INTERNATIONAL RELATIONS in the CYBER AGE

The Course is in Three Parts

PART I
Structure & Process in International Relations

PART II
Theories of International Relations

Part III
Strategic Issues
Week 1  Introduction Some Basics

1. International relations
   What is that?
   Power & Politics
   Actors & Activities

2. Cyberspace
   Defined
   Where is the politics?
   Where is the International?

3. Changing Parameters
   Legacies of 20\textsuperscript{th} C.
   Realities of 21\textsuperscript{st} C.

4. Theory Matters & Matters of Theory
   Levels of Analysis
   Systems of Interaction
   Basic Theories
   Growth & Expansion
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1. International Relations

Is about what?

Why?

How?

Key Concepts
Week 1 Introduction Some Basics

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2. Cyberspace
Global Domain of Human Interaction

• Created through the interconnection of millions of computers by a global network such as the Internet.

• Built as a layered construct, where physical elements enable a logical framework of interconnection.

• Permits the processing, manipulation, exploitation, augmentation of information, and the interaction of people and information.

• Enabled by institutional intermediation and organization.

• Characterized by decentralization and interplay among these actors, constituencies and interests.
Dilemmas for the State System

Table 1.1
Characteristics of Cyberspace

- Temporality—replaces conventional temporality with near instantaneity
- Physicality—transcends constraints of geography and physical location
- Permeation—penetrates boundaries and jurisdictions
- Fluidity—manifests sustained shifts and reconfigurations
- Participation—reduces barriers to activism and political expression
- Attribution—obscures identities of actors and links to action
- Accountability—bypasses mechanisms of accountability

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3. Changing Parameters

Legacies of the 20th Century

- Large number of new sovereign states
- Growth in number & size of international institutions
- Growth in private sector size and influence
- Growth in non-state actors with new objectives
- Expansion of the international agenda

RESULT

- “Crowded” system & high density of decision-entities
- Increased uncertainties, collusion & collisions

None of this is due to cyberspace
Realities of the 21st Century

- New vulnerabilities & challenges to security
- Changes in traditional power calculus
- Dominance of new private cyber actors
- Increased complexity of cyber management
- Contentions over US-created cyber institutions
- Growth of cyber-conflicts & need for cyber-cooperation

RESULT

- Increased coupling of “real” and cyber domains
- Growth in “hybrid” policies & responses

All of this is due to cyberspace
The familiar world map

This image is in the public domain.
Source: The CIA World Factbook.

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The Cyber Access View

"Exploring the Exploding Internet." New Scientist, April 28, 2009. © Reed Business Information Ltd. All rights reserved. This content is excluded from our Creative Common license. For more information, see http://ocw.mit.edu/help/faq-fair-use/.

Global Traffic Map (2010)

The Cyber Layer Model

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Levels of Analysis

Traditional Theory

Three Levels
- Man – Individual
- State – The Sovereign
- International System

One Domain
- The Human System
Levels of Analysis

New View

Four Levels

Individual & Aggregates
State & Non State Actors
International System
Global System

Three Domains

Human System
Natural System
Cyber System
Systems of Interaction

Challenges for the State:
New Complexities for
Security & Stability

Cyberspace
New Arena
• Distinctive Properties
• New World Map
• New Malware Markets
• New vulnerabilities

GeoPolitics
Traditional Arena
• Traditional Power
• Economic Power
• National Security
• High Politics

War Invasion
Incursions

Threat to Critical
Infrastructure

Nuclear attack/accident

Biochemical
attack/accident

Kill crop
Poison water

Cyber Attacks
Cyber Espionage
Cyber War

Trajectories & Threat Linkages

Environment
Threats
• Emergent Concerns
• Conflict Connection
• Accelerated Damages

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Systems of Interaction

Reversing Arrows

Domain
Cyber Security

Geospatial Arena
The State – Traditional Domain

Tradeoff
Dilemma

Environment:
Nature’s Life Supports

Cyberspace
New Arena

De-materialization
De-centralization
De-territorialization

Joint Gains
Week 1  Introduction Some Basics

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Traditional IR Theories

- Realism
- Institutionalism
- Constructivism

To be continued
1. Cyberspace – Defined
2. IR – Past & Present
3. Theories of International Relations
4. New Concepts & Theory
5. Assumptions for 21st century IR
Realism & Neo-Realism

• The role of the state – The uses and limits of its instruments
  ▪ For Power, Security
  ▪ For Wealth

• How portable is the kinetic logic of power to the virtual realities of cyber venues

• Government is autonomous & centralized around security concerns

• How and where can influence or power be exerted in the ecosystem in the cyber domain

• The only relevant technological change relates to power and the military

• Other?
Liberalism & Neo-Liberalism

• **Government** as a processor of inputs and outputs
  • **Government policies** are results of effective access of interest groups
    – Self-interest and division of labor
    – Realists also on self interest- but realists do not address explicitly the division of labor
• **Politics** is competition among organized interests
• **Change** perceived as gradual and adaptive
  – Sources of change is not addressed, as a central issue
• **Logic of technological** development is integrative not divisive in society

• **The role of the hegemon** is essential to maintain international order and stability (and open markets etc.)
• Other?
Institutionalism & Neo-Institutionalism

• “General pattern or categorization of activity or ... a particular human constructed arrangement, formally or informally organized.”
  
  – Complex rules and norms; as well as practices
  – Specific institutions defined in terms of their specific rules

• Rules that generate repeated behaviors (D. North)
  
  – Frozen decisions or history encoded into rules (March & Olson)
  – Rules are viewed as summaries of past decisions (Rawles)

• Institutions reflect the preferences and power of the units constituting them
  
  – Causal position of political institutions
  – Institutions themselves shape those preferences and that power (Keohane; Krasner)
Constructivism

• **Causal position of ideas** – idea drive action & output
  - not power, security, institutions, or other

• **Focus** on cognition, preferences, interpretation of content,

• **Agency function** – changing and making society

• “Changes in international politics occur when beliefs and identities of domestic actors are altered thereby also altering the rule and norms”... of their behaviors. (Koslowski & Kratochwill, Cited in Hall, 1999:293)

• **Importance** of inter-subjective meaning
Week 2 Outline

1. Cyberspace – Defined
2. IR – Past & Present
3. Theories of International Relations
4. New Concepts & Theory
5. Assumptions for 21\textsuperscript{st} century IR
New Concepts & Theories

• Challenges to state power due to contemporary trends, e.g., globalization of economic processes, growth of cyberspace argue for non-traditional theories of international relations.
  – Less state centric
  – Accommodating international organizations, regimes and networks
  – Understanding new dimensions of power

• New Assumptions

• Different theories or frameworks for international relations focus on different potentials of cyberspace
Concepts

Soft Power & Smart Power

• States, non-state actors and international organizations will seek to increase influence on the global stage by appealing to public opinion
  — Strategic communications that emphasize the actor’s cultural, social or political values;
  — Non threatening/ attractive displays of military, economic or technological capabilities

• Cyberspace -- international networks -- are well suitable for such communication and displays
  — Relatively inexpensive
  — Global reach, yet capable of targeting specific groups
  — Communication does not depend on permission of targeted states
  — Dependence of users on proffered technologies

• States are also vulnerable to other actors’ soft power
  — Response include filtering of incoming information
    • Radio jamming precedents
    • Efforts to establish borders in cyberspace
  — Contention over governance and protocols of international networks
    • Localization of control?
    • Hegemony or multiculturalism in protocols and other manifestations of the cyberspace technologies
Theory
Lateral Pressure

• Extends traditional theory that sees states competing to increase their power, resources & influence to retain sovereignty
  – State action motivated by new needs & expectations created by growth in population and technical capabilities
  – New economic spheres can be an area for expansion if the activity can meet the population’s needs and expectations

• Different assumptions from traditional theory

• Competition and conflict are not inevitable outcomes if other venues are pursued

• States are motivated by need to survive not necessarily to dominate

• Selective convergence with other theories