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Women's creativity and Soft technology

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We should confident for our creativity

- ? People says that in the future society, development of science and technology will have to rely on masculine who will carry on inventions, and feminine apply the results of inventions which are created by masculine.
- ! No, this is big misunderstand.
- ? Why most of women including intellectual women are lack of confidence for their ability of technology innovation.
- ! We need re-definition and re-understand technology
- ! We need to awareness the new paradigm of technology—soft technology.
- ! We need to cognizant of the predominance of women's thinking mode and creativity.

1. Challenges in the 21st century

♥ 21st century will be a highly developed world never had before and full of hope and opportunities. In the mean time, 21st century also will be an anxious century facing even more severe challenges.

We should re-establish a new mode of human development, and choose a road for harmony, peace and sustainable way.

How?

♥ The main challenges in the 21st century in particular many negative impacts that brought by the speedup of industrialization during more than 200 years (including the gap between the rich and the poor, the polarization of society, the natural & ecological environment deterioration, climate change & etc.) are difficult to meet only rely on the high technology.

♥ Take China's example:

☉ China's economic growth over the past twenty years has been among the fastest on earth.

—The global ranking in GDP (2.329 trillion USD at 2006, 3.4 trillion at 2007) went up to No. 4 in the world;

—The per capita of GDP ranks only 128th (1,352 USD) at 2006;

1-1. Rapid economic growth and challenges for China

☯ However, the sustainable development has met austere challenges:

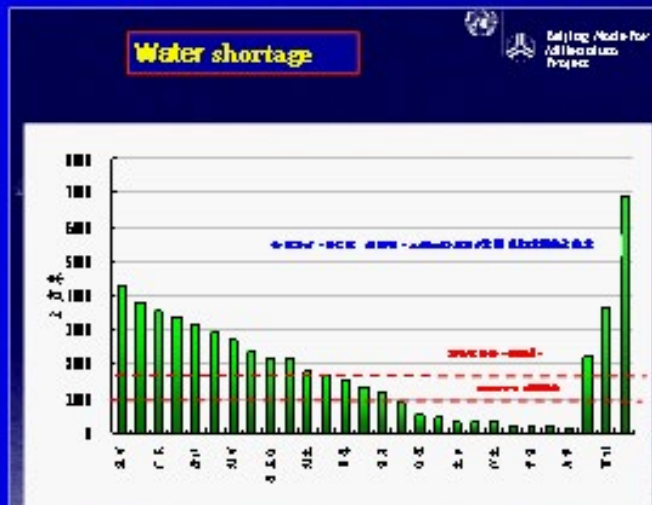
Challenge 1: Social development is lagging behind economic development.

Challenge 2: High cost of environment

Challenge 3: Natural resource has paid a tremendous cost

Challenge 4: water crisis(shortage, pollution, waste, chaos of water management)

Challenge 5: The challenges for business ethics and values



1-2. How to meet those challenges

♥ **The Chinese government realized that China could no longer go further this way.**

Given these challenges, the Chinese Government has taken it as state policy to develop scientifically, comprehensively and sustainedly in a coordinated manner and with a human face.

♥ **For implementing government strategy, just to rely on the high technology will not enough to solve the “problems” human being met. Because the essential reason of those challenges is by human behavior who is simplistically pursue material civilization. Therefore we need to strength the capacity of invention, creation & innovation of soft tech and soft environment to settle the problems.**

♥ **The decision-makers should understand above principles really through implementing them in action, namely changing the traditional deflection on putting most of manpower, financial resources & inputs on policies to hard technology.**

2. New understanding of technology

- Technology is regarded as the “engine” for human society**
- Technology is regarded as the core of the competitiveness**

To the end, what is technology?

Is it truth that women lack of capacity for technology innovation ?

No, we need to correct the misapprehension about the technology !

- ♥ “Technology” is an operable knowledge system**
- ♥ Technology is the means, tools or solutions for “problem solving”.**

2-1. The broad sense of technology

- ♥ **“Technology” is an operable knowledge system**
- ♥ **Technology is the means, tools or solutions for “problem solving”.**



Hard Technology

- * Knowledge of natural science
- * to operate physical world



Soft Technology

- * Knowledge of non-natural & non-science
- * to operate spiritual world

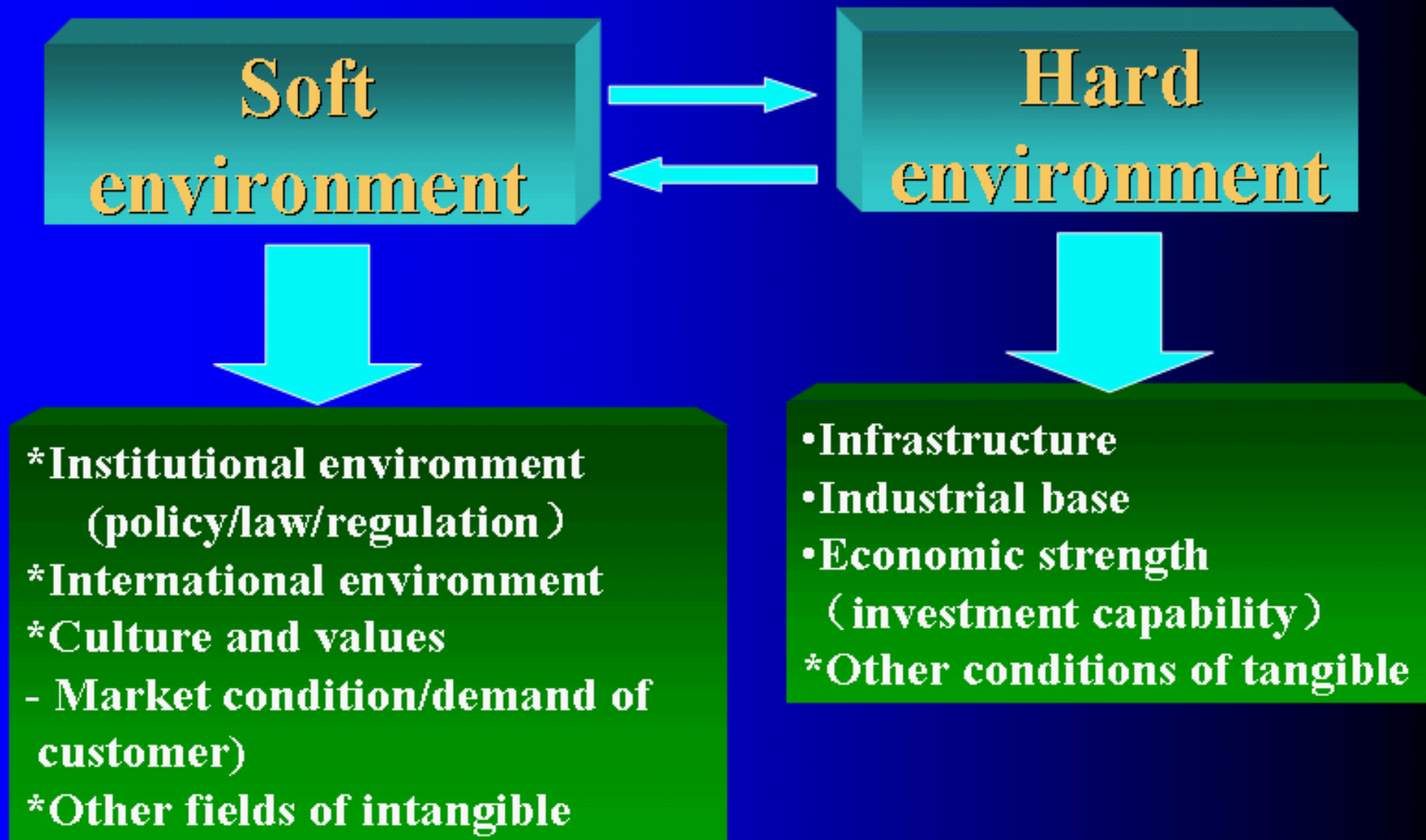
- ♥ From the perspective of knowledge: those operable knowledge systems derived from non-natural sciences and non-scientific (traditional) knowledge, aimed at solving various practical problems
- ♥ From the perspective of the carrier of technology: “hard” technology is means to solve “problems”, which refers to the physical entities through which operations are conducted; “soft” technology refers to entities without physical form and embodied process.
- ♥ From the perspective of the operational object: hard technology stresses the operation of natural substance & artificiality, while soft technology pays more attention to human psychological action and social behavior.
- ♥ From the perspective of nature of “problems” that we need to solve: various economic, social, environmental practical problems such as service technology, business mode, commercial technology, social technology, cultural technology, diagnostic and dialectical therapeutic technology in traditional Chinese medicines,.....

2-2. Beyond technology

Soft environment: institution, culture, values

- ♥ **We have been talking about the importance of technology, nevertheless, technology does not represent the whole shoot.**
- ♥ **The key to success rests with what kind soft technology is designed and whether it can be implemented. Namely, activities of human being must be restricted through formulating the rule of game (soft tech). It's lay on soft environment, including institutional environment, international & domestic environment, market environment, cultural environment, as well as world view & values of human beings at that time.**
- ♥ **Institutions here contain: Law, regulation, policy, standard & etc.**

2-3. Soft environment and hard environment



2-4. The limitation of institutions

- ◆ **The institution is not omnipotent or catholicon;**
- ◆ **Using the law can only solve part of the problem, legal changes must be realized by changing the people's fundamental attitude - George Soros said while he criticized the worship of the market.**
- ◆ **Numerous examples can illustrate the limitations of the institution, eg. all business activities, including the management of patents;**
- ◆ **The institution is insufficient to restrain all human behavior and mental activities completely.**

Therefore,

- **The most fundamental thing is to raise the public's awareness of credit and credibility;**
- **In the knowledge society, we should further emphasize the importance of the business ethics (eg: Juhani Pekkola), the moral market (eg: Hazel Henderson) & education.**

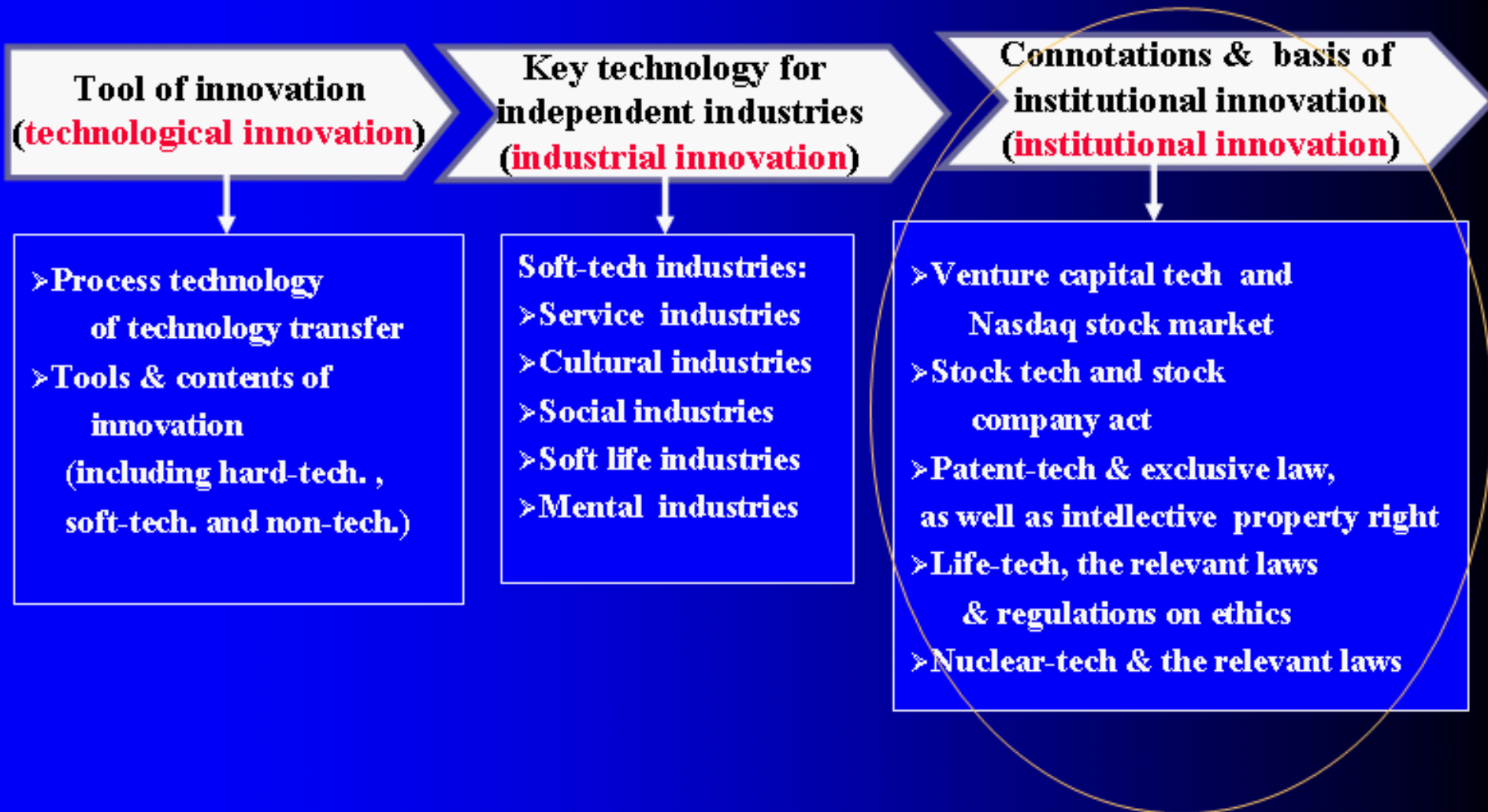
2-5. Exceeding the power of institution : Cultural and conceptual innovation is the base of competitiveness

◆ Culture and custom bring in-depth the impact on innovation, sometimes it goes beyond the role of the market & government.

**Example: From long perspective, the gap on e-commerce,
will create by cultural and institutional innovation**



2-6. Three key functions of soft tech

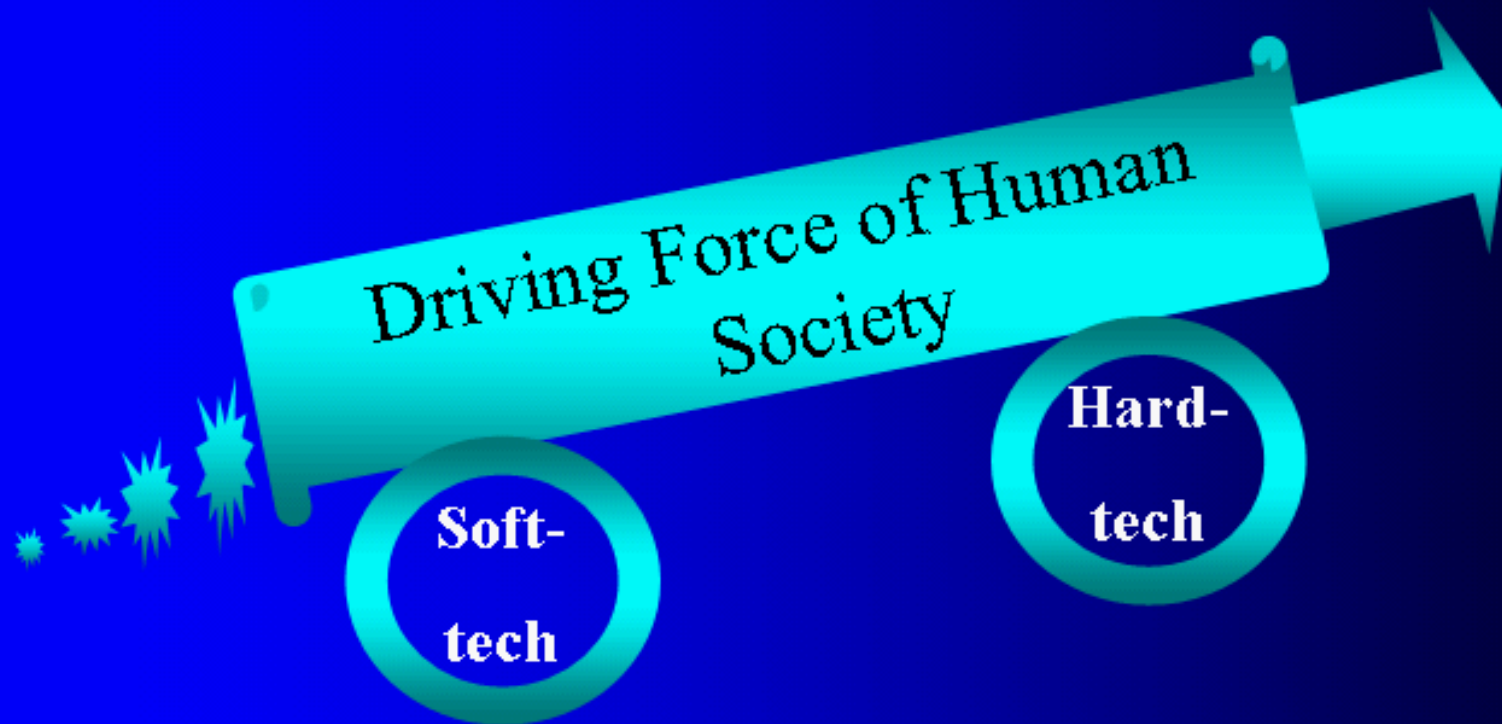




3. New understanding For many fundamental issues

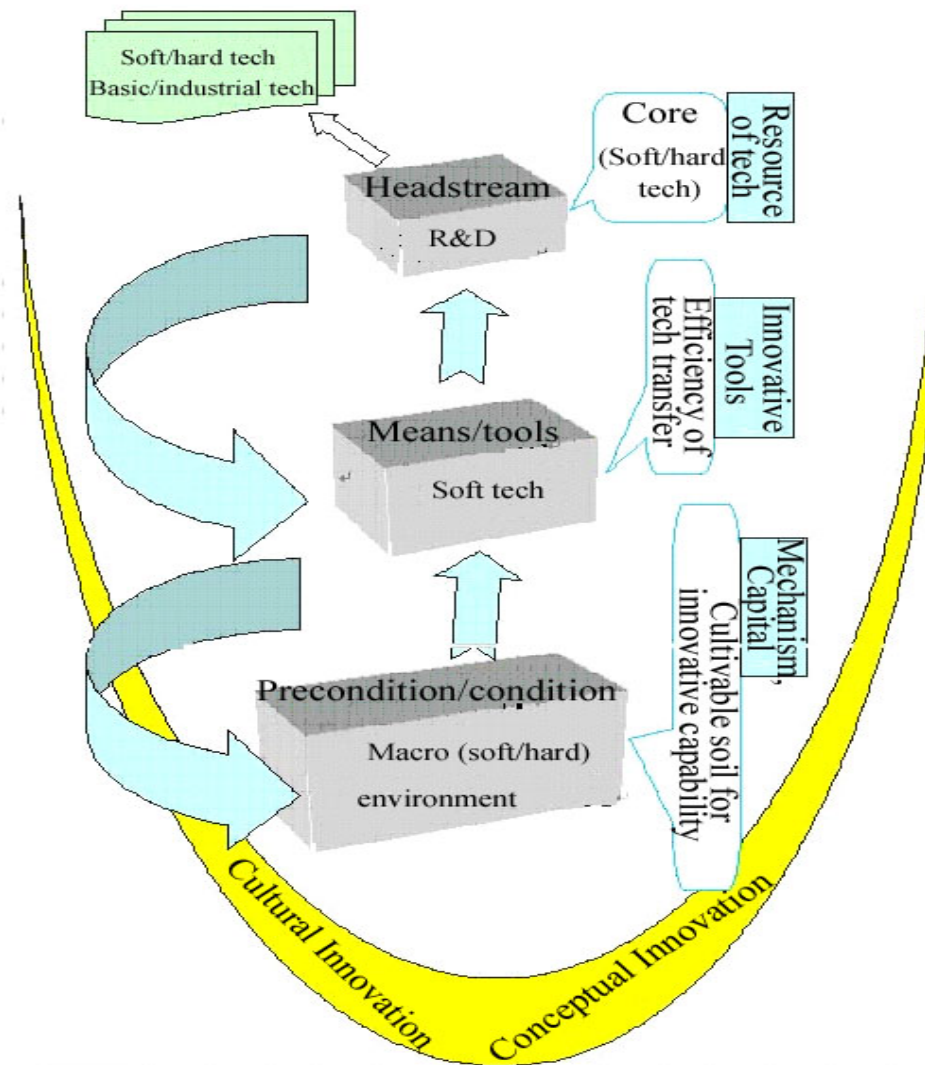
- ★ Rethinking of technology
- ★ The Driving force of Human society
- ★ Technological competitiveness
- ★ What is innovation and how to innovate
- ★ Institutional innovation & soft technology innovation
- ★ The gap of developed & developing countries
- ★ Educational revolution
- ★ Soft Power
- ★ The principles for the 21st century- Harmony, Balance

3-1. Two Engine Theory

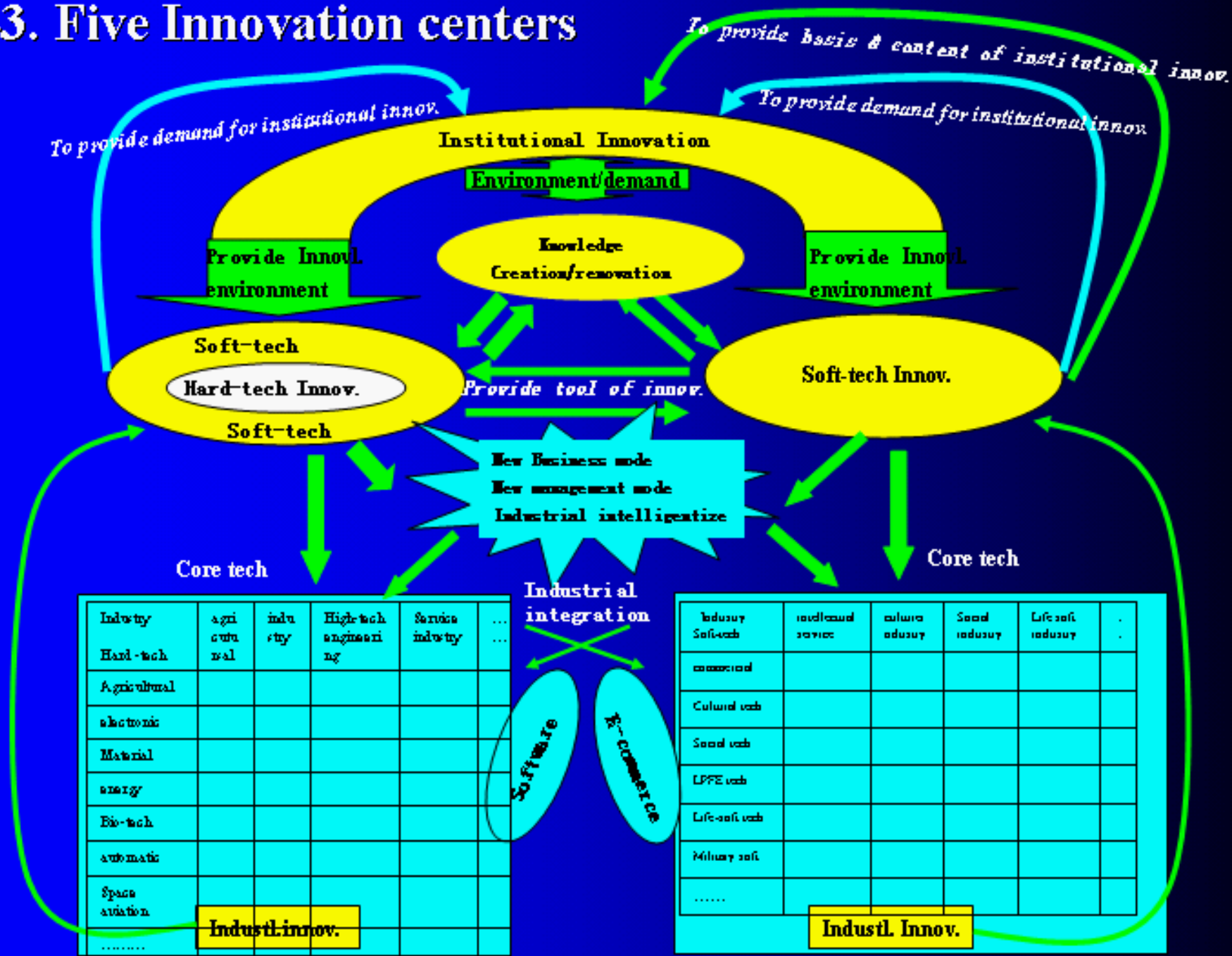


**History of soft Tech (same with hard tech)
is the history of human creativity**

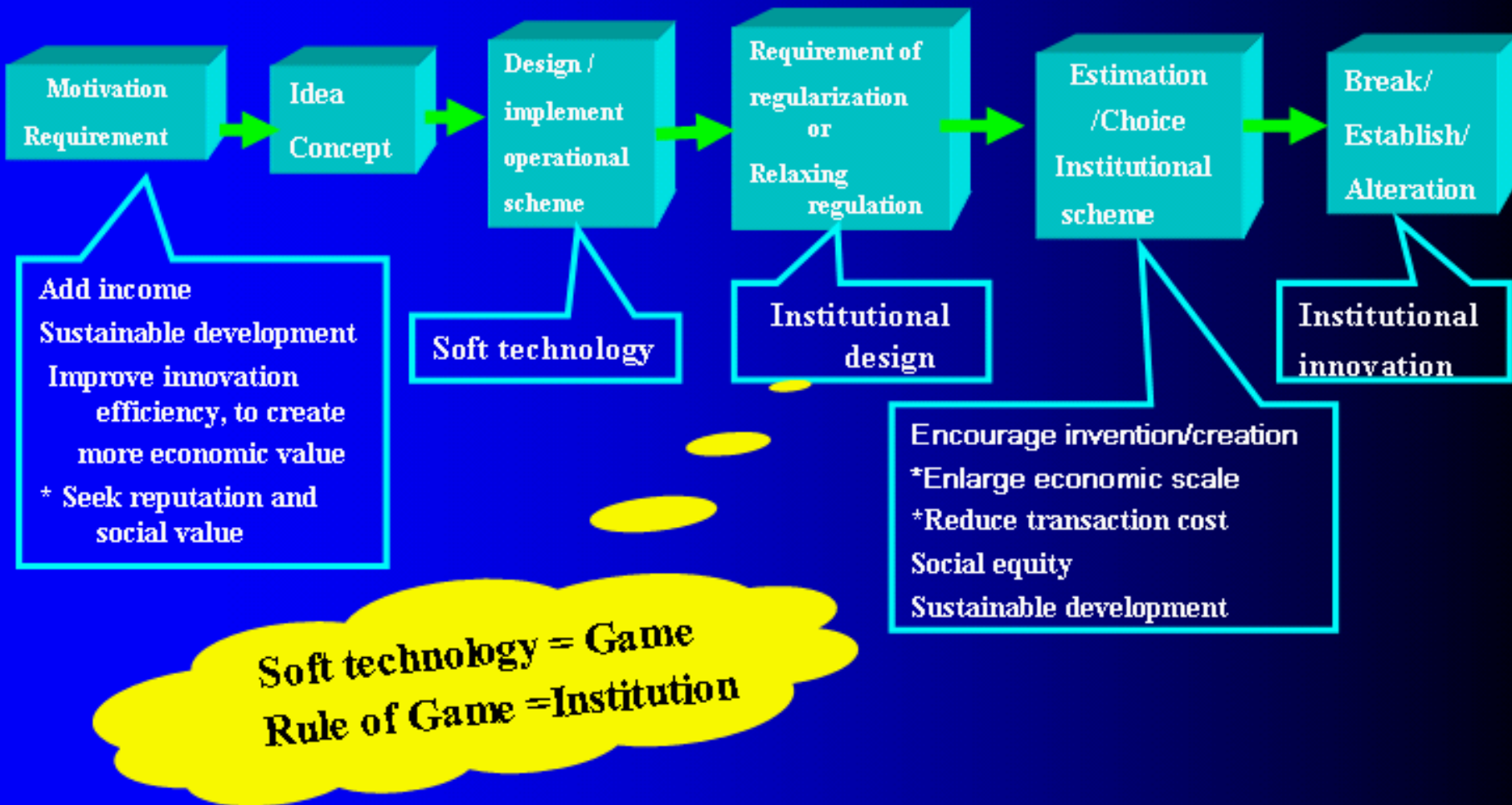
3-2. Three conditions for creating technological competitiveness



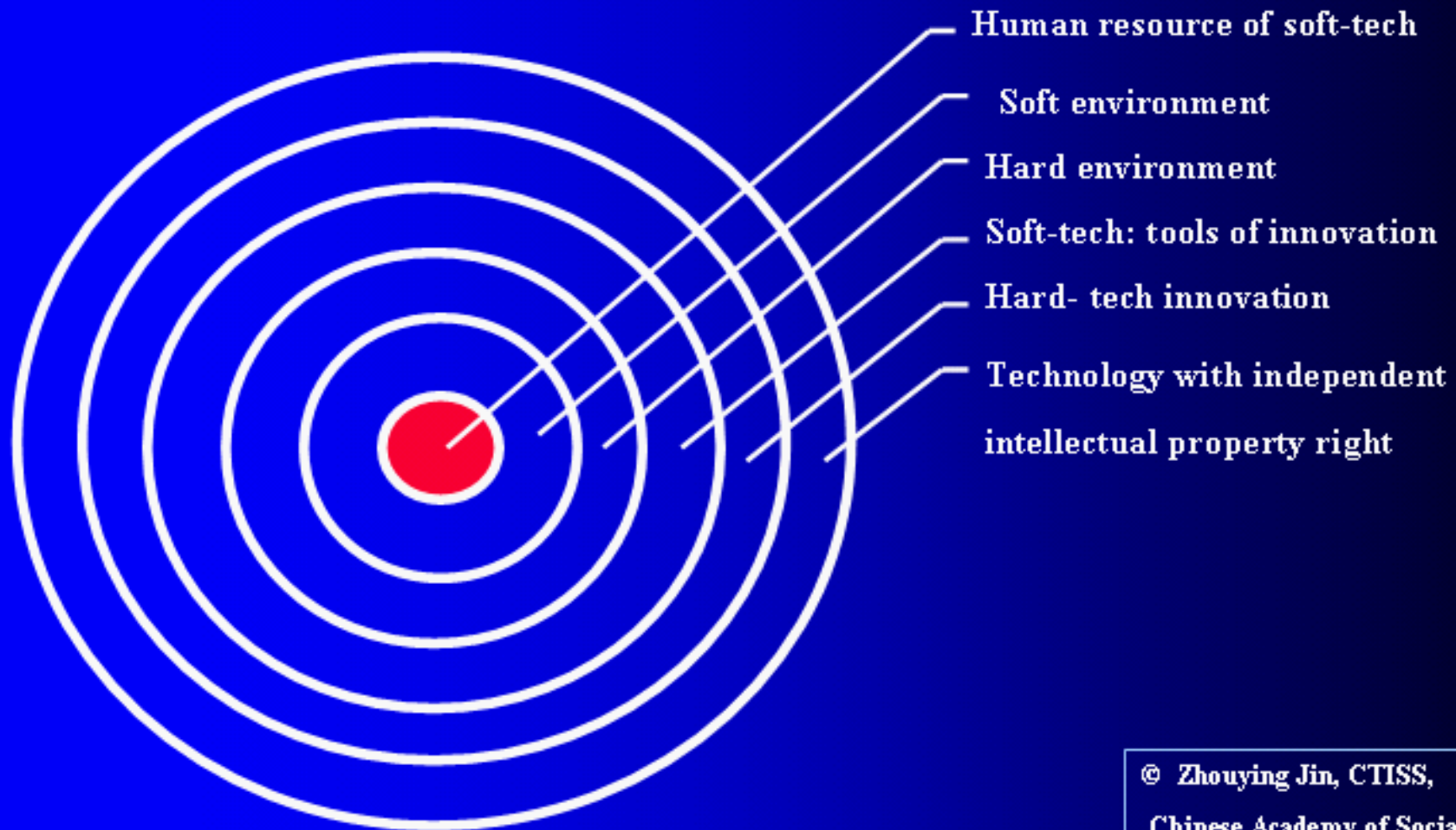
3-3. Five Innovation centers



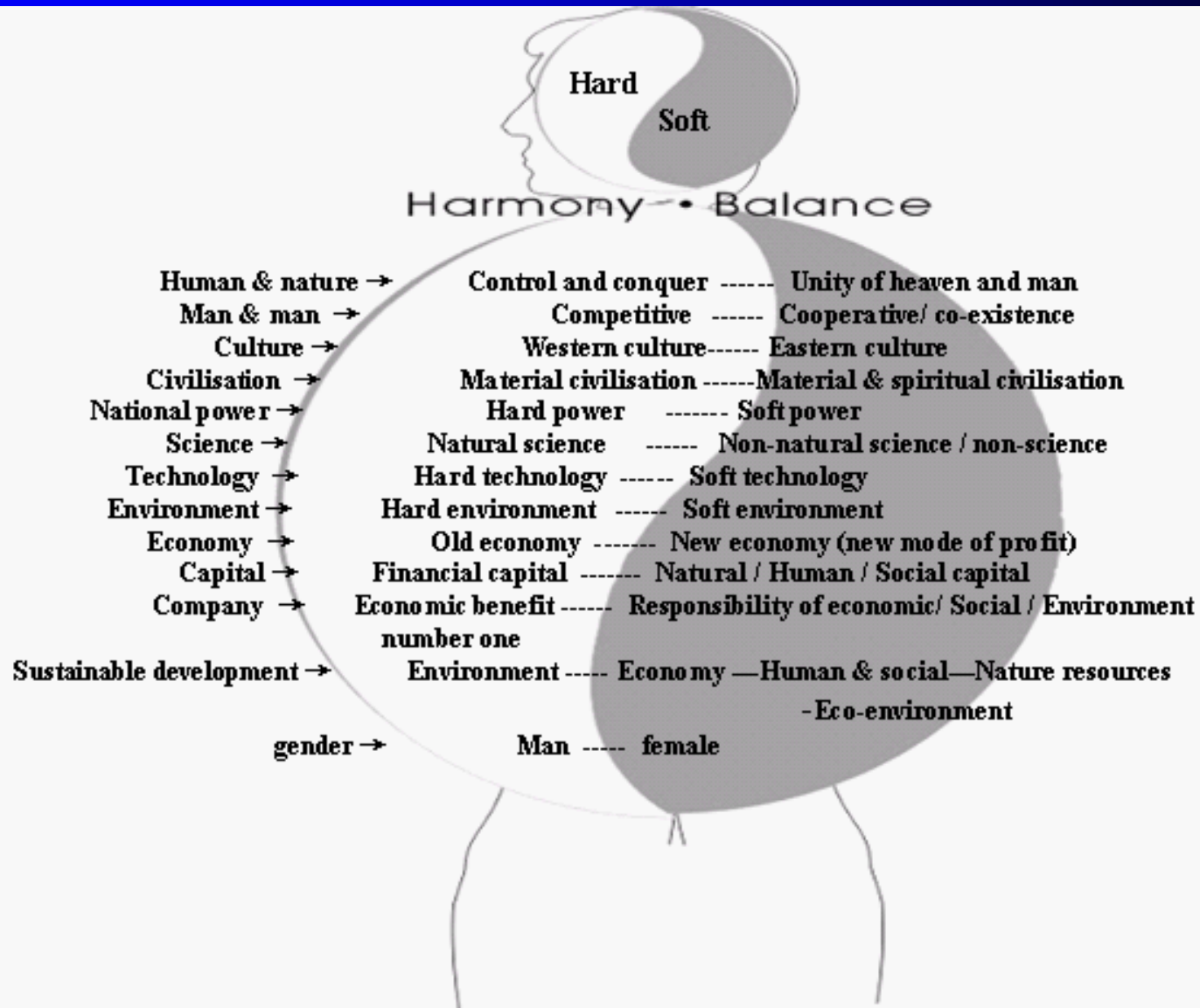
3-4. Soft-tech innovation & Institutional innovation



3-5. The GAP between developing & developed countries



3-6. The principles for the 21st century --- Harmony, Balance and Equality





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Global Technological Change

From Hard Technology to Soft Technology

Fostering human creativity need to change the thinking mode

**Creativity come from cross-disciplinary research;
cross-fields interaction; cross-culture exchange and learning.**

**Awareness and development of soft technology is one of the
strong mean and way of fostering creativity**

4. In the 21st century, Soft technology will be a leading actor

- **In the age of globalization and informatization, people's Spiritual world heavily and quickly influenced by exchange information world wide unprecedented.**
- **All social behavior and psychological action restricted by soft environment especially by institutions and culture.**
- **All information goes through cultural filters, and declamatory statements are rarely heard as intended (Joseph Nye).**
- **This is why we need redefine national power, national competitiveness, innovation system as well as technology itself for the global information age. Then we can use the concept of soft-tech to attained scheme**

4-1. The characteristics of Soft-tech for “problem solving” are suited to meet those challenges in the 21st century:

- Thinking mode is from whole system to part, adopt to systematic design way:**
- Operational field is focused on Spiritual world (Hard tech is on Physical world)**
- Operational object: “Human” psychological action and social behavior**
- Tools of resolving problems: Processes, governance, rules, institutions, products, and services,o**
- Technological parameter; social, cultural and psychological factors**

5. The characteristics of Soft-tech are suited to exert women's creativity

5-1. Women's creativity & soft technology innovation—1

The feminine characteristic, including women's way of thinking, is more suitable for invention, creation & innovation of soft technology. Therefore, soft technology innovation provides a vast space for women to exert their creativity.

The expert studies indicated that:

1. Feminine thinking is "mesh thinking," while that of masculine is "ladder thinking". And feminine way of thinking can let them make several matters simultaneously;
2. Women is good at collaboration than men, because they have the psychology of seeking common points, hence the coordinating ability of women is stronger than men. This feminine characteristic is more suited to the needs of globalized information society.
3. Masculine is stronger than feminine in the capacity of emotional control & judgment, as well as the desire for promotion, etc. In industrialized society, these characteristics enable masculine to be better than feminine in the work;
4. Feminine intuition in judgment is more accurate than masculine;
5. Because of women's divergent thinking, when they judge something, they are accustomed to weighing repeatedly the pros and cons, and conceiving a variety of results. Such characteristics are suitable for the soft technology innovation which focuses on design and implementation of the "solution";

5-1. Women's creativity & soft technology innovation—2

6. Feminie is good at relevant thinking, and they often relate the surrounding details, emphasize the whole, and envisage various options and outcomes. Such characteristics are suited to the problem-solving “solution” of soft technology, which is well designed from whole system to part;

7. Women possess the maternal nature, so they have more attachment to humankind from the way of pondering problems to that of solving problems. Soft technology is a human-centered technology, which is undeveloped and boundless potential field.

Therefore, women adapt well to the creation & the invention of soft technology.

Some people said that in the future society, development of science and technology will have to rely on masculine who will carry on inventions, and feminine apply the results of inventions which are created by masculine. Thus this kind of interpretation is not right.

8. Feminie has patience, ability of withstanding all kinds of uncertainty, and coping with complicated situations and the uncertain elements, which is precisely one of the major characteristics in our complex world nowadays. It will be conducive to women in the implementation of “solution” to withstand hardships & overcome risks. It's often difficult for masculine to adapt to this uncertainty, because they are more step-by-step and follow rules docilely.

5-1. Women's creativity & soft technology innovation—3

♥ In brief, soft technology innovation provides infinite space for women, feminine way of thinking and behavior pattern are more responsive to the problem- solving solutions of soft technology, which focus on solving the problem through the overall design system, taking human behaviors and the thinking as well as spiritual world as the main operating target.

The soft tech solutions pay attention to process innovation, solving the problems through the standardization of soft technology and the creation & innovation of soft environment, namely which is better suited to face the challenges in the 21st century.

5-2. The relation between Hard-tech and soft-tech innovation

♥ Soft technology is the process technology of technology transfer, therefore,, the ability of soft-tech innovation is the core of hard-tech innovation

♥ Soft technology is the tools & contents of innovation, including hard-tech. , soft-tech. and non-tech.

5-3. Women and soft-tech industry

- ♥ **One important function of soft technology is as the key technology for independent industry, such as Service industries, Cultural industries, Social industries, Soft life industries, Mental industries, etc.**
- ♥ **Innovation happens in a process, and the key of service industry is the representative “Process technology” and provides to women limitless space for creation and innovation.**
- ♥ **Soft-tech industries provides countless opportunities for women to spinouts soft-tech companies**
- ♥ **A lot of human-centered industry will be needed in the 21st century;**
- ♥ **Women should conviction in their own capacity of create soft-tech industry and will be a leading actor soft-tech innovation.**

In fact, those companies where take women as decision makers occupied high success rate than that of man.

6. Women and the future enterprises

- ♥ One of the responsibility for the women entrepreneur is to build a “futuristic company” that meets the challenge for sustainable development.
- ♥ “Futuristic company” dedicates to transform from the “old ” rooted in economic benefits for the privileged few to a “new” economy which will harmonize with society and the environment — triple bottom line.
- ♥ This is historical and difficult mission in particular, tiny enterprises might be built and prosper in a turbulent world. This theme regards with enterprise’s paradigm shift from a “machine” model to an “industrial ecology” model which can unite economic, environmental and social needs.
- ♥ Nevertheless, this is the only way for survival in the 21st century.
- ♥ In China, the future 500 China, introduced the the future 500 mechanism during the past four years and half of members are those companies that take woman as decision maker.

7. Women and sustainable development /Harmonious world

- ♥ **Women have natural ability of education and the management, so that they will be all square in participating in nation's management, politics and social rights with men, or even better than men in the future century.**
- ♥ **As the core of family life, women are charged directly with many heavy burdens such as the family lifestyle, children's education, the environment & ecological protection, against violence, respect for different cultures, advocating frugality and healthy consumption, the training of healthy next generation and so on.**
- ♥ **As mother, feminine not only nurtures the next generation and is the initial pedagogue, but also she will be the natural bridge and mediators for the next generation. Women will contribute more to sustainable development and a harmonious society.**
- ♥ **Because women are usually more serious, cautious, accustomed to repeatedly weighing the pros and cons than men in judging certain matters, the organization leaded by women will be more healthier, including the reduction of corruption.**

8. Woman's responsibility in the 21st century

- ♥ **For retrieval the disordered world from which masculine regnant and full of the conflict to the co-existing, sustainable and harmonious world, let us positively engage to design for the future:**
 - **How to co-existence in one earth at the 21st century**
 - **Sustainable development and new business mode**
 - **Intergenerational sustainability solution**
 - **Financing for the Future**
- ♥ **Women can leverage on their positive points, affection, kindness, and bring these values as complementary to work for the future – globalized, informatized & ageing society.**
- ♥ **Women should be self-confidence, self-respect, self-love and self-worth**
- ♥ **All the women of the world should draw together.**

Thank you!

