

Kansei information research

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Design process in Structured Planning

Good design provides a good consideration

Good consideration reflects the thinking process

Designer must have knowledge for thinking!

So that the research on the knowledge and thinking contributes design process.

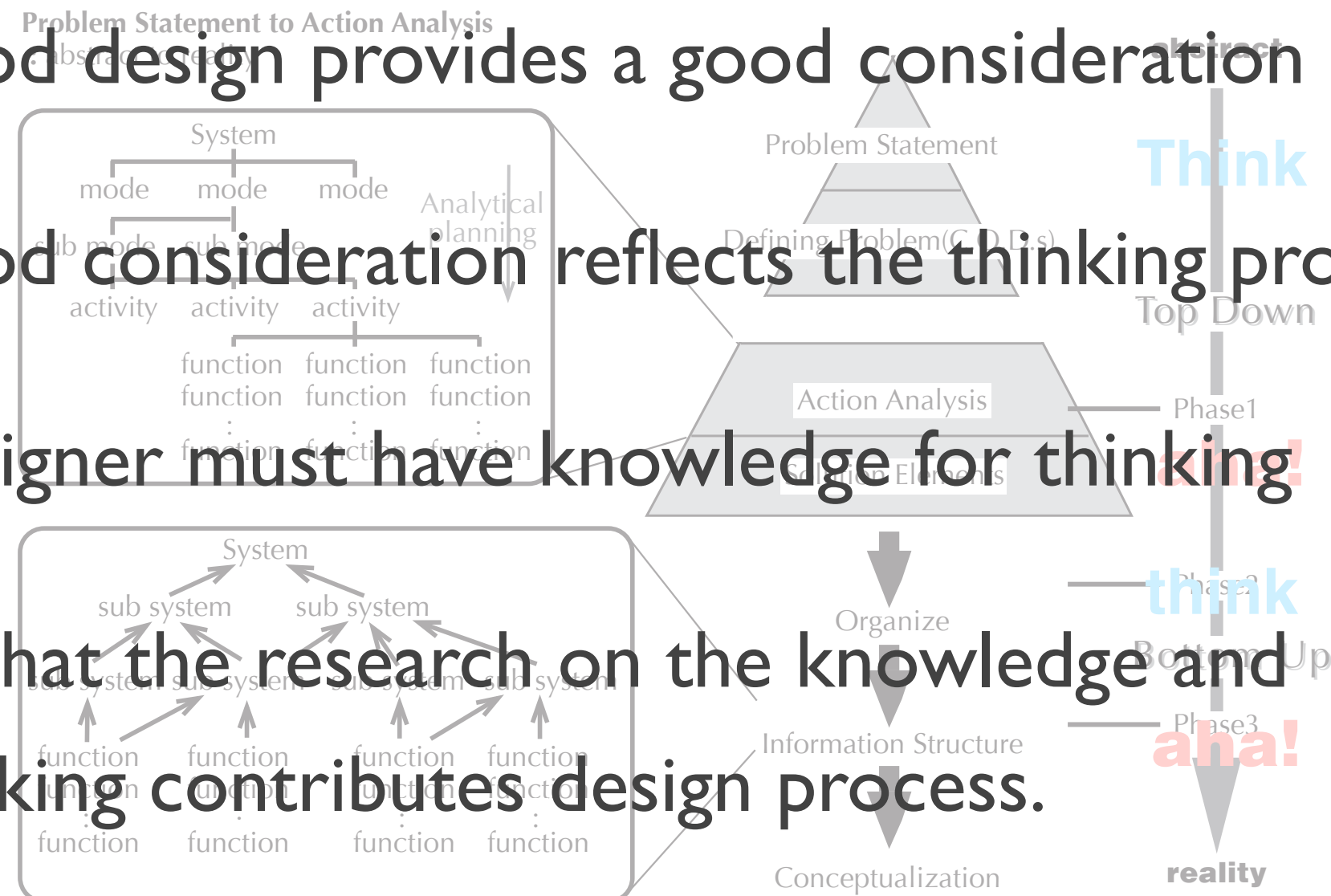


図 2-5 Structured Planning におけるデザインプロセス

Explicit Knowledge

Knowledges are:

Explicit knowledge
Expression

Experience

Tacit knowledge for intuition and expression
Tacit Knowledge

The kansei function covers the process in-between the tacit knowledge and explicit knowledge is the kansei function.

Explicit Knowledge

Objectives of kansei research are,,,

Understanding the intuition and expression.

Experience

Create good relationship between tacit knowledge and explicit knowledge.

Expression

Tacit Knowledge

Support thinking with fundamental research of mind.

All these for create the good relationship between tacit knowledge and explicit knowledge.

Since the establishment of Kansei Engineering, the method had been applied to design development.

At the 6th ADC, 2003, there were a lot of research presentations on kansei and design.

The application area of kansei research had been expanded to marketing, communication, product, environment, graphic, architecture, culture, lifestyle and more.

The elements of the kansei research had been extended to:

Subconscious mind function, cognition, feeling evaluation and brain function.

Application of the kansei research had been extended to:

Marketing, promotion, communication, design.

As a science of mind, kansei research must contribute to the research and development in design.

Kansei Information and Brain Function

こころを解明する感性科学の推進

Doctoral Program in Kansei, Behavioral and Brain Science

Major of Art and Design

Major of Psychology

Graduate School of Comprehensive Human Science,
University of Tsukuba

JSPS 日本学術振興会

21世紀COEプログラム

- 21st Century COE Program -

世界的研究教育拠点の形成のための重点的支援

21世紀COEプログラムは、「大学の構造改革の方針」(平成10年)に基づき、文部科学省に新規事業として「研究拠点形成費補助金」が措置された。我が国の大学が、世界トップレベルの大学と伍し、国際競争力に基づく競争原理により競争的環境を一層醸成し、国公立大学が発に行われることが重要です。このプログラムは、我が国の大学を国際競争力のある個性輝く大学づくりを推進することを目指す。

本会では、この補助金の審査及び評価に関する業務委託機関の選定・設置、この補助金に関する審査・評価を行うこととしています。

なお、その際、大学評価・学位授与機構、日本私立学校振興協会の協力を得て行うこととしています。

Culture
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Aims

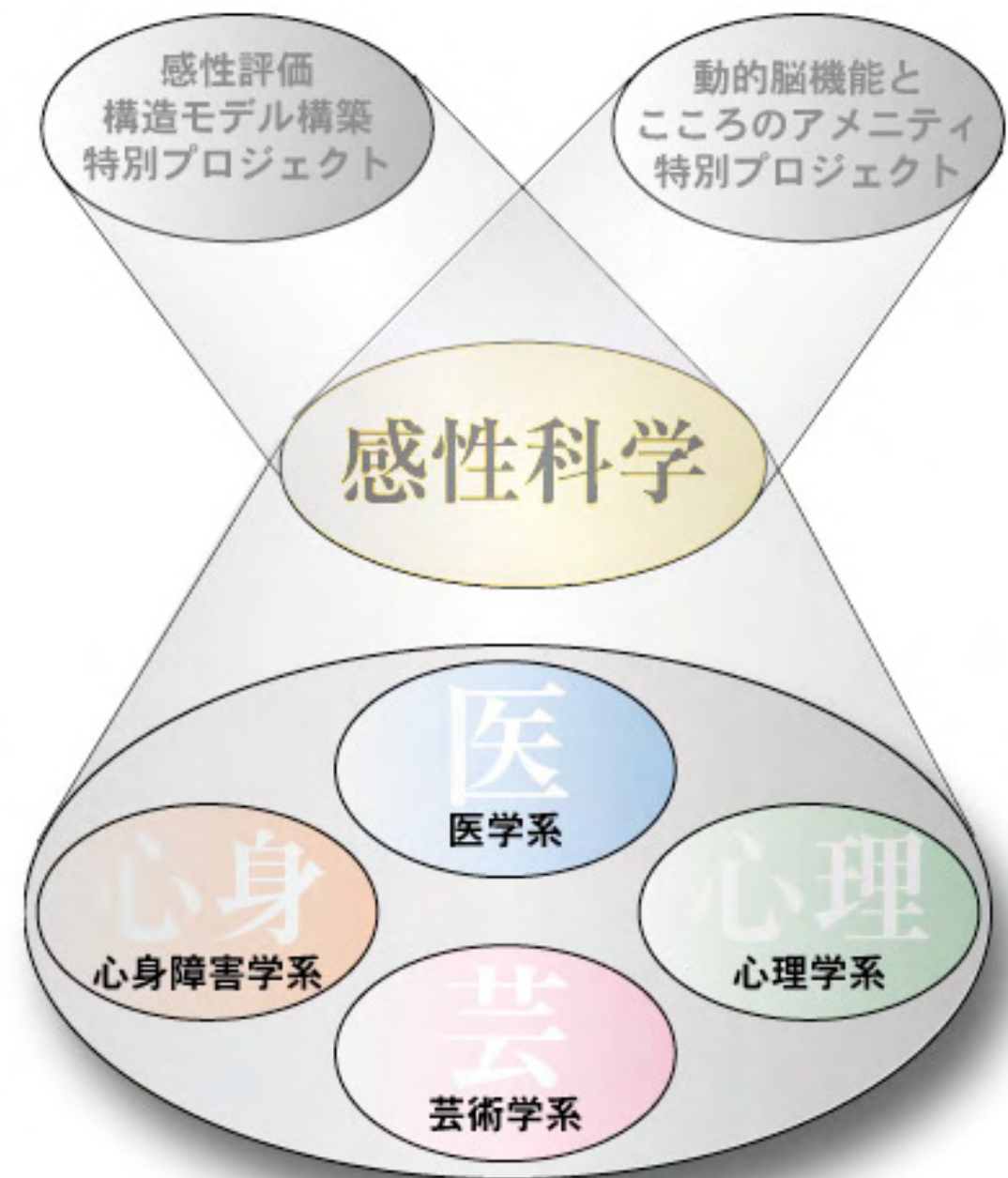
Seeks to elevate Japanese universities to the world's highest echelons, while fostering people of talent and creativity who will be qualified to assume roles as world leaders.

「こころを解明する感性科学の推進」は、筑波大学で活動中の4拠点のうちのひとつ

sponsored by MEXT

objective

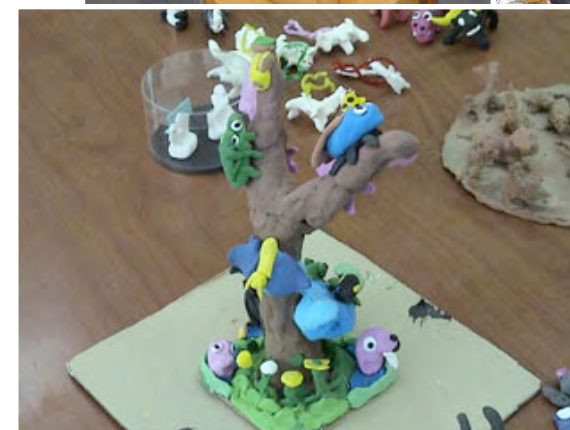
- Amalgamate inter-disciplinary research ranging from Kansei information, Brain-science, Psychology, Mental health-care to Art and Design
- Establish research base on Kansei Science from cross disciplinary study on human's mind function.
- Establish scientific research process on Kansei function which tend to be discussed based on feeling



A. Harada, University of Tsukuba

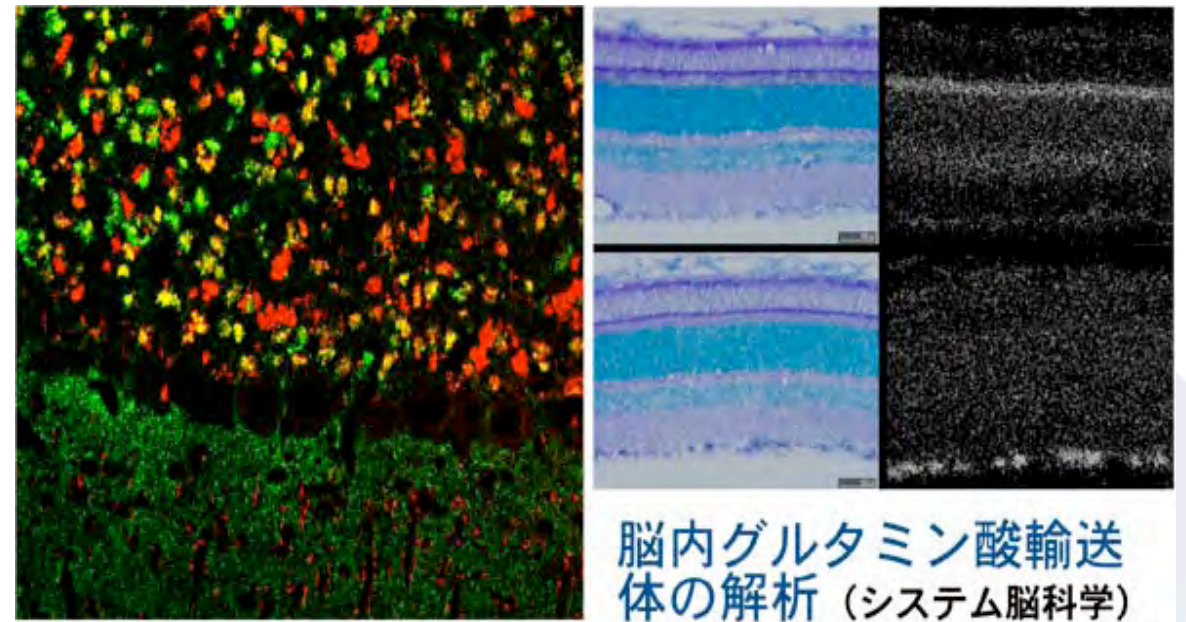
importance, evolvability

- Kansei Science will contribute the comprehensive understanding on brain function to the treatment for mental disablement.
- Develop the human based industry that create products with mental satisfaction
- Educate young researchers with cross disciplinary environment as well as production and promotion of product fit to human's kansei.



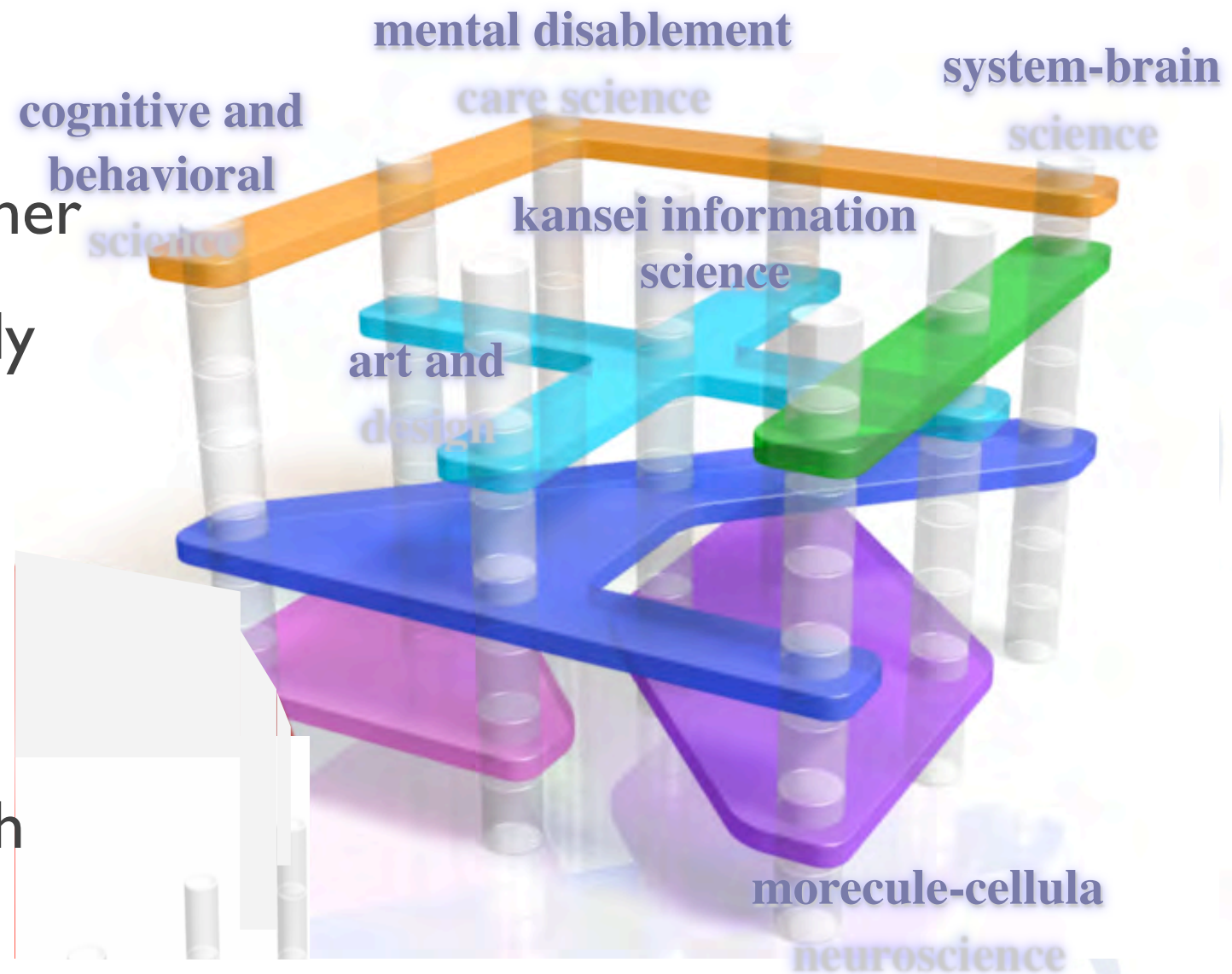
feature

- Research from multi-disciplinary fields such as molecule level analysis to system physiology, behavioral analysis and human science.
- Participation of artists and designers in scientific study and experiment.



prospect

- Educate young and flexible researcher as well as designer
- Promote international study
- Establish science on kansei
- Collaboration body on research between business and university with flexible exchange of either research or researchers.



Research theme

● Kansei and brainfunction through behaviroal and physiological analysis

心理学的測定、注視点解析、fMRI、脳波および光トポグラフィによる絵画鑑賞時の脳機能活動測定から感性に関わる脳機能部位を同定

● Development and disorder of kansei function.

母子分離や自閉症モデル動物を用いた脳構造や分子機構の解析から出生後の感性発達に及ぼす生育環境の影響について研究し、精神機能障害の支援機構などを構築

● Kansei function from neuro-physiological studies

感覚器から高次中枢を経て扁桃体に至る神経機構について神経回路の形成と機能制御に関わる分子の機能解析

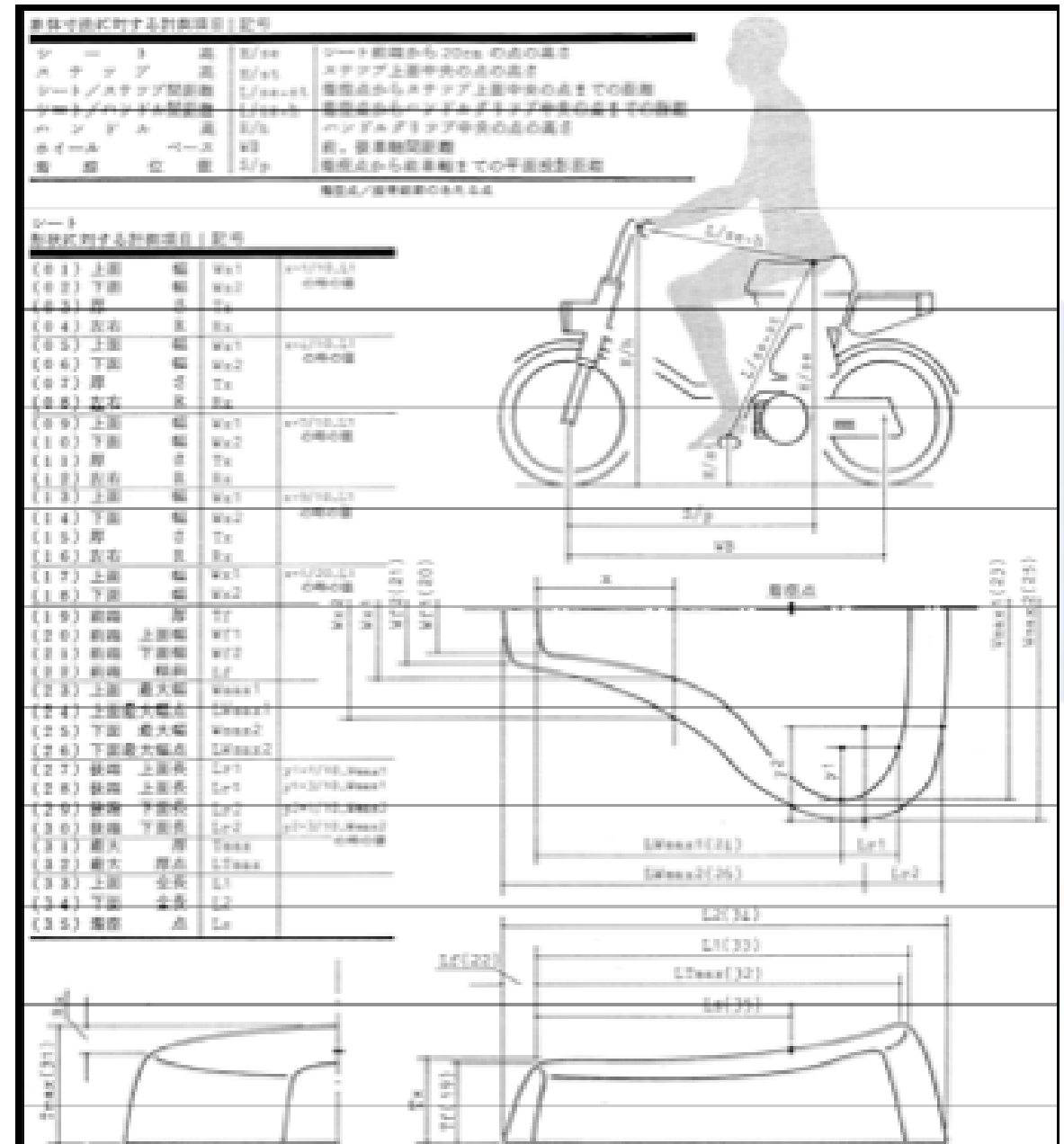
● Kansei expression and appreciation

美術鑑賞における感性評価について、高度な制作経験や鑑賞経験がどのように感性反応の差として示されるのかを調査し、感性表現の鑑賞支援のための指針を得る

research topics on kansei

riding feeling of moped

- Quantitative design method of seating for better riding feeling
- Based on experiment, measurement and kansei evaluation data through statistical analysis



good feeling

in Motion

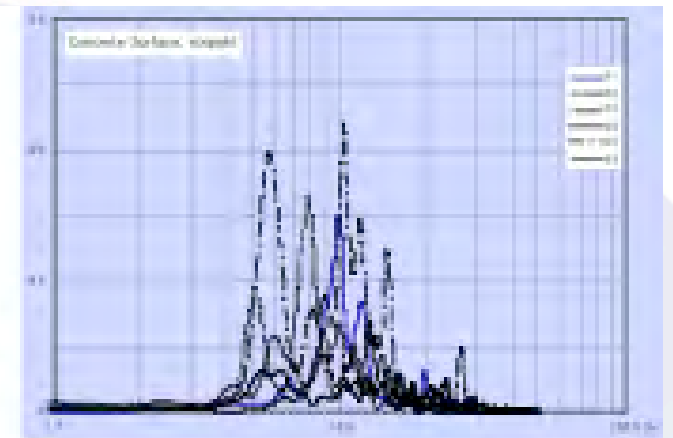
- Static spring invialiable, static spring rate, hysteresis-loss rate, hysteresis-loss volume are significant
- Soft surface and firm feeling in seated. Stable while seating.

in Static

- Static spring invialiable, hysteresis-loss volume and damping time are significant.
- Firm surface, stability at seated especially gripped with thigh

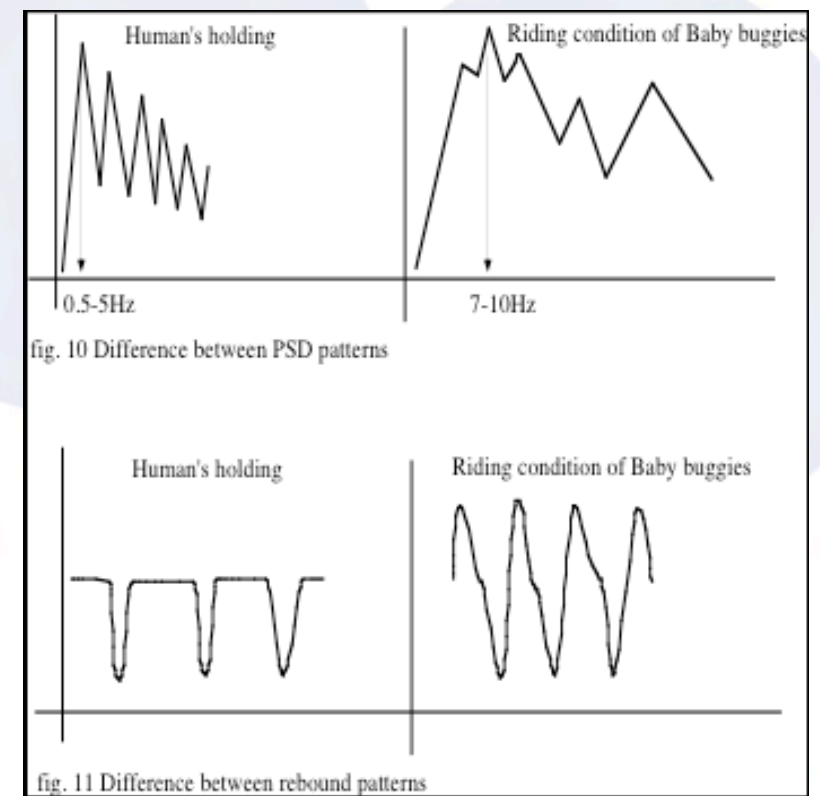
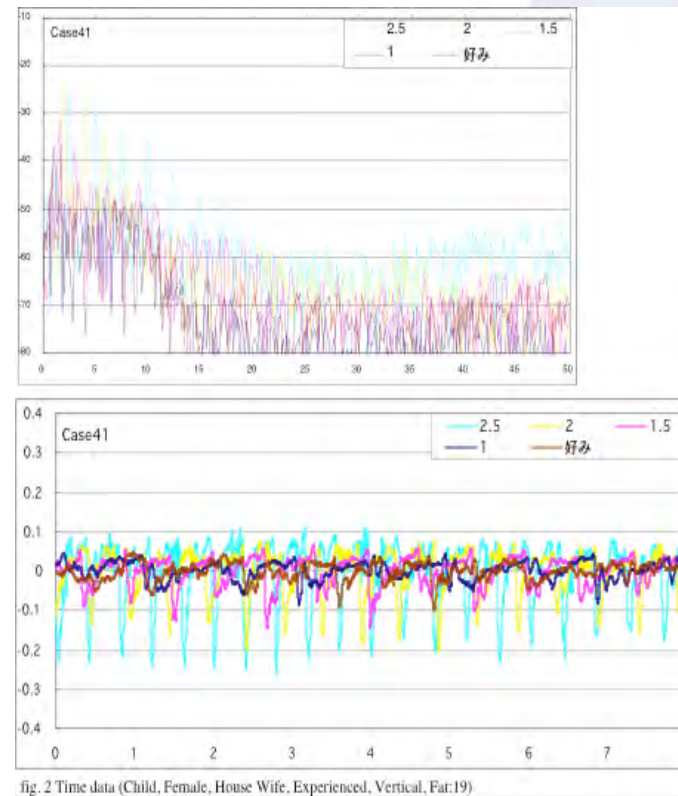
riding feeling of baby buggy

- Analysis the riding feeling of baby buggy
- Facial expression can show individual mood but there were difficulty for generalization.
- As an riding condition, baby baggy is far different from holding



human enfolding

- accustomed human's holding produce rythmical vibration and moderate rebound. Also, quick damping factor.



- lower peak frequency than baby buggy

structure of *Kodawari*

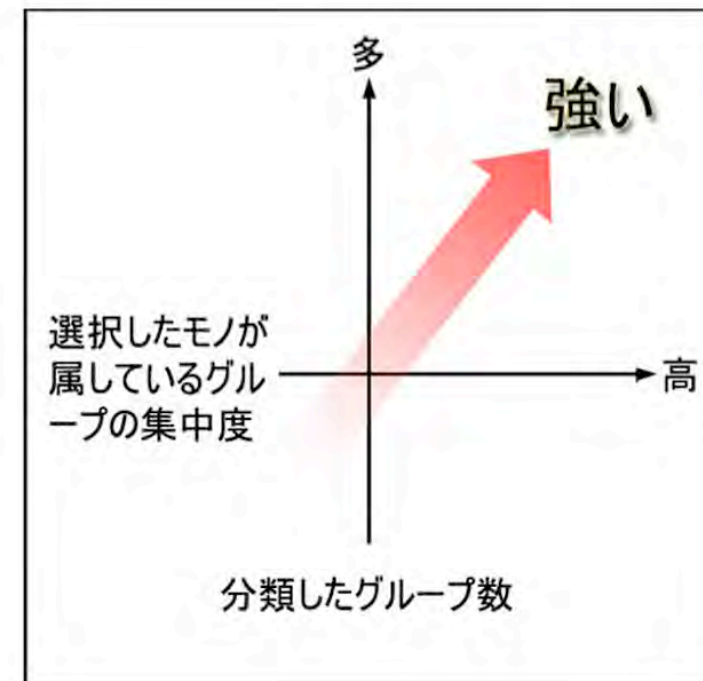
- Kodawari (obsessiveness) related to personal preference and intuitive decision.
- Categorizing manner may show the unaware sense of kodawari.
- A person with strong kodawari weights not only functional part of product but visual or esthetic elements.



N.G.Kang,
T. Yamanaka,
6th ADC2003

expression of *kodawari*

- Balance of number of groups, number of groups include preferred product may show the difference of tendency between design-educated and others.
- Assuming designer is generally having strong *kodawari*, this result shows the difference of *kansei*.



$$\text{集中度} = \left(\frac{\text{選んだベンチの数 (5)}}{\text{選んだモノが属しているグループ数}} \right) - \left(\frac{\text{選んだモノの集中度}}{\text{分けたグループの数}} \right)$$

$$\text{コダワリ係数} = 1 - \left(\frac{\left(\frac{\text{選んだベンチの数 (5)}}{\text{選んだモノが属しているグループ数}} \right) - \left(\frac{\text{選んだモノの集中度}}{\text{分けたグループの数}} \right)}{\text{分けたグループの数}} \right)$$

$$\text{コダワリ係数} = 1 - \left(\frac{\text{選んだモノが属しているグループの数}}{\text{分けたグループの数}} \right)$$

behavioral analysis of tea friends

- Tea set is not only a functional object provide drinking tea. It also modify the communication environment.
- Experiment of different situation: with tea set / without tea set.
- If somethig different, it shows the clue of effect of unaware object for communication.
- Generally, panel takes tea at the time of break of conversation and end of speaking for seven seconds. In case of drinking at silence, it takes 20 seconds.

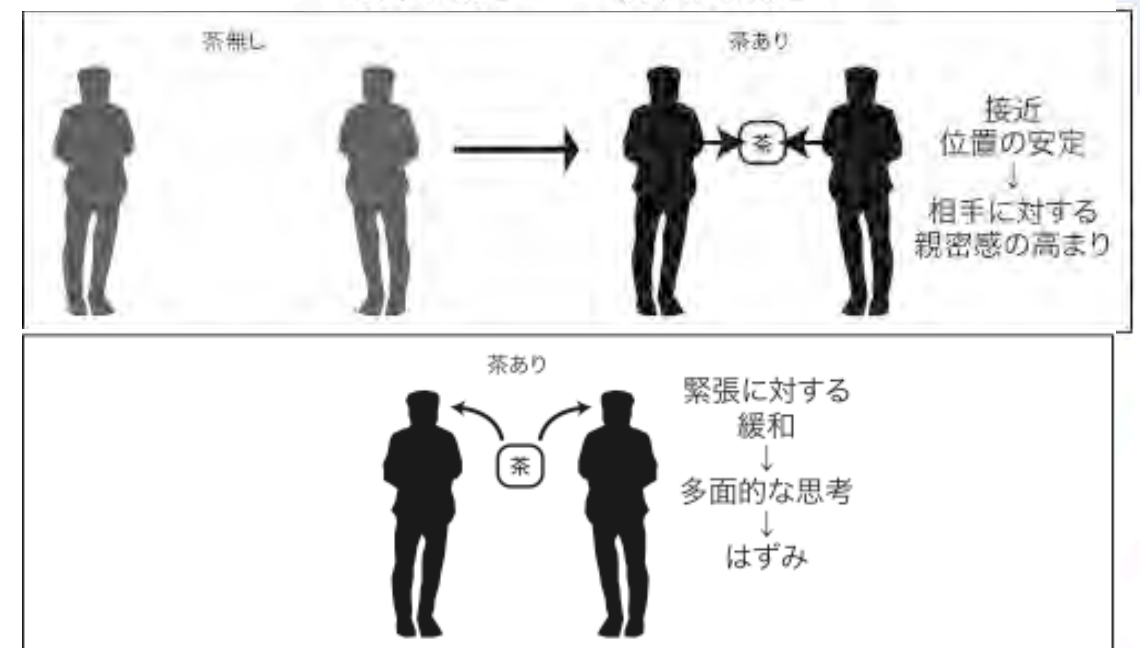
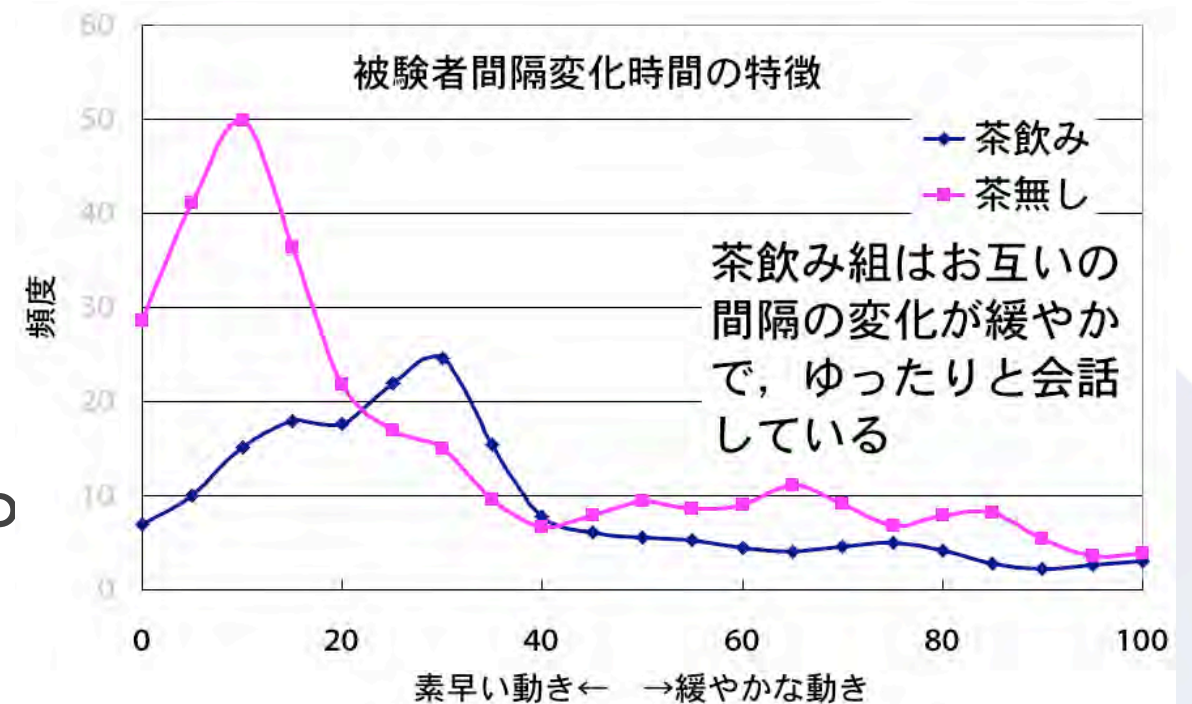


1. 会話の内容に関係のある動作	2. 会話の内容に関係の無い動作
<ul style="list-style-type: none"> ・ 数を指で示す ・ 大きさを指で示す ・ 形態模写(動きの表現) ・ 相手を指さす ・ 頷き ・ 茶を飲みながら頷き ・ 茶を持ちながらの頷き・発言 	<ul style="list-style-type: none"> ・ 髪にさわる ・腕に触る ・ 顔に触る ・指をいじる ・ 椅子を回転させる ・メガネにさわる ・ ハンカチをいじる ・ アクセサリーをいじる ・ テーブルをいじる ・姿勢をかえる ・ 茶を注ぐ ・茶を飲む ・ 茶碗にさわる ・茶菓子を食べる

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K. Tamura,
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tea set and communication

- Behavioral analysis of time dependent changes of distance in two person was made in comparison of with tea and without tea.
- Characteristic pattern of change of distance had found.
10-30 seconds in [with tea] 5-10 seconds in [without tea]
- Effect of tea set support closeness of relationship and stability of communication.
- Tea drinking situation, tea produces more close positioning. At the same time, it make easier for people to take timing and relaxed communication.



summary

- Kansei information study gives us comprehensive information of mind process, not mind reaction
- Kansei information will support fundamental understanding of human's mind and designers' mind
- Kansei science will be the necessary element in design, similar to the fundamental study on cognition in 1980s.

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