



The Human Terrain of NCO

Leoni Warne

*Defence Science and Technology Organisation
DSTO Fern Hill Park, Department of Defence, Canberra,
Australia*

Presented by Celina Pascoe

13th ICCRTS
"C2 for Complex Endeavors"
June 2008





Outline of Presentation

- **Acknowledgements**
- **The Human Dimension of NCO**
- **Findings from Middle East Area of Operations (MEAO) Interview Program**
- **A Model of the Human Dimension**
- **Questions**



Acknowledgements

The content of this paper (and presentation) is derived from the work of the Human Dimension Concepts Team in Joint Operations Division, DSTO, and the author would like to acknowledge input from all team members involved in this work: Irena Ali, Celina Pascoe, Mark Lewis, Derek Bopping, Gavin Hazel, Brigit Maguire and Dennis Hart.





The Human Terrain of NCO: What is it all about in the Australian Context?

The Human Dimension (HD) is based on:

- Professional mastery
- Mission command

It is about the way people collaborate to share their awareness of the situation so they can fight more effectively (become networkers)

Requirements:

- high standard of ED&T, doctrine, organisation, leadership
- trust between warfighters across different levels, and with their supporting agencies

(Australian Defence Force, 2004, p. 27)



The Human Dimension is...

Concerned with the role, capabilities, behaviour, and impact of humans on the full spectrum of warfighting and the battlespace

Based on the psychological, cultural, behavioural, and other human attributes that influence

- intentional activity
- decision making
- the flow of information, and
- the interpretation of information by individuals or groups

(Australian Defence Force, 2004, p. 27)



The Human Terrain of NCO is Networker Centric Operations

“The importance of the ‘networker’ over the ‘network’ emerged, thus introducing concepts of ‘Networker Centric Warfare’ and the ‘Networker at War’ ”

“Nothing brand new here but the power of the idea and the possibility it offers to transfer our consideration of capability from technology-centric to people-centric warrants further work.”

*Lieutenant General David Hurley, Australia’s Defence Capabilities
Priorities, 2005*

Human Dimension Studies Research Methods

- **Evaluation of extant literature***
- **Review of extant metrics, frameworks & Instruments (eg NCO CF)**
- **Use of existing ADF data sources**
- **Survey and Interviews of ADF personnel**
- **Observations of Exercises**
- **Modelling Results**
- **Go Team Simulation**

* Warne, L., Ali, I., Bopping, D., Hart, D. and C. Pascoe. (2004) *The Network Centric Warrior: The Human Dimension of Network Centric Warfare (U)* DSTO Report CR-0373, Defence Systems Analysis Division, ISL, Defence Science and Technology Organisation, Department of Defence, Edinburgh, S.A. (Approved for Public Release).



MEAO Interview Program 2003-2007

Sample

- 130 personnel returned from Middle East
- Stratified across ranks, Services, gender

Interview Focus areas

- Pre-deployment preparation & training
- Duties whilst deployed
- Decision-making processes
- C2 arrangements
- Interdependence
- Information gathering
- Information sharing
- Communication flows
- Skills and competencies
- Lessons learned



Interview Program – Overview of Primary Findings

- **Some evidence of devolved command**
- **Importance of trust & relationship building**
- **Critical role of informal contacts/ informal social networks**
- **Knowledge of coalition cultures invaluable**
- **Prior joint experience & training critical**
- **Variability in pre-deployment preparation**
- **Team work & team building identified as crucial skills**
- **Reputation of ADF core to its ‘acceptance’**
- **Expansion of non-traditional roles**
- **Increased need to deal with non-military organisations**
- **Variable C2 arrangements**



Military / Service culture

- **Strong ‘in-group’ identity characterised effective cooperation.**
- **Informal networks provided knowledge of other military/Service cultures - highly valuable.**
- **‘Clashes’ of culture associated with a lack of cooperation.**

Where new tradesmen were brought in to replace other tradesmen who finished their tours ... that is where I saw some interesting clashes, and once again, just between different cultures of bringing in other Service personnel...bringing in Air Force personnel to replace Army personnel and vice versa, and people just have different expectations on what is required.

If you need to rely on or interoperate between two different nations, it's just a matter of getting in there. You know, I suppose the trick for people who haven't worked with the US before is to understand their work ethos and culture.



Relationships & trust

- **Service/national boundaries sometime barriers.**
- **Strong personal relationships & trust underpinned collaboration.**
- **Essential for access to knowledge, information and other resources.**

It was basically good business...to keep up good relationships with the Americans. We took it as an opportunity to draw on their mass of knowledge and experience...So, to work with these guys and to take on as much information as you could, was invaluable.



Information sharing

- **Not a direct consequence of existing IT links.**
- **Face to face sharing of information preferred.**
- **Informal social linkages define preferred channels.**

Sometimes I was really nervous about [sharing information] ... my idea was firstly to get to know them. But, I did not have much time.

You would find out who's the person you need, who's got that piece of information, or may have that piece of information, or knows who knows somebody who has that piece of information. And you would just start ringing, walking, phoning. ... it was all personality based. ... the networks, in a sense, were person to person, personality based networks.



Information trust

- **Reliable Information is not necessarily guaranteed by better connectivity**

...sometimes you'd get a little bit of misinformation come through and it'd set everybody going crazy and you'd send it up through the chain and they're like, "Well, I don't know if that's true or not". So, there was a lot of stress from all levels there and then you'd have to go and try and find out whether that was the case or not.

I think that knowing the person allows you to - the fact that they knew the people and had a relationship with them definitely helped in whether or not to believe the information.



Required Human Attributes and Abilities for NCO - 1

NCO Characteristic	Required Human Attribute or Ability
Agility	Adaptable, Flexible, Cognitive skills, Sensemaking skills , Appropriate Education & Training, Empowered to make decisions , Tempo tolerance , Prior operational experience , Role certainty .
Collaboration Civilian-Military (CIMIC)	– Communication skills , Teamwork skills , Teambuilding skills , Co-operation , Understanding and trust of collaborating partners’ culture , capabilities, modes of operation and information protocols, CIMIC training experience , Relationship building skills .
Collaboration Coalition	– Communication skills Teamwork skills , Teambuilding skills , Co-operation , Understanding and trust of coalition partners’ culture , (including language sometimes) capabilities, modes of operation and information protocols, Relationship building skills .
Collaboration – Joint	Communication skills , Teamwork skills , Teambuilding skills , Co-operation , Understanding and trust of other Service partners’ capabilities and modes of operation, Joint Training Experience , Relationship building skills .

Required Human Attributes and Abilities for NCO - 2

Information Management	Ability to adapt to different technologies, Capacity to deal with information overload, Information filtering , assessment, retrieval skills, Understanding of information protocols.
Information Sharing	Communication skills, Relationship Management skills, Trust in others, Shared objectives , Co-operation, Relationship building skills, Role certainty.
Mission Command	Empowered , Education, Training, Prepared, Cognitive skills, Sensemaking skills, Information filtering, assessment, & retrieval skills, Communication skills , Trust in self and others, Confidence in self and others, Role certainty.
Professional Mastery	Education, Training, Experience, Ethos, Continuous learning, Prior operational experience.
Self-Synchronisation	Empowered, Adaptable, Education, Training, Prepared , Cognitive skills, Sensemaking skills, Information handling , Trust in self and others, Confidence in self and others, Prior operational experience, Role certainty.
Shared Situational Awareness	Education, Training, Information handling, Information filtering, Communication skills , Memory Accuracy, Information integration, Shared objectives , Cognitive skills, Sensemaking skills, Tolerance of Ambiguity, Prior operational experience, Relationship building skills, Role certainty.



HD model and measures





The HD model is based on:

Findings from empirical research and proposed theory

- military studies on team performance
- organisational behaviour / management studies on team performance
- psychology / cognitive science studies on team performance

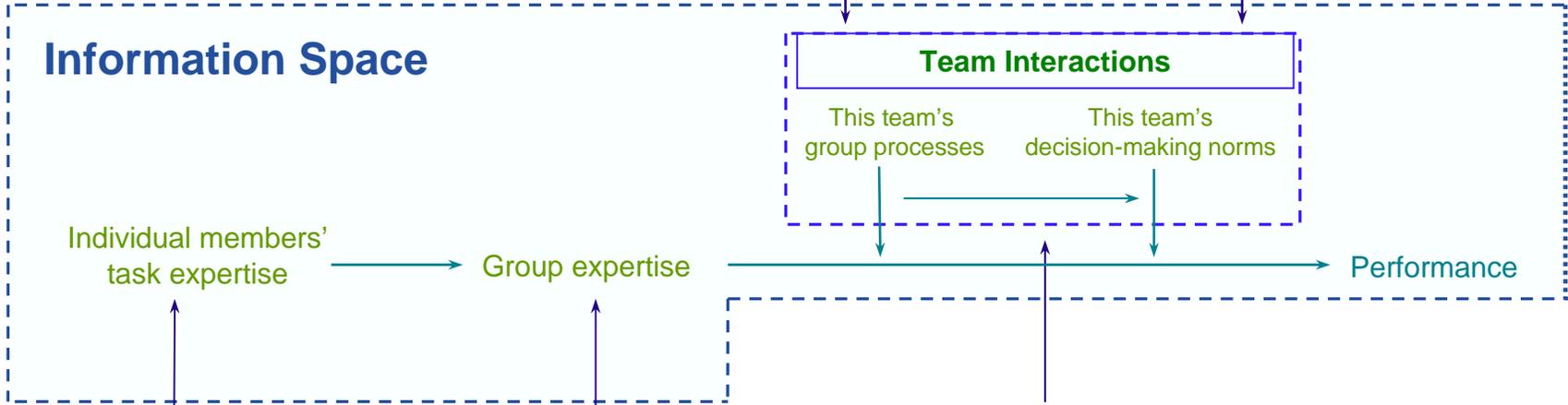
And our own previous research of

- our troops' experiences in the MEAO since 2003
- ADO personnel in joint and single service HQ between 1999-2002



Individual behaviours
 Individual sensemaking
 Sharing of information, knowledge, etc
 Balancing team- vs task- oriented behaviours

Group behaviours
 Team cohesion
 Rank-free collegial interaction
 Reciprocated sharing of information, knowledge, etc
 Mutual team awareness
 Maintenance of shared vision/Goal alignment
 Mentoring
 Balancing team- vs task-oriented behaviours
 Management and effective use of information



Individual Characteristics
 Personal body of knowledge & skills:

- Service competencies
- Operational experience (desirable)
- Information literacy
- Self-awareness
- Life skills

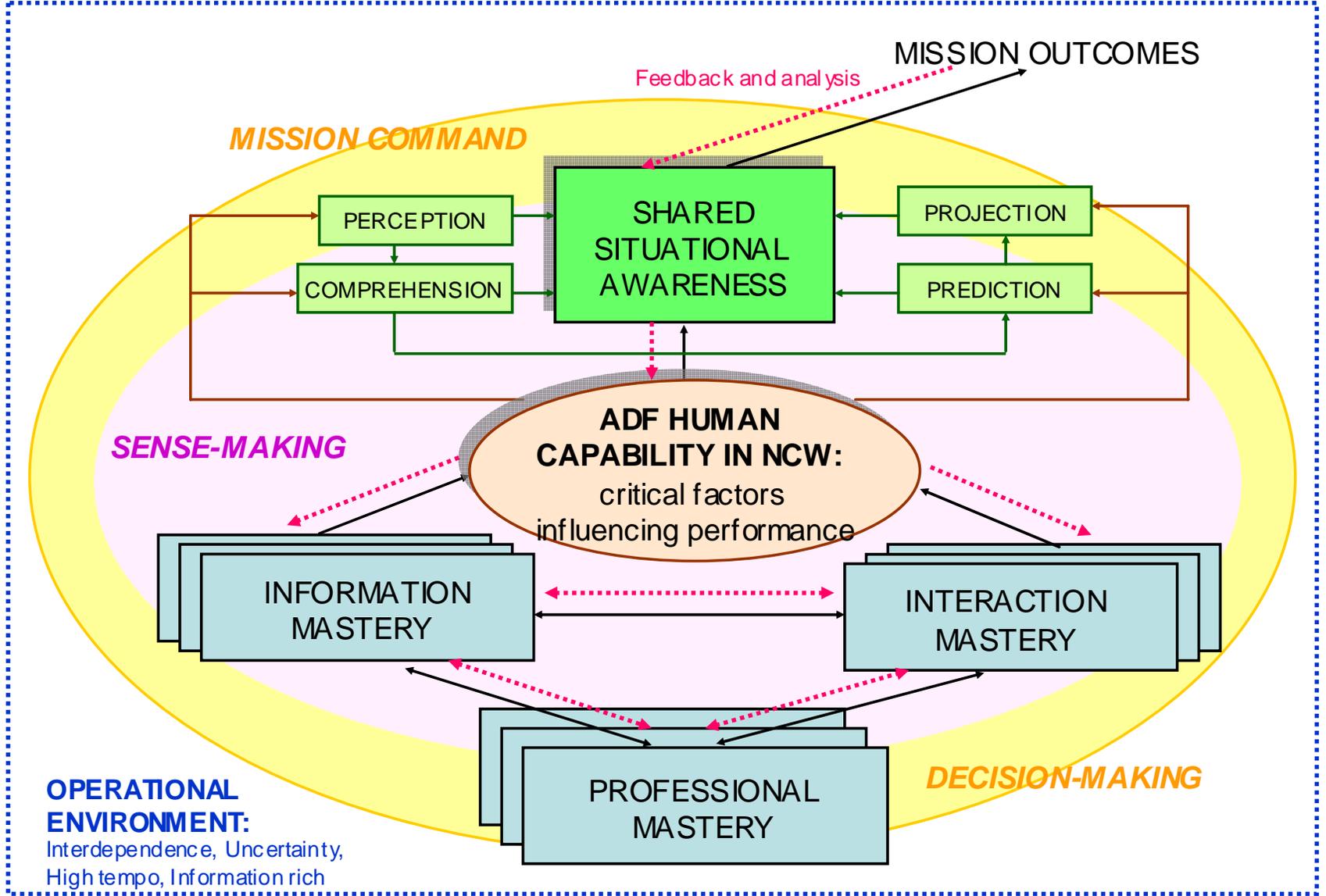
Willingness to share info, knowledge, etc
 Personal flexibility
 Tolerance of ambiguity, uncertainty
 Cultural awareness
 Risk tendency
 Military ethos
 Joint operations ethos
 Confidence in one's own abilities

Group Characteristics
 Team members' knowledge of each other
 Cumulative knowledge within team
 Collective efficacy
 Climate of openness and transparency
 Trust of team members' and their abilities
 Sense of common identity between team members

Quality of interactions

Legend
 NCO-CF
 HDCT studies
 Research on team performance
 Sauer et al model

Human Dimension Model of NCW

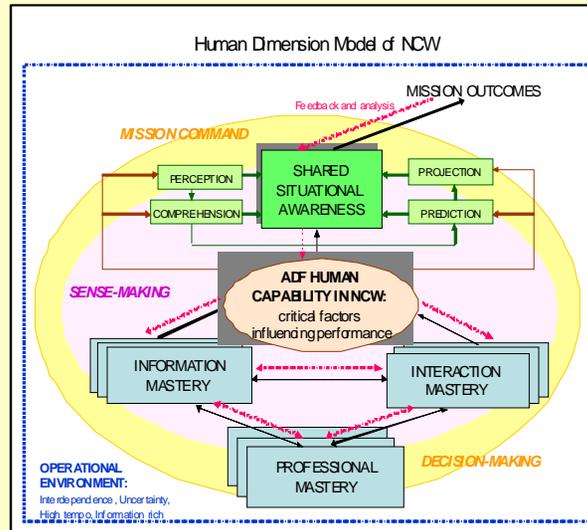




As an Instrument...

EVALUATION TOOL FOR GENERIC HUMAN DIMENSION SKILLS REQUIRED FOR NCW

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Requirements as ordered by Masteries

Human Dimension Model: Planning and Evaluation Tool by Masteries

Purpose of Evaluation:

HD Elements	Specific Requirements	Link to definitions and more information	Priority Low Medium High	Links to Sample Measures Available ?	Action Required	Remarks
Information Mastery	Ability to sort large amounts of information and redirect accordingly	▶▶		Yes		
Expertise in efficiently acquiring the appropriate information for the task at hand, via electronic, non-electronic, human and	Ability to determine the relevance of received information	▶▶		-		
	Ability to establish the reliability of information	▶▶		Yes		
	Ability to use information to assess the situation	▶▶		Yes		
	Ability to share information appropriately	▶▶		Yes		
	Willingness to share information appropriately	▶▶		-		
Interaction Mastery	Adaptability - ability to rapidly change course of action	▶▶		Yes		
Interpersonal capacities	Social awareness (ability to sense, understand and react appropriately to others)	▶▶		Yes		
	Cultural sensitivity - considering the cultural context	▶▶		Yes		
	Relationship management (the ability to inspire, influence and develop others and manage conflict)	▶▶		Yes		
	Goal alignment	▶▶		-		
Team cohesion	Ability of team members to work together	▶▶		Yes		
Team (shared)	Knowledge of fellow team members skills	▶▶		-		
	Team's shared belief in its ability to achieve the desired outcome	▶▶		Yes		
	Cultural knowledge	▶▶		Yes		
Trust	Individual's trust of team as a whole	▶▶		Yes		
	Individual's trust of another team member's competency interests)	▶▶		-		
Leadership	Willingness to mentor (behaviours that support team members' skill development)	▶▶		Yes		
	Maintenance of shared vision	▶▶		-		
	Willingness to distribute command / authority	▶▶		Yes		
	Effectiveness in communicating commander's intent	▶▶		Yes		
Open and honest team	Open communication	▶▶		-		
	Transparent decision-making	▶▶		Yes		
	Opportunity to input into decisions as appropriate	▶▶		-		
Professional Mastery	Effectiveness of Specific Training on NCW	▶▶		Yes		
NCW Service-specific competencies	Effectiveness of Exercises in preparing for NCW	▶▶		-		
	Sufficiency of National Exchange programs	▶▶		Yes		
	Self awareness (understanding one's internal states, preferences, resources)	▶▶		Yes		
Intra-personal capacities	Self management (understanding one's internal states, preferences, resources)	▶▶		-		
	Confidence in one's own abilities	▶▶		Yes		
	Tolerance of ambiguity and change	▶▶		-		
	Ability to adapt to rapidly changing circumstances	▶▶		Yes		
	Individual sensemaking	Individual awareness of the situation	▶▶		Yes	
Achieving and maintaining situational	Individual interpretation of the situation	▶▶		-		
	Decision-making ability	▶▶		Yes		
	Perceiving Skills (acquiring the available data / facts)	▶▶		Yes		
Achieving and maintaining situational	Comprehending Skills (understanding the facts in relation to one's expert knowledge of such situations)	▶▶		Yes		
	Projecting Skills (envisioning how the situation is likely to develop in the future)	▶▶		Yes		
	Predicting Skills (evaluation of how outside forces may act upon the situation to affect your projections)	▶▶		Yes		



Requirements as ordered by Masteries: Close-up

Purpose of Evaluation:

HD Elements	Specific Requirements	Link to definitions and more information	Priority Low Medium High	Links to Sample Measures Available ?	Action Required	Remarks
Information Mastery	Ability to sort large amounts of information and redirect accordingly	» —		Yes		
Expertise in efficiently acquiring the appropriate information for the task at hand, via electronic, non-electronic, human and	Ability to determine the relevance of received information	» —		-		
	Ability to establish the reliability of information	» —		Yes		
	Ability to use information to assess the situation	» —		Yes		
	Ability to share information appropriately	» —		Yes		
	Willingness to share information appropriately	» —		-		
Interaction Mastery	Adaptability - ability to rapidly change course of action	» —		Yes		
Interpersonal capacities	Social awareness (ability to sense, understand and react appropriately to others)	» —		Yes		
	Cultural sensitivity - considering the cultural context	» —		Yes		



Example of the Measures

Elements and Attributes	Source	Definition of/ Intended use for Attributes	Components of Attributes	Metrics and their Sources	NCW specific Y/N	AS specific Y/N
Adaptability (partly covered in EI – self management)	HDCT AOD	Altering a course of action in the face of changing conditions, appropriate change of action, and maintaining constructive behaviour under pressure (AOD, p12 from Brannick et al 1995)	i. Flexibility ii. Compensator behaviour iii. Dynamic reallocation of functions (AOD, p4 – adapted from Cannon-Bowers et al 1995)			
Cultural awareness / sensitivity (need to differentiate between behavioural guidelines/etiquette given as part of pre-employment preparation and cultural awareness which impacts on operational effectiveness)	HDCT	Of other Services, Coalition, host nation, CIMIC, other agencies The ability to recognize and understand the effects of culture on people’s values and behaviors. In the military context, cultural awareness can be defined as the “cognizance of cultural terrain for military operations and the connections between culture and warfighting.” Cultural awareness implies an understanding of the need to consider cultural terrain in military operations, a knowledge of which cultural factors are important for a given situation and why, and a specified level of understanding for a target culture. Military personnel with different levels and types of responsibilities (commanders versus soldiers) require different levels of cultural awareness (Wunderle, 2006)	Matching skills (look at chapter 1 of Carlopio et al 2005 – sounds like it will be good for non-ethnic culture as well) See also Report by Wunderle 2006 <i>Cultural Consideration</i> (“How and Why”) is the incorporation of generic cultural concepts in common military training—knowing how and why to study culture and where to find cultural factors and expertise. <i>Cultural Knowledge</i> (Specific Training) is exposure to the recent history of a target culture. It includes basic cultural issues such as significant groups, actors, leaders, and dynamics, as well as cultural niceties and survival language skills. <ul style="list-style-type: none"> • Geography. • History. • Religious composition. • Political structures. • Social groups (ethnic, race, tribal/clan, religious affiliations, economic partnerships, leaders, elites, followers (religious, tribal, civil, business, armed groups (pro, neutral, insurgent) • Religion (history, tenets, major branches as applicable). • Customs and social norms (verbal/nonverbal communications, etiquette, and roles of gender in society). • Culturally significant locations • Governance and laws (secular, religious, and tribal). Based on Wunderle, (2006p63-64)	Look at the Influence Dimensions Instrument (Andrawartha 2002) See intercultural interpersonal comm. literature (Slade and Lewis maybe) With regards to host nation I have operational knowledge of: <ul style="list-style-type: none"> • Cultural influences: major social or institutional factors, such as heritage, religion, traditions, and language that bind people together. • Cultural variations: styles of behaviour values and ways of thinking that are common to a culture. • Cultural manifestations: The concrete displays of a culture’s thought and behaviour, whether through its members’ view of authority, negotiation style, willingness to compromise, embracing of risk, etc Based on Wunderle, (2006p87) 		

a work in progress ...



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Discussion and questions