Global Innovation Management and Strategies

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Sep. 21, 2009

Course Purpose

The objective of this course is to understand innovation management and strategies, which produce the main source of global competitive advantages in the age of “Knowledge Capitalism”.

Course Contents

- This class examines innovation management and strategies of companies.

- Successful companies have tried to enhance innovative capabilities, in order to cope with globally turbulent competitive environments.

- **“Innovation is a process of turning opportunity into new ideas and of putting these into widely used practice” (J.Tidd et al.[1997],p.24)**

- “Invention is only the first step in a long process of bringing a good idea to widespread and effective use” (ibid.,p.24).

- **“Industrial innovation includes the technical design, manufacturing, management and commercial activities involved in the marketing of a new product of the first commercial use of a new process or equipment.”**

(C.Freeman [1982], The Economics of Industrial Innovation. Frances Pinter, London.)

- We also focus on “Strategic knowledge creation”, which becomes critical issues of business management in 21st century.

Many companies who are required to secure technological capabilities
realize that "knowledge management" has become the critical factors.

- Companies have not only internationalized business processes, but also enhanced “Research and Development” (=R&D) capabilities to produce competitive products (and services) to cope with globally turbulent competitive environments.

- In these processes

that make life cycles of products and business model shortened, innovative companies have gradually employed cross-disciplinary and cross functional new product development systems.

Table 1-2

The PLC of hit selling products

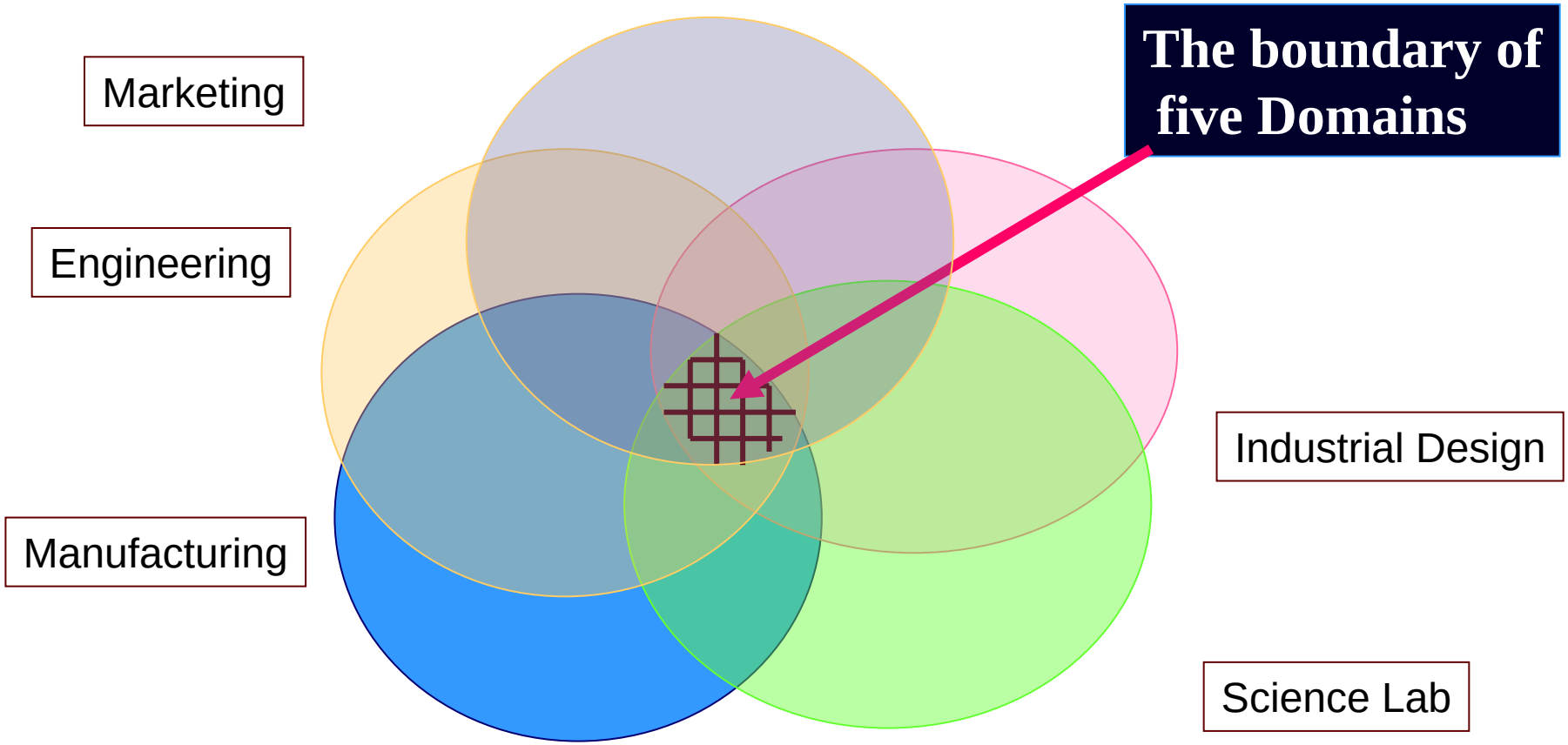
	less than 1 year	1- 2 Years	2-3 Years	3-5 Years	more than 5 Years	Total
before 1979	1.6	6.3	5.1	27.7	59.4	100
1980's	1.7	9.8	12.4	29.6	46.5	100
1990's	4.8	16.4	19.6	32.5	26.8	100
2000's	18.9	32.9	23.1	19.6	5.6	100

Source: SME Agency(2005), Chushokigyou Hakusho.

- New knowledge in these innovation processes seem to be often created **at the boundaries** between disciplines, functions and communities.

In the knowledge economy, therefore, the dynamic boundary management capability to create new knowledge and conceptual framework, by leveraging global (R&D) networks, is becoming a “main source of sustained competitive advantages”.

Radically new insights need diverse domain specific knowledge



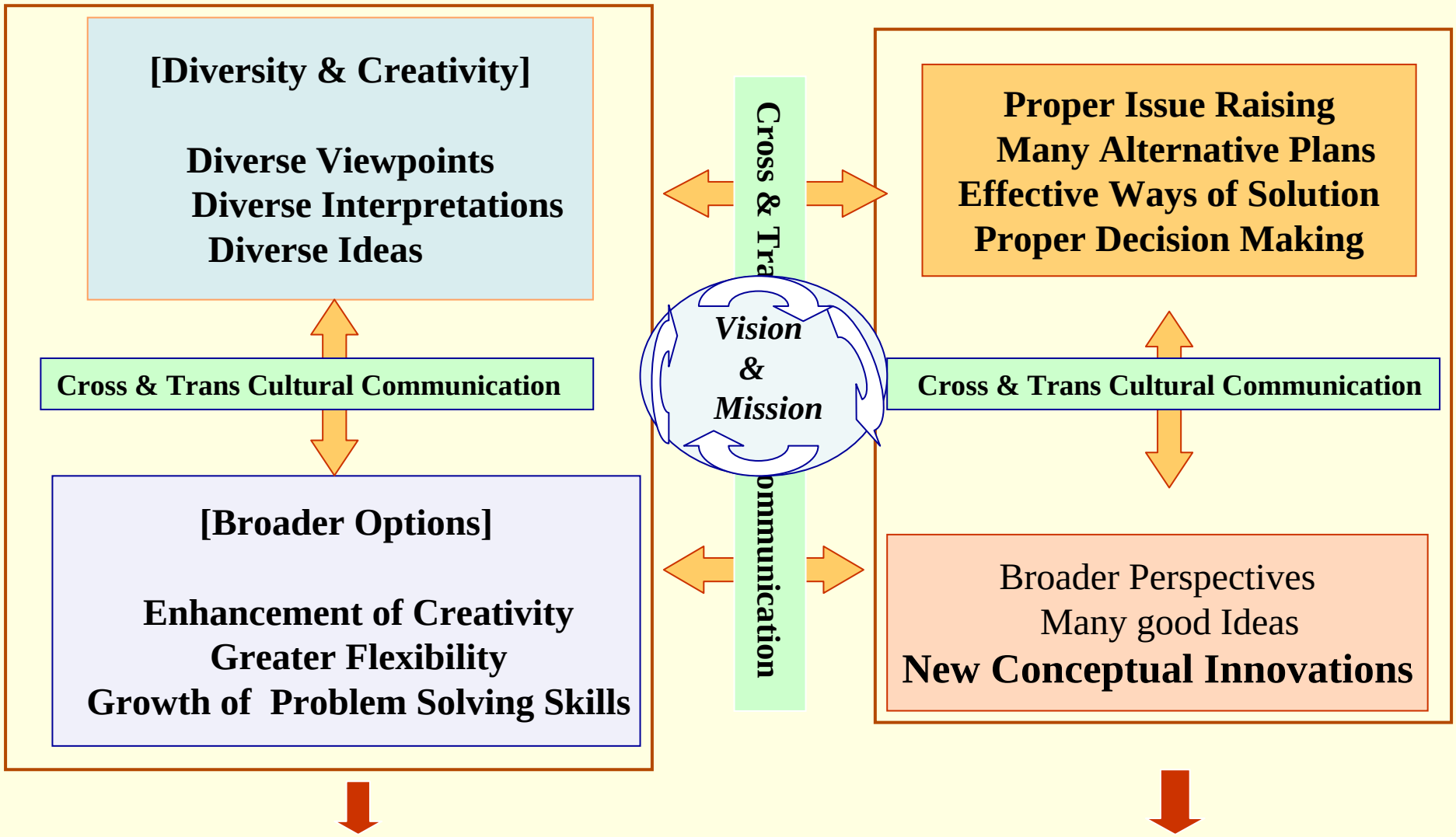
“Radically new insights and developments often arise at the boundaries between communities”(E.Wenger[2002])

- In this process, therefore, cross-trans cultural communication among diverse project members play critical roles.

- **Cross-trans cultural management at the boundaries** appears to be essential so as to inspire diverse members to create knowledge, synthesize their ideas, and transform them into new concepts.

Analytical approach, Interpretive approach, and Holistic approach

Synergistic effects by Multi-cultural Management and Leadership to create knowledge



Source: Compiled from Adler,N.(1991), Hayashi and Hayashi Seminar(2006)

New concepts are often created by diverse analytical approaches.

Diverse analytical approaches need requisite cultural diversities and domain specific knowledge.

- Cross border/cross-cultural boundary knowledge management would emerge as one of "critical issues of business management in the 21st century".

- Course schedule, and major topics -

Sep. 28 :

Global Competitiveness and R&D (= Research & Development) Capabilities

- The importance of new product development, success rates of new products, and R&D intensity -

October

- **Oct. 5: Technology Transfer in Asia and the Importance of Intellectual Property Rights**
- **Oct. 12:** No Class **(National Holiday)**
- **Oct. 19:**
  Business Strategies and the Importance of Intellectual Property Rights
- Oct. 26: **Special Lecture by Guest Speaker:**
  Mr. J. YAMADA(Chairman of Qualcomm Inc. Japan)
  " Global Strategies of Qualcomm and IPR"
  "Qualcomm is ***The Winner of Transmission Standards of Mobile Phones.***

November

- Nov. 2 : **No Class (Rikkyo Campus Festival)**
- Nov.9 : International IPR Strategies
- Nov. 16: Globalization and Networking of R&D activities
- Nov.23: **No Class (National Holiday)**
- Nov.30: Midterm Exam. **(Essay Exam.)**

December

Dec.7: **Knowledge Management 1**
Cross-cultural Knowledge Management
and Competitive Strategies

Dec.14: Knowledge Management 2
Boundary Management
and Knowledge Creation

Dec.21: Strategic Knowledge Creation and
the Management of Diversities

- **January 4 :**

Summary and wrap-up

- **January 11 :**

Final Exam ?

Grading System

Attendance	(20%)
Reaction papers and Reports,	(20%)
Midterm exam	(20%)
Final exam	(40%)
Total	(100%)

S(90-100) A(80-89) B(70-79) C(60-69) F(0-59)

Readings

- J.Tid, J.Bessant, and K.Pavitt(1997), *Managing Innovation*, NY, Wiley.
- R.G.Cooper(2001), *Winning at New Products*, NY, Basic Books
- E.Wenger, R. Mcdermott, and W.M.Snyder(2002), *Cultivating Communities of Practice*, Boston, HBR.
- T.Hayashi(2000), "Technology Transfer in Asia in Transition", in M.Nakamura(ed.), *The Japanese Business and Economic System*, London, Palgrave, 115-136.
- K.G.Rivette & D.Kleine(2000), Discovering New Value in Intellectual Property, HBR,
- M.Serapio and T.Hayashi(2004), *Internationalization of Research and Development, and the Emergence of Global R&D Networks*, NY, Palgrave.
- T.Hayashi and M,.Serapio, Cross Border Linkages in Research and Development, Asian Business and Management, 2006,5(271-298).
- Nonaka,I, Toyama,R. and Konno,N., (2002), SECI, Ba and Leadership: a Unified Model of Dynamic Knowledge Creation, in Little,S, Quintas,P. and Ray,T.(eds), *Managing Knowledge*, The Open University, London.41-67.
- Pauleen,D.J, Wu Ling-Ling, and Dexter,S(2007), Exploring the Relationship between National and Organizational Culture and Knowledge Management, in Pauleen,D.J(ed), *Cross-Cultural Perspectives on Knowledge Management*, Libraries United, London, 3-19.

Text

- Handouts

Questions, Comments and Requests

Office Hour: Monday, 16:30 – 17:00

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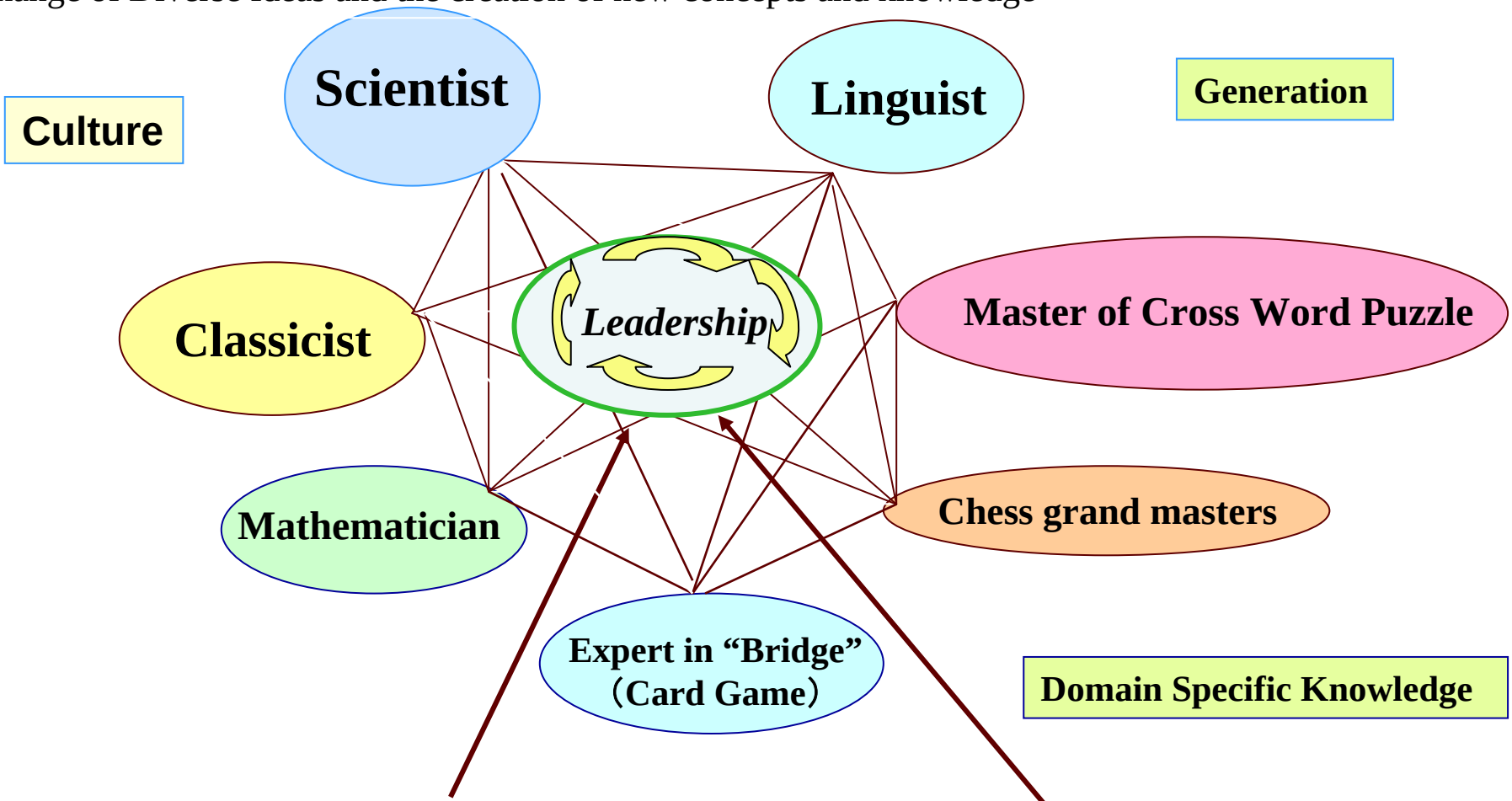
http://www.rikkyo.ne.jp/~takabumi/GIM.html

German Secret Code System(=Cipher System)
Enigma：A coding machine

vs

British Project Team to break the code system:

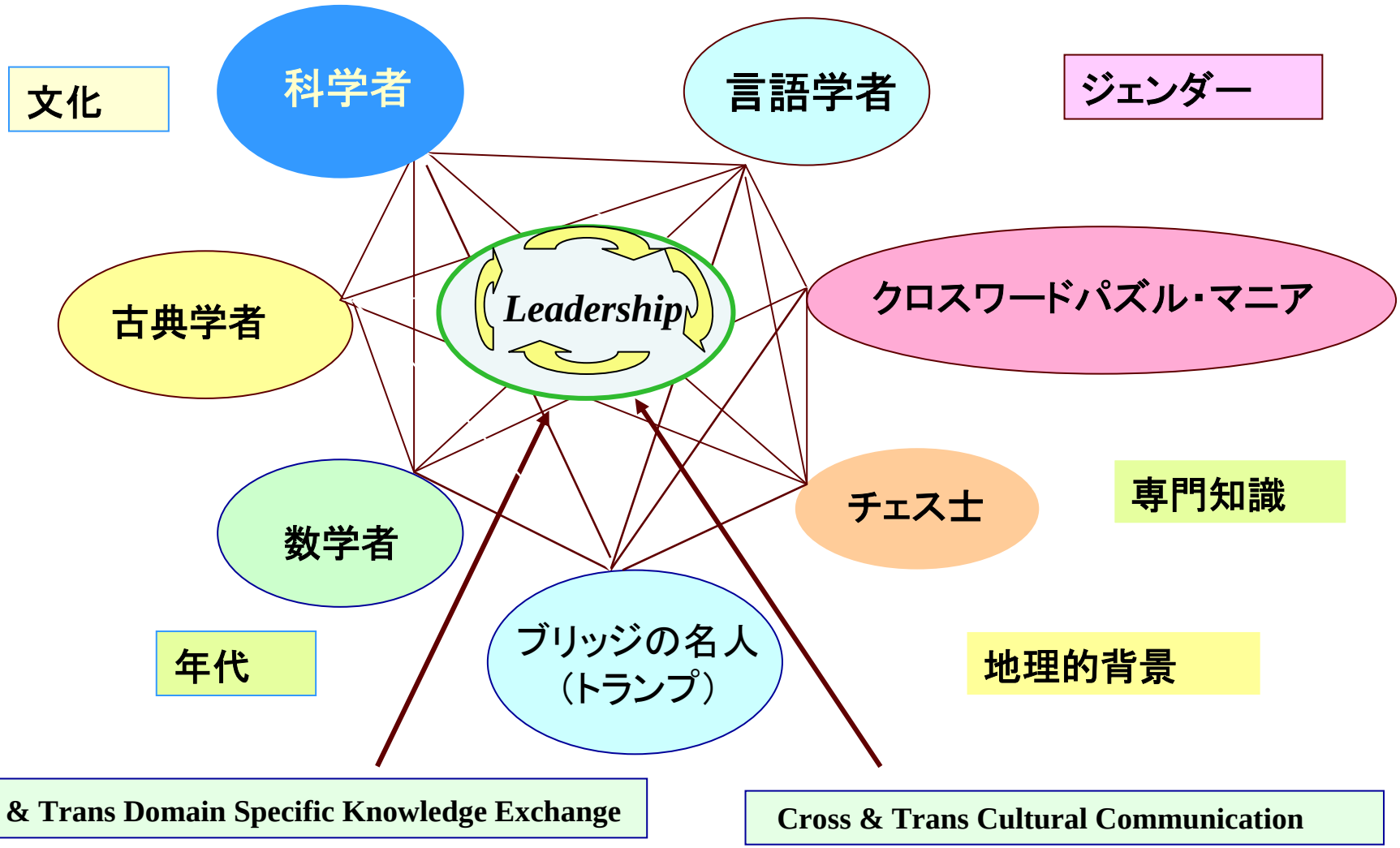
Exchange of Diverse Ideas and the creation of new concepts and knowledge



S.Singh, *The Code Book*, Anchor Books, 1999 『暗号解読』新潮社

暗号システム（エニグマ）

暗号解読チームの構成



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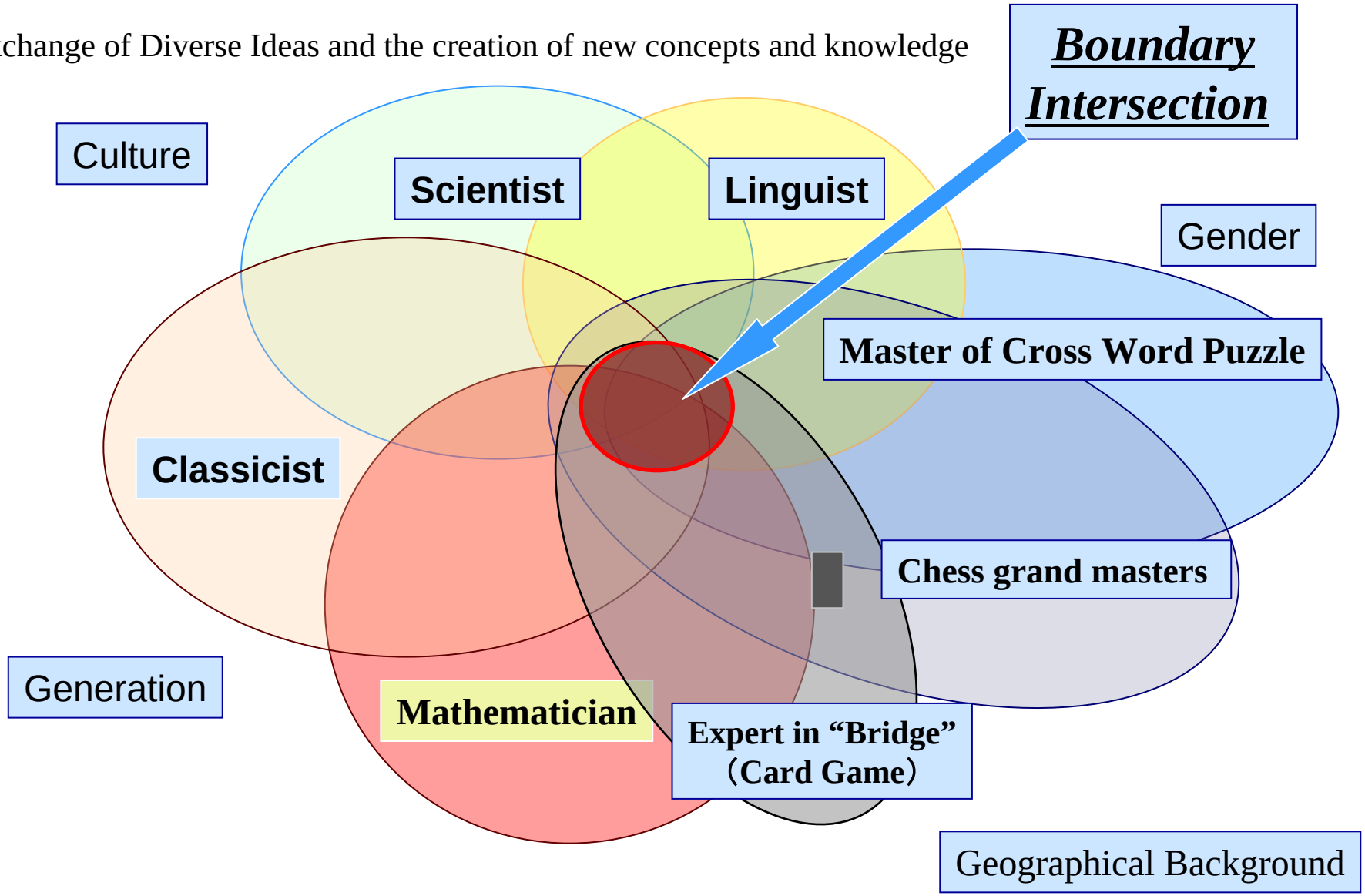
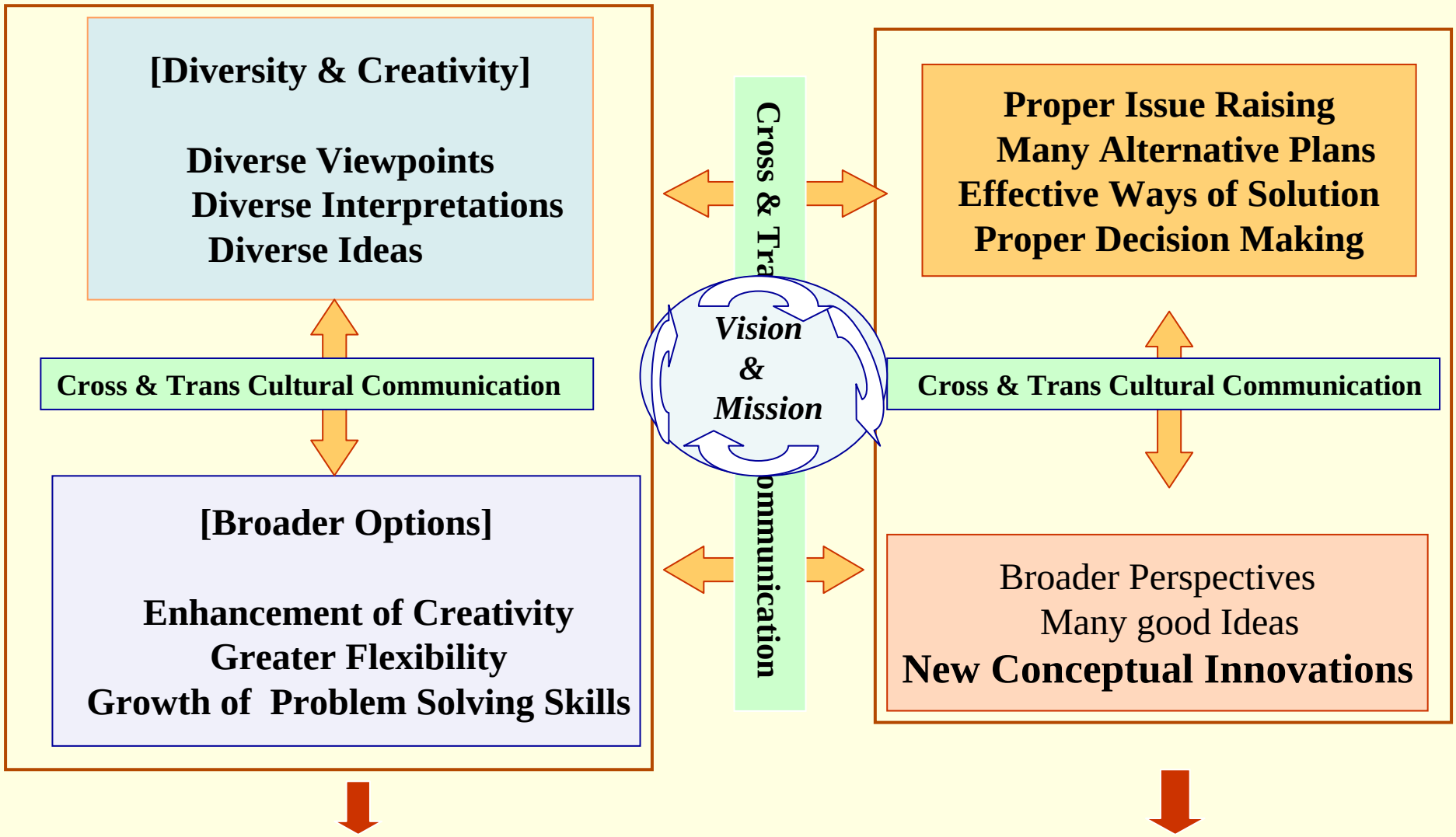
Exchange of Diverse Ideas and the creation of new concepts and knowledge



Synergistic effects by Multi-cultural Management and Leadership to create knowledge



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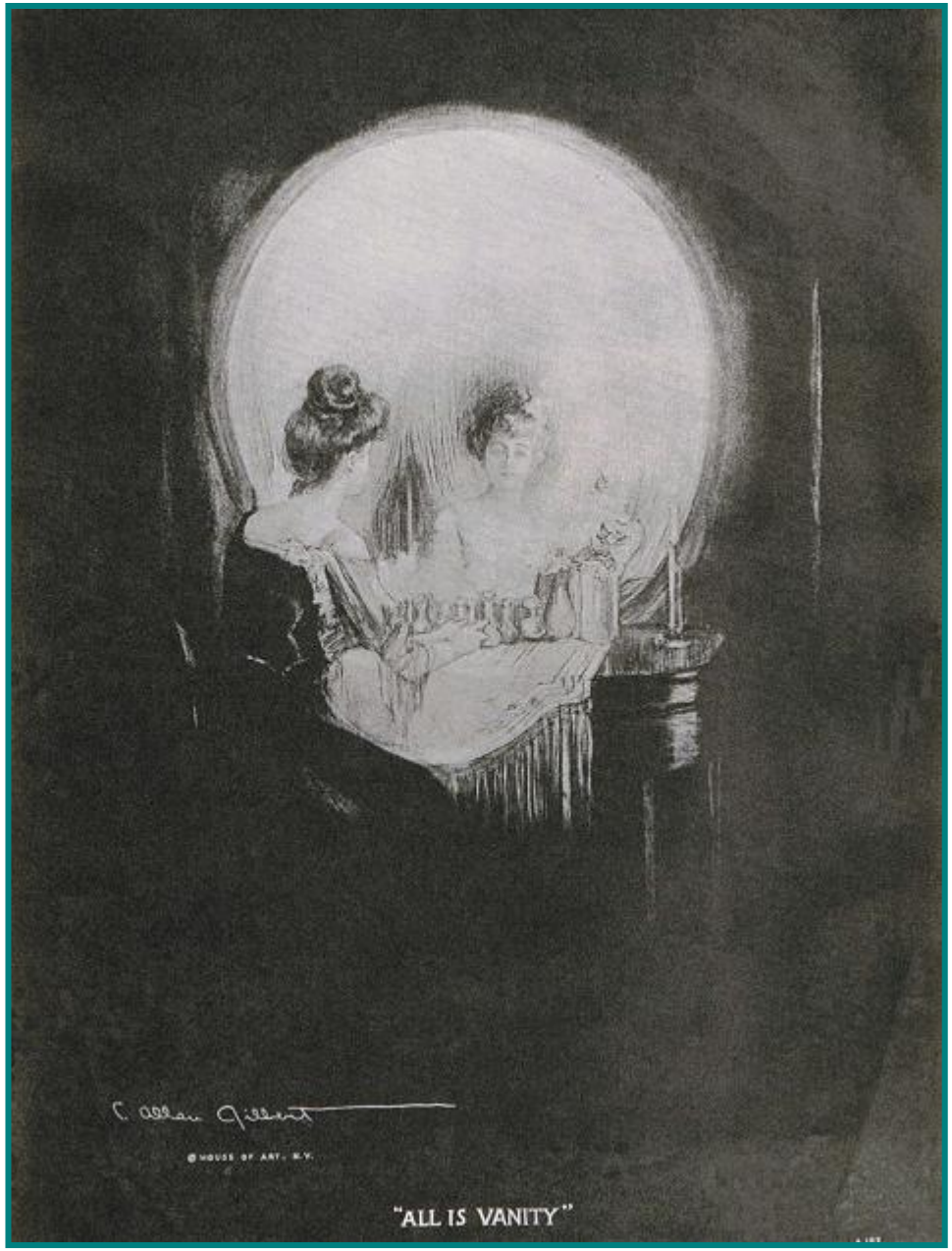

(B)

(D)

Company X

sports science
Australian Institute of Sports

Welding by Ultrasonic Technology（超音波溶接技術）
ペトラテックス社
(Petratechs??)(PORTUGAL)

Hydro Dynamics(流体力学）
Air Resistance (空気抵抗）
NASA(US)

Clothing Fabrics(生地）
メクテックス
(MechTechs??) (ITA)

?

Aero Dynamics(航空力学）
University of Nottingham (UK)

Thermal Dynamics（熱力学）
Optical Solutions Inc. (US)

Testing in the Water
University of Otago (NZ)

Zipper（ジッパー）
YKK (JPN)

Nikkei Business, 7/7/08

- ***Closed Innovation Systems***

- *Open Innovation Systems*

Table 1－1	Product Life Cycle :Year		
	1987-88	1992-93	1997-98
Home Appliances	1.6	1.3	0.9
Semi-Conductor/Devices	5.4	3.8	2.9
Information/Communication Instruments	4.8	3.4	2.0
Automobile	7.3	5.3	4.6
Entire Industries	11.1	8.9	8.1

Table 1－3	Development Lead Time :Year		
	1987-88	1992-93	1997-98
Home Appliances	1.6	1.5	1.1
Semi-Conductor/Devices	4.2	3.2	1.9
Information/Communication Instruments	3.8	2.5	1.6
Automobile	4.7	3.4	2.3
Entire Industries	4.3	3.6	3.0

Source: Nippon Keidanren(1998), Establishing Strategic Industrial Technology Policy for Stronger International Competitiveness, questionnaire survey was conducted from Dec. 1997 to May 1998. 123 manufacturing companies responded.