have identified. They speak of leadership, personal skills, technical vs people oriented (two suggest that these are almost opposites). All seem to agree that command style is complex, and that it is very personal (a fingerprint). One just didn't want to discuss "styles"; of interest, this same interviewee said that he readily varied his approach (or "style") depending on the circumstances in which he found himself at the moment. He suggested that he has a range of style that he readily flows within. Another agreed that style changes depending on circumstance (nature of the team in his case), but he had the approach that he would try to change the environment to be able to command in his preferred style. So one changes his style to meet the context (no implication of time line here), and the other will try to change the environment in the longer term to suit his preferred command style

What determines a commander's command style?

Subject #1

Does comd style change to fit team or does team change to fit team? Elements of both. Some of it is in-grained, that won't change.

Sheer magnitude of responsibility can have an impact – there are people out there who have known well throughout their career and very surprised to see how they exercise command. Some people have a hard time accepting that responsibility – this spills over into actions they take. Manifesting itself into individuals very interestingly.

Each person has set up build-up beliefs and experiences about "I'm going to do that or this"

What is the change that's happening if they've never commanded before?

It ultimately comes down to the individual is having a hard time letting go. They need to verify to themselves that everything has been done right – situation they may believe is unsafe or worried about embarrassment, innate need to know all the details about what is going on. Eventually can't cover all of the basis and you can feel uncomfortable that you can't do this and you start to feel the stress of it. I've witnessed this several times.

Have you ever seen examples of the opposite?

I'm probably an example of someone who tends to delegate when I don't feel comfortable. I delegate to experts. I delegate more than usual. I take the benefit of the doubt. I believe they have certain abilities b/c of their position. Accepts that until he sees evidence otherwise.

Is there an overall command style that a cdr chooses to maintain? Or is it more flexible?

Even though you may have the ability and willingness to operate in a full spectrum, your personality will skew you to one end of another. It all depends on what your philosophical and fundamental approaches to the job. It's easier to talk about the attributes than to talk about command itself. Easier to break down into components. Everyone is molded by their experience. You look in the mirror and don't always like what you see but you have to be aware of where you are. I'm a fairly demanding individual and pretty determined so I have a certain intensity level. I probably don't operate in the kind, nurturing end of the spectrum as I'd like to but I have to be myself. But it seems to have supported me.

Formatted: Bullets and Numbering

Subject #2

Professional knowledge, integrity, courage, leadership, ability to convince people that they are important, ability to create a team. Most important aspect of leadership is ability to remember people's faces or names b/c they know that you care about them.

Subject #3

Where he comes from, circumstance, other commanders from very far back to commanders they've had. Background is a very big part of it. Personal leadership style doesn't change, but day to day style may change. When under pressure, they are true to form. You see the real guy when he's under stress. Where you are in the timeline of a situation effects your command style. How a captain reacts before a hit is just as important as how he acts before. Captains revert to form too but depending on his team will react differently. It depends on what is happening in the team. Team factor is not more important than contextual factor. They are related and you can't isolate them. It is all about "comfort zone". A captain has to have confidence in his team.

Subject #4

As I've increased in rank and responsibility, I've learned to adapt my style to different demands and people. There are times in needs to be near the loud screaming lunatic who is not collaborative and authoritarian and there are situations that dictate and more nurturing, collaborative, populous approach. As long as you're deliberately selective in how you approach it, it's fine. If you get stuck in a rut, it detracts from your effectiveness. It's a very personal thing, you have to be yourself. You have the authority so what else has to be there? Trust and credibility and how you take rejection and send information. It's all about communication and interaction.

Interviewer Comments

Most agree that a commander has a pre-disposition to command in a certain way, and that this is the result of their experiences or their "personality". Most believe the dominant determinant to how one commands at any moment is the situation, but #3 extrapolates this to say that when the situation is very stressful, a commander will revert to form, and the true self will come out. This commander is the ex-Commander Sea Training who has seen dozens of COs under stress. One delegates more when in a situation about which he is uncertain, one will change style hopefully temporarily if his team is inexperienced, one will assess the situation and adopt a style appropriate to the situation.

Only one (#2) suggests that he remains consistent and he "makes" his leadership style (which he sees as synonymous to command style) work. This is the same commander that felt that as time becomes increasingly constrained, he does not change his style. Rather, the pace at which he demands things from his team picks up. He says that he does not bring things closer in to himself as most of the others do, he just speeds up his collaborative cycle.

Subject #1 suggests that many people change when they become a commander – that they intend or would like to command in a certain way but when they get command they change. He suggests that this is due to them not being comfortable letting go. Therefore there is an aspect of command that is having to let others do things for which you are responsible.



Does command style vary with level of command?

Subject #2

Even higher level cdrs know their staff very well. That is important to me.

Subject #3

Yes but the macro style of leadership never changes.

Interviewer Comments

None



Please compare the situations presented in terms of command style and identify command challenges of each.

Scenario #1 - Fishpat

Subject #1

Function of going out there is serving another dept, must be sensitive to what other dept wants to achieve and from that provide insight and advice to what you bring to picture to help achieve goals. Consensus driven operation. Not overly challenging. Must think about spirits and motivation of company. Use opportunity to conduct departmental work. Much more of a team effort and looking more towards fisheries environments dictating where we're going to go, etc. Impact of ship heavy in one dept. more likely to delegate to subordinates and also DFO.

Subject #2

Safety of ship & guys & DFO, maintaining focus, interest

Subject #3

1st CIO, reporting, safe finding and safe boarding, potential for small arms fire.

Subject #4

locating a target, collaborative support with DFO, deal with mundane nature of mission with team (focus team). Must be ready if anything happens. Overcoming inertia (must maintain determination) and complacency is important. Must think about SAR and the fact that your entire world can turn around in a moment's notice, fuel, time/space, coordinates, etc. Biggest job is to get team and DFO and put plan together and forge ahead, get NAFO guys in. Need to exchange information quickly.

Interviewer Comments

Delegate heavily, challenge is to keep team motivated and alert in mundane operation, and to keep people safe



Scenario #2 – operational theatre with no external warfare commander duties

Subject #1

Biggest thing is lives are at stake now, increased liability, tend to hold cards closer to chest to make sure things done certainly, more defined on sticking with a course of action, less delegation b/c of lives at stake. May change as become more comfortable with evolution. But at beginning, a lot more in the weeds and a lot stronger of vido power to say how we're going to go.

Subject #2

Keeping ship safe, maintaining focus b/c no imminent threat, maintaining picture

Subject #3

More challenging b/c potential adversary is Iranian, can't think like him, rational decision making is different, trying to control team and get them to do something that may not be logical to them. Style really comes out here b/c if you become uncomfortable, the team becomes uncomfortable. It is contagious

Subject #4

Maintaining operational focus. Not warfare cdr but focus of team must be on contributing to picture and support cause and be ready to step in whenever it's required. Vigilance in all respect is very important in this type of operation. Being ready for unexpected. Threat knowledge training. Pace of internal training and what we're trying to achieve. Make sure entire ship's company understands what we're doing. Internal information campaign. So when new info comes it can't be misconstrued and rumours get nipped in the bud.

Interviewer Comments

Common themes are vigilance and managing the team's attitudes (level of mental comfort, rumours).

#1 suggests he begins to bring things closer to his own chest in this scenario, tends toward a "1" type of commander. This is generally echoed in the survey results for 3 of the 4 command style elements. Note that generally speaking there is a leftward shift between the fishpat and this scenario for leadership, decision making and delegation.

Of interest, Orders style went to the left for two, and to the right for 2. The two that went to the right are the ones I would personally describe as the least technically inclined, both in terms of technology and the application of tactics. One wonders if this tendency is because they are not comfortable getting into the "technical" (technology and tactics) weeds required to provide more explicit orders.



Scenario #3 – operational theatre with external warfare commander duties

Subject #1

Changes again b/c mission has changed slightly. Also responsible b/c need input of other nationalities and taken on comd role to deal with task. Would be more sensitive to ensure that there's great experience in other assets. Would expect good dialogue not only b/w CO's but also ORO's. Introduces more of a consensus nature again b/c responsibility for other ships as well. What happens when there's a conflict b/w what your internal and external assets are recommending? Ultimately if time wasn't an issue, want to hear why b/c there may be something that's missed. Man in charge has say but would be an error to outright neglect what someone says to you. You would have a build up of the competencies of different units and make decisions accordingly. Learn lessons for next time.

Subject #2

Concerned with other units and keeping CTG informed. Would still do same amount of delegation within own team but QA might be a little bit tighter (i.e. regular checks). Level of attention must be a little bit more focused. Would tend to retain as much responsibility as possible within ship.

Subject #3

ASW intentions would be very clear. Need to put out your boundaries and give clear direction b/c it could happen outside of your ship so need to make directions very clear. Specific actions to be taken based on intentions. If there was fighting, would move more toward a 5. Therefore planning would be a 1 and execution would be a 5.

Subject #4

Maintaining state of vigilance. Being consort you have more latitude but generally the same as being the warfare cdr. Warfare cdr must read team in terms of the delegation you're going to allow based on their experience. Going to take on other units so scale of responsibility is greater. Consequences are greater. When consequence of error grows, less tendency to delegate.

Interviewer Comments

Quite a bit of variety here. Most tend to give more latitude toward other commanders with respect to action they take at any moment, providing it is within carefully crafted and detailed written orders (OPTASK ASW or ASW SUP).

#4 mentions would consider less leeway for his own internal team in this situation, especially if they are not so experienced. Not surprising given the fact that he and his team are responsible for others.

Of interest, #2, who tends to want to delegate a lot and be very inclusive, brings responsibilities closer to him in this situation.



Please identify likely differences in performance outcomes as a consequence of using different command styles in the different situations.

Cognitive workload

Subject #1

Closer you get to 1, more ownership of situation so it now becomes your decisions so much higher demand on your own resources.

Subject #2

Type 1 cdr, requires more cognitive workload

Subject #3

A 1 has to be much brighter than a 5. If you're a 1, what happens when he's dead? Cognitive workload of team – if a cdr is a 1, more stressful on team. A good XO will work harder b/c he has to do his job but also has to guess what the cdr wants. Basically has to do two jobs

Subject #4

1 has a greater workload – less sleep, more involved. Even a more collaborative approach, you don't switch off need to have critical analysis of whether you're going to meet objectives

Interviewer Comments

All agree that cognitive workload is higher when tend toward a "1". #3 suggests a (good) "1" must be brighter than a (good) 5, but a "1" may build in less redundancy in the event he is indisposed. #s 1 and 3 allude to this unavailability due to sleep deprivation, exhaustion due to higher demand on own resources



Team Performance

Subject #1

If you measure it as far as if the team is successful, will be measured as talents of leader as you get towards 1. Team success = leader success. As you go toward consensus building, will get into situations where you may go down a wrong path but you go down that path together and probably you as a cdr may see some of the falling but would go along with it. Responsibility of cdr to train his team – also to learn from their mistakes.

Subject #2

With complexity of systems we have, if don't build team and give them responsibility, will have problems. Need to develop team and find who you can rely on.

Subject #3

A 5 will get better teamwork almost all the time.

Subject #4

Neutral in terms of team performance. Depends on situation. Need to select what's most appropriate for environment

Interviewer Comments

Interesting, the one who tends to depend on the team the least also defends that by saying that team performance is not dependent on command style (#4). Others generally feel that involving the team as much as possible, consistently through training opportunities and in operations, results will be better. Suggestion that by being inclusive all of the time will better prepare team for action, and will tell you who you can depend on in action. #4 seems to agree somewhat with what #1 says in terms of team success = leader success, although he reiterates that one chooses the best style for the situation. He just seems to demonstrate that when the situation becomes more demanding, threatening etc, he tends to take more on himself.



Success of task / mission

Subject #1

difference b/w team performance and mission success. Can be satisfied with your attempt to succeed. Success in attempt can mean more than mission success. Tend to believe that consensus building and openness in command leads to better team performance. Better product all around, more pleasing experience.

Subject #3

probably just two ways of getting to the end. 1's are bright enough to carry everyone to the end and sometimes get there quicker although team may be behind. If you're concerned about the team aspect, it may be slower to get there. The problem with 1 is what happens when he's dead? Therefore there are short term and long term differences. In the long run, definitely more advantage to being a 5.

Subject #4

depends on the situation. Neutral in terms of achieving the aim and team performance

Interviewer Comments

#s 1 and 3 agree on the advantages of long term inclusiveness of the team. Maybe in the long term (training, non-critical tasks/missions) it is better to include and build team, but in the short run (immediate mission/battle) one chooses what works for him. If the demand is short lived and he survives, maybe a "1" can be as good as if not better than a "5". Problem is, that if the demands are longer term or if the "1" is put out of action, the team will be hard pressed to carry on. Given that in modern warfare, the higher commanders tend to be more physically secure (the Admiral is probably safer than the frigate CO sent out to fight the sub), maybe a "1" is less risky the higher you go up the chain, but is riskier at the lower levels.



Common Intent

Subject #1

when people are aware of what's expected of them and feel like they're being competently used to achieve that objective, will get to more successful position in the end. (i.e. "5")

Subject #3

if you're a subordinate of a 5, you have a better understanding b/c cdr articulates the problem better and where you fit into that plan. Most 1's are bright enough to communicate very well but subordinates may not understand where they fit in the grand scheme.

**Maybe continuity should be an outcome??*

Subject #4

1 would eliminate ambiguity greater than 5. May be undercutting some initiative. In terms of communicating what their job is and the expectations are

Interviewer Comments

A significant dichotomy between #s 1 & 3, and #4. Which is right? I would think that, again, a #1" is fine as long as you stay in the game and there are no sudden changes to the plan or situation. What happens when things change and the last set of detailed orders can't apply?



Information flow

Subject #1

1 is not an info flow. Bottleneck is one person. You run risk of setting up more bottle necks as move toward 5 so maybe flow will be slowed down.

Subject #2

A cdr that tended toward 1 would have a bottleneck

Subject #3

Significant point. Being a 1 is a bottleneck b/c can't be "on" all the time (e.g. when sleeping). Must delegate some but b/c of all the information he has to process, more potential for bottleneck. Technology that's coming favours the 1's

Subject #4

Poor information flow has caused me to change from a 5 to a 1. Intensity depends on environment. Laissez faire leader may have his role in ops alongside but may be counter-productive in other ways

Interviewer Comments

Again, a significant difference between #s1-3, and #4. Most see a "1" as a bottleneck, whereas #4 sees going to a "1" as a solution to poor information flow.



General

Subject #1

Except in cases where time is critical, outcomes tend to be favorable for cdrs that are more open and consensus building, especially for longer outcomes.

More opportunity to learn from experience – very healthy when an out of the box solution is introduced. Happens with more 5 style.

Interviewer Comments

I can't help but reiterate that the topic of Command Styles is so broad that a focus has to be determined. Most tend to agree that the more time you have (presumably during the planning and transit phases, and then perhaps during routine operations with no immediate threat) an inclusive, delegating, consensus builder is best. There is significant disagreement on whether a "1" or "5" is best as things heat up.

Maybe there are three (at least) potential areas of focus in terms of command styles and their impact on outcomes, and they are related to time and threat:

1. Lots of time, no threat (planning/transit)
 - CO fatigue not an issue
 - Less than perfect first action fully recoverable
 - Opportunity to train/develop team
2. Sufficient time, no immediate threat (routine operations)
 - CO fatigue a significant issue over extended ops
 - Less than perfect first action probably recoverable
 - Team getting valuable practical experience, but how are they being prepared for uncertainty?
3. Little time, immediate threat (battle)
 - CO fatigue not usually a factor unless rare, protracted action
 - Less than perfect action could be fatal

Team executes what they know at that point



PHASE 2 – Ratings of Potential Style Precursors

Were there any factors that stuck out in your mind?

Subject #2

Intellect interesting – USN would prefer to lose top and bottom third from USNA – keep middle third Top third too smart, bottom level too not smart.

Don't need technical skills too much, need communication. Credibility closely linked to personal authority.

Interviewer Comments

Most comments from this question better placed in other categories



Were there any factors that you completely did not agree with or didn't even understand why they were on the questionnaire?

Subject #1

There were no surprises here

Subject #2

No, but education and technology he feels are not important. Educational level good to highlight because not important

Subject #3

Subject #4

Education – liberal arts degree not req'd for command for example.

Interviewer Comments

Education came out as not important to most.



Was there a particular category of factors that you think have the greatest influence on a Cdr's command style?

Subject #1

Cdr not a Cdr without a team. Technical experience of team is critical to fill in Cdr's lack of expertise. CO is the facilitator, team expertise is critical. Team awareness important – sometimes crew doesn't know what's going on (subs especially). Can be a very important patrol with crew not understanding. Have to understand how not to screw up mission – do your job to best ability but need not know highest element of . Subs a bit unique in that team sit awareness not always so important. Technical / system knowledge, trust critical.

Subject #2

Characteristics of Commander, but don't command in isolation so maybe a moot point. Maybe team if any

Subject #3

Team and context are about equal as most important. Remember that the char of a team may change in battle, so can't necessarily count on that. Context the most.

Subject #4

Team, context then commander in that order. If there's a default style, then the char of cdr would dominate, but even then, the cdr has to be dynamic.

Interviewer Comments

Interesting #3's comment on the characteristics of the team might change in battle due to unanticipated reactions to stress, fear. Team and context seems to be most important.



What about the least influence on a Cdr's command style?

Subject #1

Personal backgrounds not important. Education not that important – training is important

Subject #2

Education, technology

Subject #3

Organization is a precursor so let's get rid of it. Char of cdr leads to a default style so let's not focus on that

Interviewer Comments

None



Characteristics of the Org

Subject #1

Responsibility jumped out at him. Authority is given, responsibility is accepted. Sense of obligation. Command structure, asset mix, team roles more important than philosophy & history. Have to sensitive to different cultures, but not an earth mover. History/tradition is window dressing. Ultimately the mission takes primacy. More dependent on the team than on history. Sub community tended to be elitist, recent move to assimilate the sub culture into larger navy culture. Change from sub squadron to MOG 5.

Subject #2

Figures about 1 in 4 get command now, used to 1 in 2

Command structure extremely important, need to nurture this. Bottom line, there are circumstances in differing strengths of team that would make him change style

Subject #3

Whole process probably results in even distribution of 1s to 5s. Process doesn't really change style at all. Asset mix assigned – ext important, experience and capabilities of external assets will dictate how work with them, could be a type 1 internal and type 5 external or vice versa. Culture through tradition vital – past bosses greatly impacted, there is a maritime culture that allows cdr's different styles to work.

Subject #4

Culture has changed over last 20 yrs, defines spectrum of what's acceptable. Puts bookends on extremes of acceptable command style, and influences command style.

Interviewer Comments

None



Characteristics of the Context

Subject #1

Most extremely important. As risk goes up more ownership taken by Cdr, no room for failure. Want to know more. Decision complexity plays a lot on command style. ROE so complex, has become more important in last 10 years. Battle has real impact on comfort level of delegation – new things will come up that have never experienced so tend toward 5 if have the time, but 1 if have little time.

Subject #2

72-77 extremely important . Time available is key. As time goes down and risk goes up would demand more from team, QA might go up (oversight) while still would delegate

Subject #3

Risk is risk , so not different. Things you don't have influence over won't change your style (serviceability of assets for example). ROE – coming closer to a 1 as the first shot in a battle is approaching. But.. train as you'd fight so try not to change.

Interviewer Comments

None



Characteristics of the Team

Subject #1

Subject #2

29 – get to know personalities and exploit the guys that have influence.

38 – fatigue. Would change the way we're doing business, not my command style. Make the environment conducive to the way I command

45 – trust in commander

46 – familiarity could be taken to mean slap on the back, or knowing how they think

Understanding of the mission important and they need to feel that they are contributing to the mission.

Subject #3

Tech competence the higher team has the more type 5 you can be, need to be more type 1 if they don't. Pers of team less so because there is such an extreme anyway, all the time. Trg – team trg would drive him to a 1 if team not coming together (bad if cdr is stepping into others' shorts). Op experience of team closely related to trg. When acting as a 1 you are trying to work the problem such that a type 1 can become a type 5 (in his own case). One could argue that a Type 1 may think he always has a relatively poor team. Fatigue/stress among team – cdr needs to be protective (type 5) if CTG onboard. But would take on more or rearrange workload to protect them. Trust in cdr – if don't know him, wouldn't have to change, maybe speak more so they can get to know him. If have lost trust, might have to become bit more type 1 to adjust (this is almost from the perspective of cdr's trust in team, where he would really have to be very closely a monitor to get it right). From other perspective, he would have to prove to the team he has ability to do the job, so more type 1. Crew doesn't need to know all aspects of mission, but msut tend more or less toward 1 if team less involved or aware in mission

Subject #4

Personalities increases load – work harder to not let it show. Education and pers background – not important, differences are so broad generally

Interviewer Comments

None

Characteristics of the Commander

Subject #1

He was trying to separate the outcome from the characteristics of the Cdr. There are some fundamentals brought to bear that are part of your personal background. Not learned, they are innate. Other ones are learned or a result of the situation (fatigue). The core element is that the commander brings from his own inherent background/experience. The foundation (intellect, personality etc are the base). His own personal most important aspect is respect (of others and their respect in him). This is his base starting point toward the way he exercises command. He sees this as emotional capability. Why was it hard> - distinction between "somewhat" important and other categories. Difference between sub command selection is there is a black & white test – he prefers this vs the mystery of how surface commanders are anointed. There is higher credibility among the crew of a sub that their CO is credible. This is all related to the "training for command" factor. Others that differ between sub/surf? More a power of 1 in a sub than in surface ship. More unique experience in a sub CO. Sub CO will have most operational experience in the boat, not so with surface ship. A lot of factors depend on the situation. Sit awareness even further to the left than extreme. Some guys just don't get it. Even more important in a sub. Training done to prepare a sub CO makes him better prepared to interpret sit awareness than surface ship CO preps. First three factors in Char of Cdr are most critical. Ability to deal with stress, fatigue are so critical. Respect, integrity, balance but moving ahead with mission critical – not too aggressive, not too conservative. Thinks we are right track with these factors. Personal background (hard to leave family etc factors behind). Personality very important

Subject #3

Personality is about respect, easier to disrespect someone you don't like. Personality has big impact on ship's coy. Doesn't think that type of personality generally is effective, although ack that others may argue that fact. Personal background – means right back to where he's from, if not brought up to be respectful could negatively impact, who you are is what you are. Training – looked at individual training, team trg is even more important. Fatigue extremely important – closely tracked CO's fatigue when Cdr Sea Trg. When a cdr is fatigued he has to recognize his limitations – the smart ones will change aspects of their style to adjust (the real smart cdr doesn't let himself get tired). A tired cdr should delegate more, but by then its almost to late.

Trust in team members – trust absolutely one of most important things, debilitating if you don't have it. Team has to "blindly" trust CO in order to follow orders without question. Type 1 cdr isn't that way due to lack of trust, rather a recognition on their part of their superior capability. Situation awareness - ext important, if a type 5, become type 1 to get picture back to where you want it

Subject #4

Personality – you can overcome aspects of personality to be successful. Not over-riding factor, has seen effective cdrs with wide variety of personalities. Sometimes personality disposition may make it less comfortable/desirable to adopt a certain style. Emotional – means having control of won emotions. Must have intellect dominate emotions. Don't initiate action merely on emotion. Draw on emotional capability to carry you through sometimes. Public display of emotion can be a tool (if capt doesn't care that's bad). 1 is stronger emotionally, more control, if you are a 1 and not in control of emotions you're in trouble. Education level & focus not important, has seen both with higher or not education. Pers background – experience outside the navy, somewhat important. Fatigue – 5 may be less prone to fatigue, as a 1, he tended to become more "barky" when tired. Stress & workload – have to understand limits.

Interviewer Comments

None



PHASE 3 – Open Discussion

Command styles that work best in certain situations. Is command style static or dynamic? Default command style?

Subject #1

Dynamic – depends on workload, situation, etc. Complexity of decisions or workload volume – curtain of unknown can become overwhelming to everyone. When that happens it is easy to delegate less however you also want to delegate more. Likely would be more “5” in some issues but “1” in other issues. Will default to relying on his team

Subject #2

Relatively constant. Don't radically switch command styles. If they did, they would not be an effective leader. Would lose credibility of troops. Disadvantages to radically changing command styles. But can speed up decision-making process accordingly. Pace of information being demanded can change without the command style changing.

Interviewer Comments

All but #2 agree that it is either necessary or advantageous to modify command style depending on the situation or context. Sure enough, #2 scored the lowest in terms of impact of the context on command style. He suggests that you can retain the same command style (in his case he delegates and depends heavily on team input), but can just increase the pace of the input cycle. I'm not sure that this isn't in fact a change in style, because he is in fact requiring them to go to him for decisions and/or provide more and more updates and recommendations. As he demands this more frequently I would expect that the team changes to services his needs and does not have the time or understanding that they can act independently.

#4 stressed throughout interview that he has a range of command styles that he adjusts depending on the immediate context. He sees this as a strength, and would reject the idea of a static command style. Conversely, #3 sees his relatively static (inclusive, delegating) style as an advantage, and if the nature of the context, particularly his team at any time, means that he is forced to take more on himself, he will in the long term work to train and develop his team such that he can revert back to his preferred style. So #3 changes the context to meet his style, and #4 changes his style to meet the context.

#1 suggested that as time becomes more pressing and the threat/consequence scale moves up, the commander will take more on himself. He is used to this as a sub CO, where the nature of the environment means that the CO has the most responsibility (he is necessarily the most knowledgeable about tactics and the situation, the latter because he's the only one looking out the periscope)

Implications for Decision aid

Subject #1

How would you want it to help you out?

Something that would help me understand risk in a comparative sense. Risk associated with different COAs – probability based. More of a planning tool. Something that looks after the mundane and human deals with complex situations.

Subject #2

"Decision aid would have no use for me."

I don't want to look at the computer, I want to look at a person's face.

Subject #3

If there was a CDA, would it need to be flexible enough for the cdr to program his style – cdr's style is going to change, so maybe make it so when in this mode, access, or flexible enough to take whole spectrum into account. Would you want final solution, list of recommendations, or raw info better presented – YES. Ultimately, the cdr has to feel right about the decision, so maybe final recommendation isn't best. If recommendations are given, the CDA has to provide how it arrived at them, or the cdr has to know algorithms. Likes idea of a visual CDA (picture worth a thousand words)

Subject #4

Does it need to be flexible depending on the nature (1-5) of cdr? In the past we've had cdrs that can't draw info from the CCS, others easily get it. Right now cdrs adapt to the technology. It will have to be right or I'll spend all my time fighting the CDA

Interviewer Comments

Lots of interesting stuff here. The implications of #2 are that if a CDA is developed, there is a risk if it is developed targeting the CO, and if it is critical to the process. If it's focused on the CO and the CO lacks the inclination to use it, then is the process degraded? Even future COs who will have had most likely a tour as an ORO in a HAL or IRO class, will be coming from a desk job so will be rusty. As a CO they tend to not spend hours in Ops as an ORO would, so would have limited opportunity to attain skills on the use of the CDA.

Conversely, a CO who is inclined to use it has to understand how it works or they could be led down the garden path. A perfect example of this was with my first CO in HALIFAX, who knew quite a bit about the CCS and was very keen to sit at his consol as an integral member of the combat team. He liked the CDAs built into the CCS-330 and wanted to use them. One of these was a course recommendation for setting the ship up to get into the ideal firing position for a torpedo shot against a sub. While I was setting up on a course recommended by the ASWC, he was ordering a course about 90 degrees different based on the CDA. Argument ensued and time was lost. What he did not understand was that: a) the torpedo firing template used in the CCS was wrong and (maybe more importantly) b) the CCS calculated its course based on available torpedo tubes, meaning the tubes that have torpedoes in them and are set to fire. During exercises we do not have live torpedoes in the tubes so we use a test set to fool the CCS into thinking they are loaded. Each ship carries one test set, so it can only be fit on the port OR stbd tubes. In this case it was fit on the opposite side to what would be the best shot, so the CCS was recommending a shot that was best only because of artificiality. He did not know this because he didn't understand how the CDA worked.

Most agreed with the idea that a CDA should present a shopping list of some sort, with easily understood explanations of background info used to develop the list. Generally they don't want the "big red button" lights up when its time to fire. They want to be able to judge the validity of the CDA info. #1 wanted the CDA to do less critical stuff to free up th4e human mind to deal with the more critical, complex stuff. Similar to sonar automation taking care of sanitizing the array so the operators can search for other targets. All expressed some concern about trust in a CDA. If it can't be trusted (presumably based on observed performance), then they will ignore it or fight it. So if scientists are going to develop a CDA, it better work. This points toward either a work volume-related CDA doing relatively straight-forward tasks, or a CDA that presents its reasoning in some detail. #1 really liked the idea of a CDA for planning, showing % of various factors relating to risk or success etc.

Next steps

Subject #1

Vested requirements of command – when left to your own devices...

Big part is to educate people about command. Pigeau was a breath of fresh air on command.

Need to start to look at legal issues that cdrs deal with. Liability associated with being a commander. What protections do you have?

Nature of organisation as a factor in command

*Commanders not trained to be experts in ROEs

Subject #2

Contact CFC for online resources – searches for literature that are there. Staff college does 3 or 4 big projects every year.

Receptive to areas of research for students to do papers on.

Subject #3

Where to go from here? Create a CDA for cdrs to use. Visual aid, display to help visualize.

Subject #4

4 elements we've identified not adequate. We don't have cookie cutter molds. So there's different styles, so what? Is one better than the other? If so, so what?

Interviewer Comments

No clear direction here, but I find #4 interesting. What is the goal (focus) of this strain of study?



How command / command style is cultured in the Canadian Navy?

Subject #2

Organization has role to play. Navy has evolved significantly – issues of empowerment, quality of life.
CS developed through training and general culture within the navy.
Leadership style of past cdrs rubs off on you.

Interviewer Comments

Threads of discussion around this topic. Most agreed that they absorb culture just from being immersed in it. They watch other COs, they see what they like and don't like and in some way put that into developing their own style. But ultimately these will just influence to a greater or lesser degree their own personality tendencies when it comes to command style. In one can admire that a CO delegates effectively, but that doesn't mean you can bring yourself to delegate.

UNCLASSIFIED

DOCUMENT CONTROL DATA <small>(Security classification of the title, body of abstract and indexing annotation must be entered when the overall document is classified)</small>		
1. ORIGINATOR (The name and address of the organization preparing the document, Organizations for whom the document was prepared, e.g. Centre sponsoring a contractor's document, or tasking agency, are entered in section 8.) Publishing: DRDC Toronto Performing: Humansystems Inc., 111 Farquhar St., Guelph, ON, N1H 3N4 Monitoring: Contracting:		2. SECURITY CLASSIFICATION <small>(Overall security classification of the document including special warning terms if applicable.)</small> UNCLASSIFIED
3. TITLE (The complete document title as indicated on the title page. Its classification is indicated by the appropriate abbreviation (S, C, R, or U) in parenthesis at the end of the title) Command styles in the Canadian Navy: Preliminary investigation (U)		
4. AUTHORS (First name, middle initial and last name. If military, show rank, e.g. Maj. John E. Doe.) R.D.G. Webb; Lora E. Bruyn; A. Roy Keeble		
5. DATE OF PUBLICATION <small>(Month and year of publication of document.)</small> April 2004	6a NO. OF PAGES <small>(Total containing information, including Annexes, Appendices, etc.)</small> 81	6b. NO. OF REFS <small>(Total cited in document.)</small>
7. DESCRIPTIVE NOTES (The category of the document, e.g. technical report, technical note or memorandum. If appropriate, enter the type of document, e.g. interim, progress, summary, annual or final. Give the inclusive dates when a specific reporting period is covered.) Contract Report		
8. SPONSORING ACTIVITY (The names of the department project office or laboratory sponsoring the research and development – include address.) Sponsoring: Tasking:		
9a. PROJECT OR GRANT NO. (If appropriate, the applicable research and development project or grant under which the document was written. Please specify whether project or grant.) 11b15	9b. CONTRACT NO. (If appropriate, the applicable number under which the document was written.)	
10a. ORIGINATOR'S DOCUMENT NUMBER (The official document number by which the document is identified by the originating activity. This number must be unique to this document) DRDC Toronto CR 2004-141	10b. OTHER DOCUMENT NO(s). (Any other numbers under which may be assigned this document either by the originator or by the sponsor.)	
11. DOCUMENT AVAILABILITY (Any limitations on the dissemination of the document, other than those imposed by security classification.) Unlimited distribution		
12. DOCUMENT ANNOUNCEMENT (Any limitation to the bibliographic announcement of this document. This will normally correspond to the Document Availability (11). However, when further distribution (beyond the audience specified in (11) is possible, a wider announcement audience may be selected.) Unlimited announcement		

UNCLASSIFIED

UNCLASSIFIED

DOCUMENT CONTROL DATA

(Security classification of the title, body of abstract and indexing annotation must be entered when the overall document is classified)

13. **ABSTRACT** (A brief and factual summary of the document. It may also appear elsewhere in the body of the document itself. It is highly desirable that the abstract of classified documents be unclassified. Each paragraph of the abstract shall begin with an indication of the security classification of the information in the paragraph (unless the document itself is unclassified) represented as (S), (C), (R), or (U). It is not necessary to include here abstracts in both official languages unless the text is bilingual.)

(U) This report examines the concept of Naval Command Styles based on a review of readily available literature and interviews with four naval commanders. The work resulted in the development of a definition of Command Style, a concept map and broad recommendations for decision support systems (DSS). The document review identified four main overlapping concepts (Decision style; Leadership style; Delegation style; and Orders style) and four groups of factors affecting the choice or appropriateness of a given style (the characteristics of the Commander, the Team, the Context, and the Organisation). Interviewees compared three mission scenarios varying in risk, tempo and familiarity and identified their likely style for each scenario and rated the importance of the different factors to the choice of style. Interviewees readily recognised the concept of a command style and results suggest a core style that contrasts a goal or intent oriented approach with a task or action oriented approach. Reported styles tended to become more task oriented with inexperienced teams and increased risk, tempo and stress. DSS implications include the need to focus on the command team rather than the commander alone and to be adaptable to support team information exchange needs related to each style i.e. both goal and task oriented. For instance, as a common team mental model develops, team information exchange may need to become more goal based. Research questions include the following. Which styles are more effective and why? What factors affect the suitability and choice of style? Can styles be trained? How are different styles best supported?

14. **KEYWORDS, DESCRIPTORS or IDENTIFIERS** (Technically meaningful terms or short phrases that characterize a document and could be helpful in cataloguing the document. They should be selected so that no security classification is required. Identifiers, such as equipment model designation, trade name, military project code name, geographic location may also be included. If possible keywords should be selected from a published thesaurus, e.g. Thesaurus of Engineering and Scientific Terms (TEST) and that thesaurus identified. If it is not possible to select indexing terms which are Unclassified, the classification of each should be indicated as with the title.)

(U) naval command styles; decision support systems; defining command styles; command styles; mission management; leadership style; mission scenarios; navy

UNCLASSIFIED