A "cane" for thinking

an optimistic information engineering viewpoint on dementia

Katsunobu Imai (Hiroshima University)

June 7, 2019 Tokyo

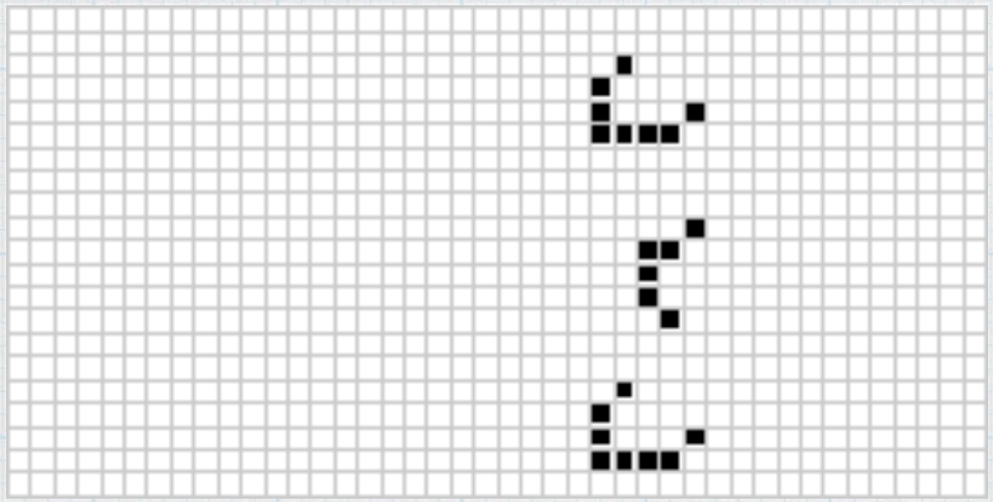
The game of life

* The game of Life (an extremely simple model of bacterial growth)

Conway 1970

  * To study the asymptotic behavior of the game of life

— death, periodic repetition, unbounded growing



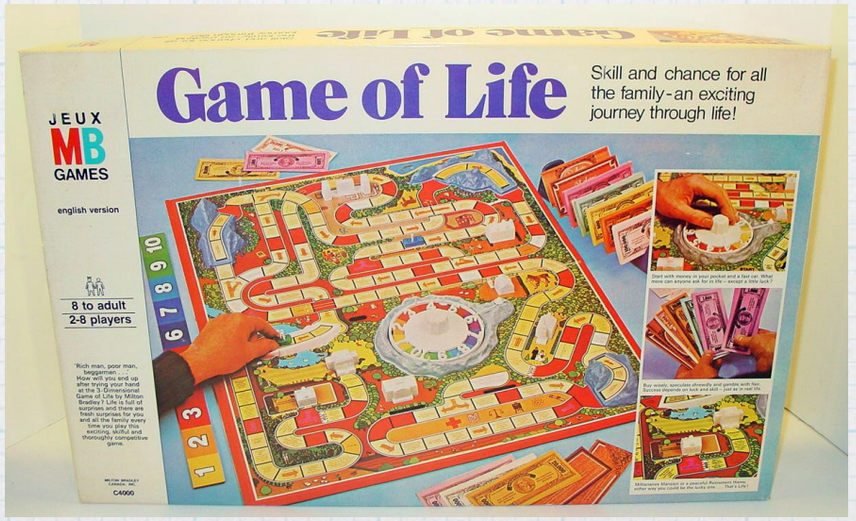
http://mathworld.wolfram.com/CellularAutomaton.html

Wikipedia

Growing: particularly, increasing the complexity of its pattern is interesting.

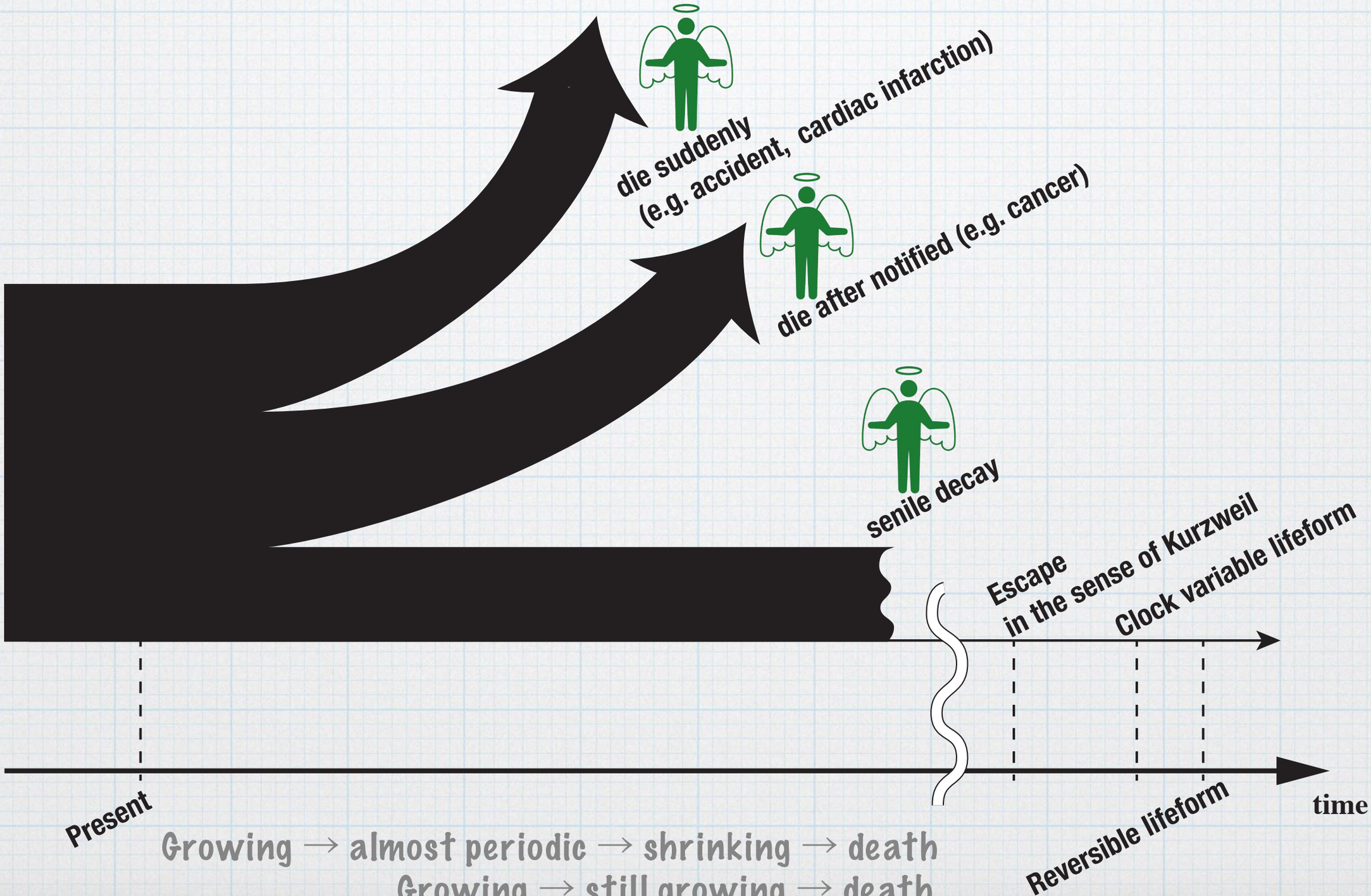
Yet another game of life

* To study the asymptotic behavior of my life — death, periodic repetition, unbounded growing



http://sa2hara.com/?p=369

My life plan



Growing → almost periodic → shrinking → death

Growing → still growing → death

My life plan

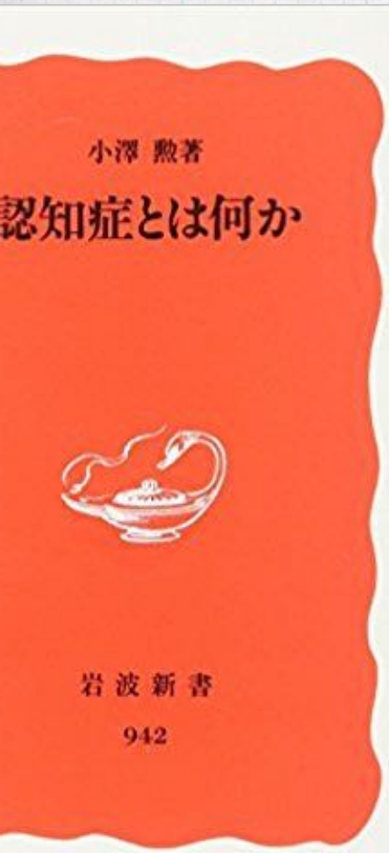
There are some nice books for preparing
for the day of these two cases.

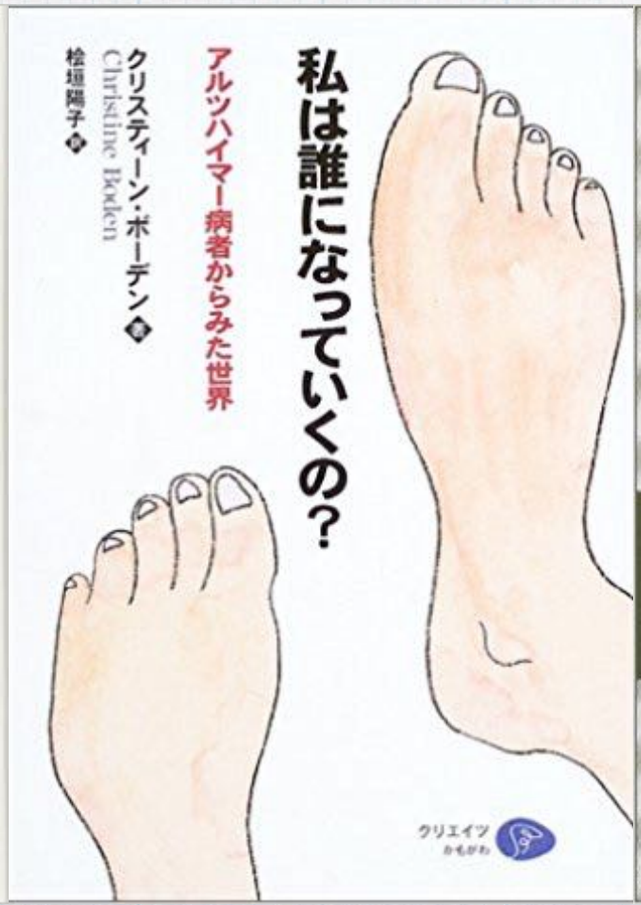
Dementia

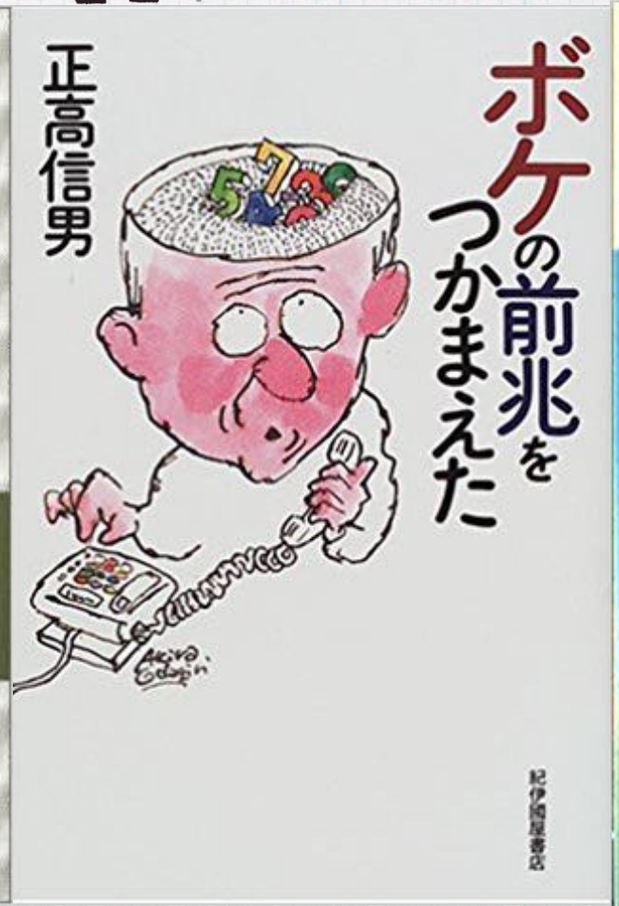
* Memory disorder and Disorientation

Alzheimer's disease

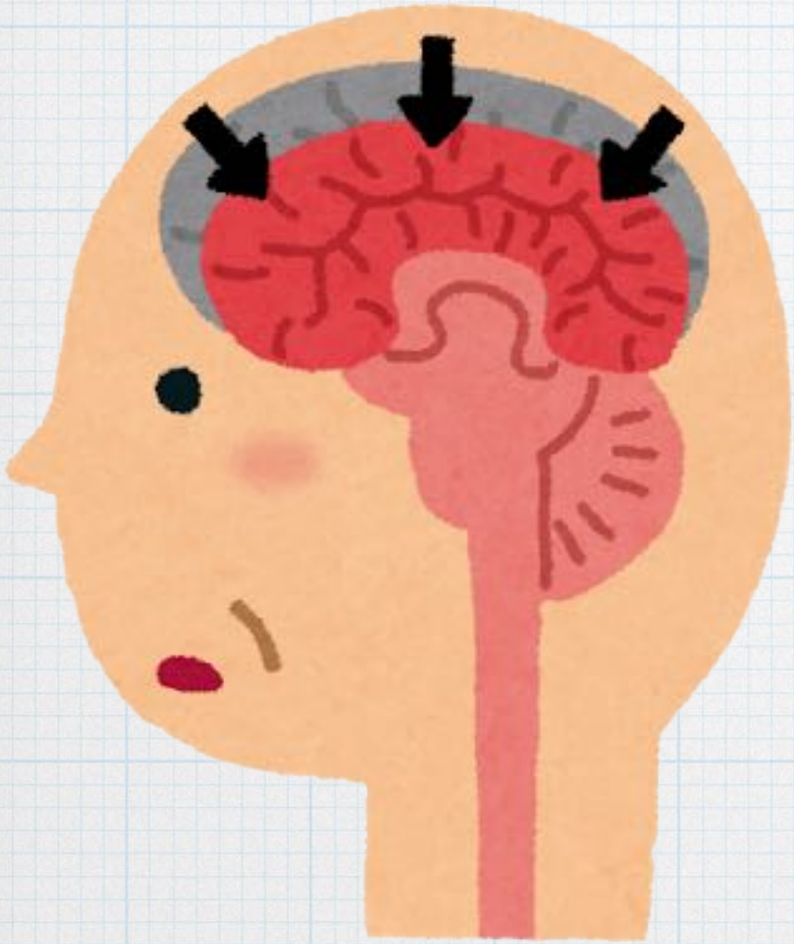
irasutoya







Dementia



Alzheimer's disease

Memory disorder and disorientation, ...

Vascular dementia

Cognitive, motor, behavioral, and for a significant proportion of patients, ...

Dementia of Lewy bodies

Visual hallucinations, and REM sleep behavior disorder, ...

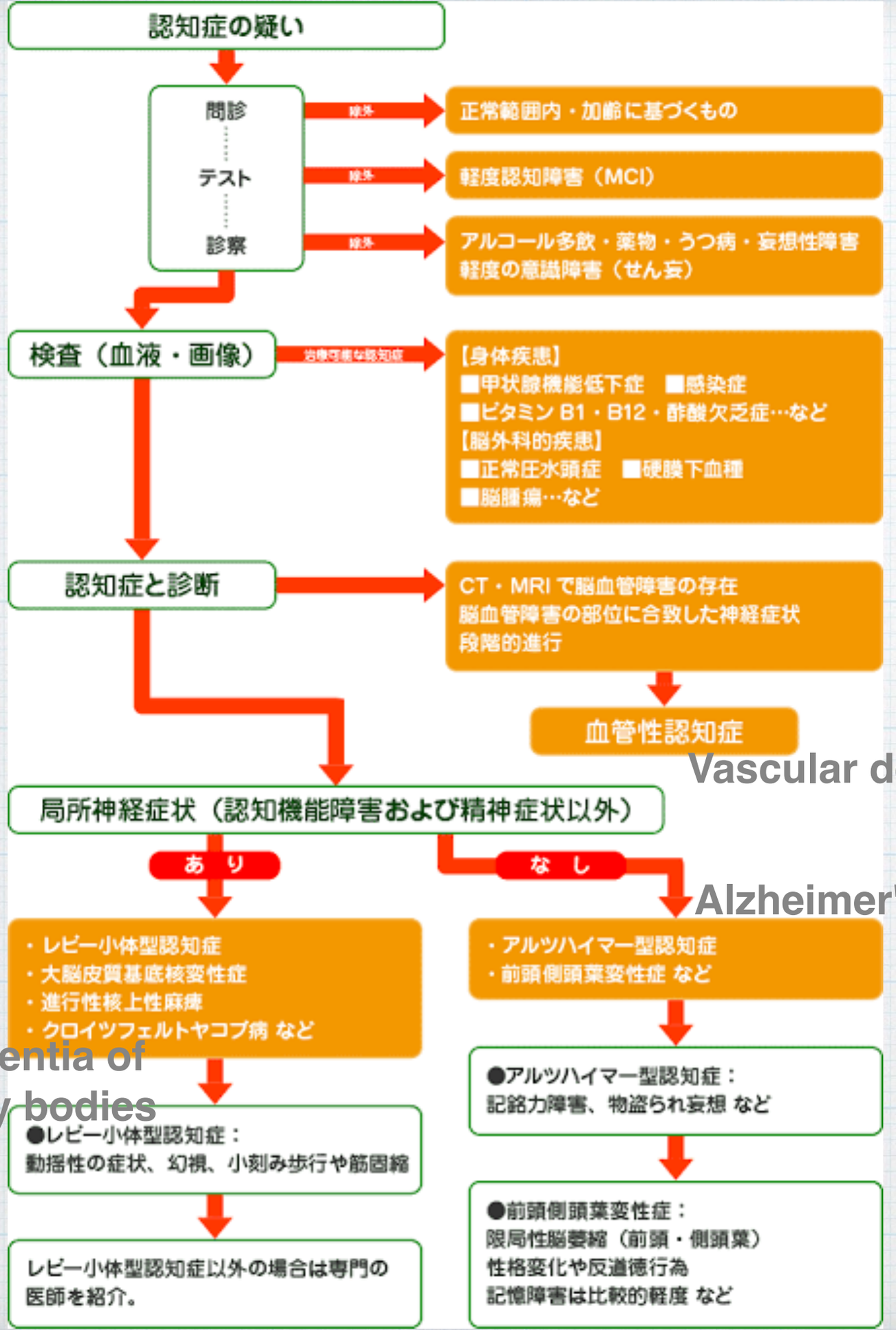
Memory loss is not always noticeable in the early stages of VD/DLB.

irasutoya
Wikipedia

http://www.kokura-orange.jp/about_dementia/diagnosis_root/

A flow chart for dementia diagnostics.

認知症診断フローチャート
(小倉医師会)



Vascular dementia

Alzheimer's disease

Dementia of Lewy bodies

Dementia is extremely difficult.
There is no specific disease named 'dementia.'
There are many variations.

The diagnosis of Alzheimer's disease: an exclusion diagnosis.

Behavioral and Psychological Symptoms of Dementia (BPSD)

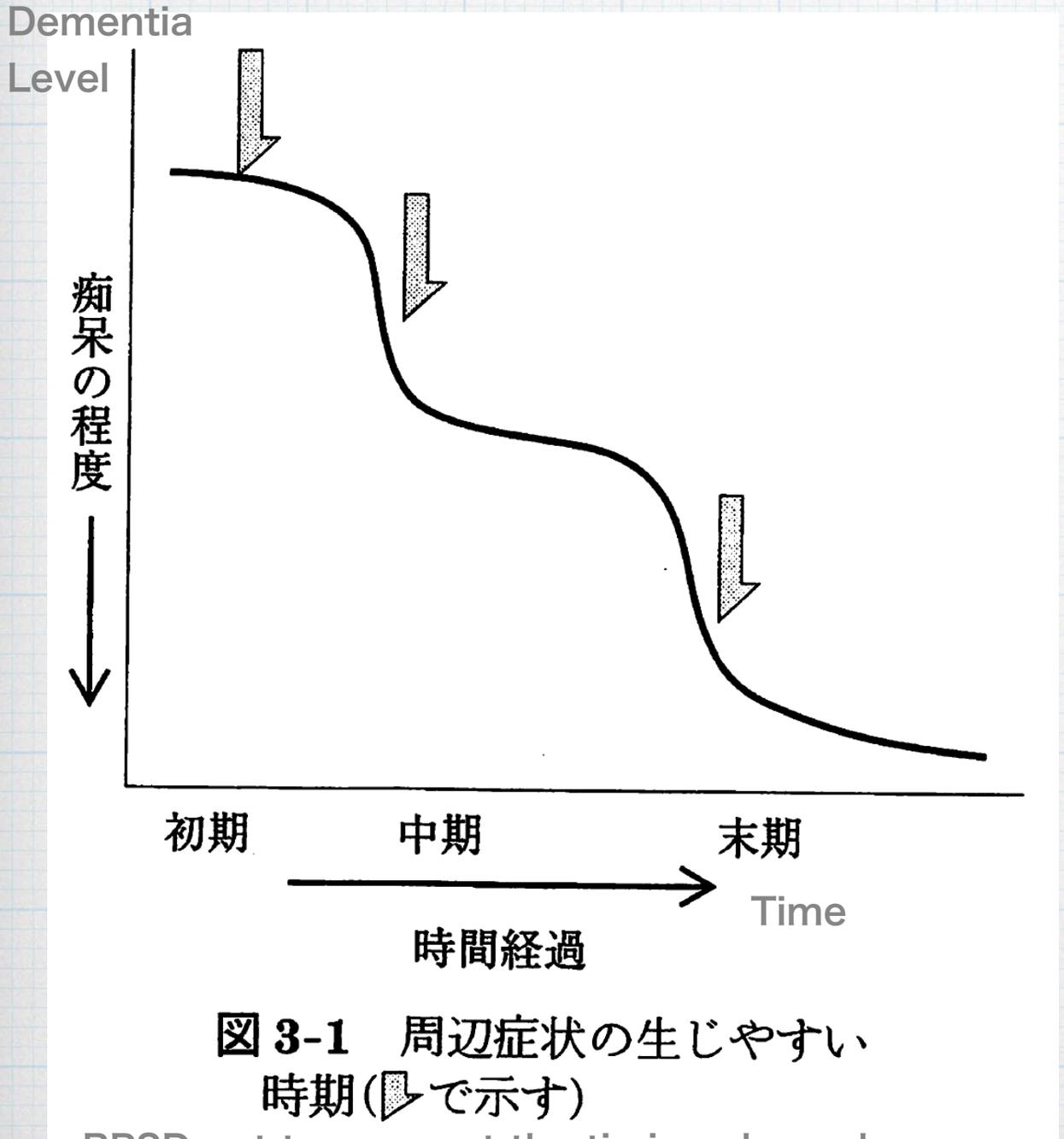
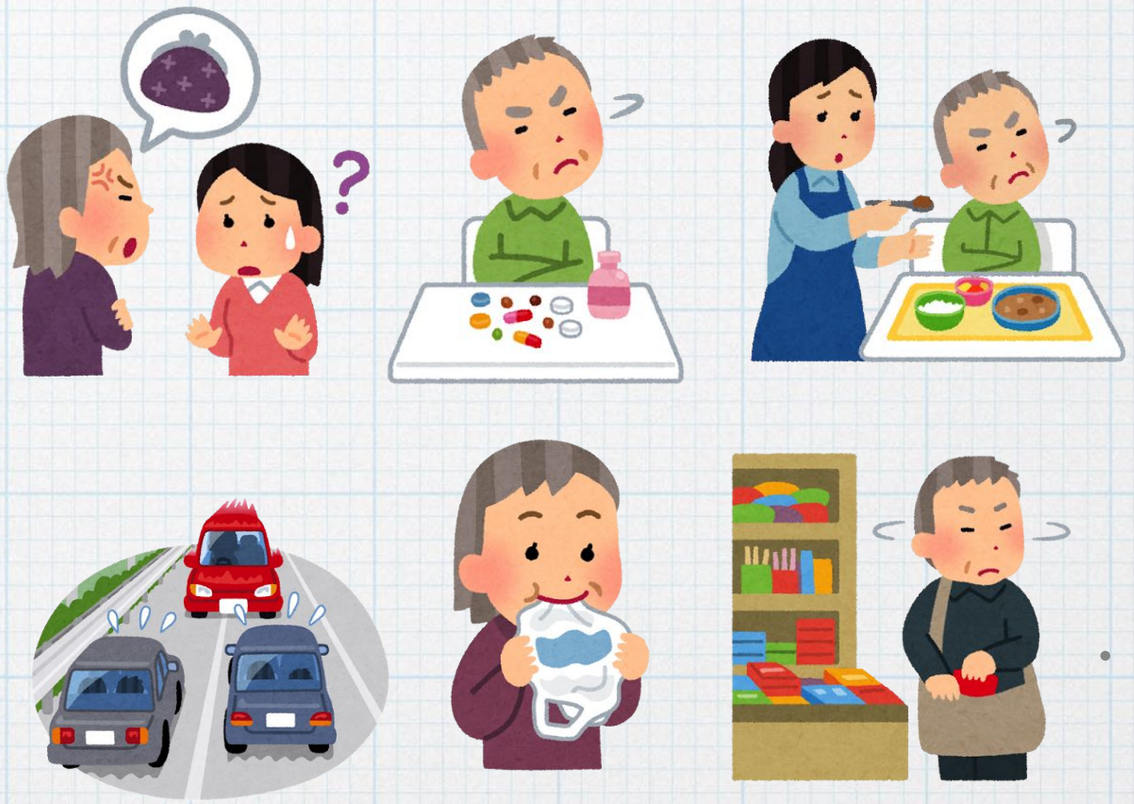


図 3-1　周辺症状の生じやすい時期(▷で示す)

BPSD apt to occur at the timing shown by arrows.



Detection and palliation of BPSD are important.

小澤「痴呆を生きるということ」

Dr. Hasegawa suffered from dementia.

Hasegawa dementia scale

2018.4.4 14:00

認知症発症を公表、長谷川和夫医師に聞く　患者だからこそ分かる「生」の尊さ

認知症であることを公表し、「一日一日を大切に生きていく」と話す長谷川和夫医師（飯田英男撮影）

高齢化の進行に伴い、認知症を発症する人は７年後に７００万人、高齢者の５人に１人に上ると予測されている。そうした中、認知症医療の第一人者で、昭和４９年に認知症を鑑別する「長谷川式簡易知能評価スケール（長谷川式認知症スケール）」を開発した医師の長谷川和夫さん（８９）が昨年、自らの認知症を公表した。発症後に感じたこと、伝えたいことなどを聞いた。（聞き手　加納裕子）

https://www.sankei.com/life/news/180404/lif1804040023-n1.html

Sleep Medicine 11 (2010) 586–588

Contents lists available at ScienceDirect

Sleep Medicine

journal homepage: www.elsevier.com/locate/sleep

Historical Issues in Sleep Medicine

Did Immanuel Kant have dementia with Lewy bodies and REM behavior disorder?

Marcelo Miranda [a,*], Andrea Slachevsky [b], Diego Garcia-Borreguero [c]

[a] *Department of Neurology, Clinica Las Condes, Chile*
[b] *Faculty of Medicine, University of Chile, Chile*
[c] *Sleep Research Institute, Madrid, Spain*

ARTICLE INFO

Article history:
Received 1 February 2010
Received in revised form 5 March 2010
Accepted 10 March 2010
Available online 6 May 2010

Keywords:
Kant
Neurologic disorder
Parasomnia
REM behavior disorder
Dementia with Lewy bodies
History of medicine

ABSTRACT

Immanuel Kant, one of the most brilliant minds of the XVIII century and of western philosophy, suffered from dementia in his late years. Based on the analysis of testimonies of his close friends, in this report we describe his neurological disorder which, after 8 years of evolution, led to his death. His cognitive decline was strongly associated with a parasomnia compatible with a severe rapid eye movement (REM) behavior disorder (RBD) and dementia with Lewy bodies.

Antidementia agents

* Acetylcholinesterase inhibitor ↑

Only for AD or possibly LBD

Inhibits the acetylcholinesterase enzyme from breaking down acetylcholine caused by the lacking of neurons and gain the activity of parasympathetic nervous system.

アリセプト (donepezil), レミニール(Galantamine), イクセロン(Rivastigmine)

* NMDA receptor antagonist ↓

Only for AD

Inhibits excessive glutamatergic nervous excitement, reduce synaptic noise and neuronal excitotoxicity.

メマリー (memantine)

* Psychoactive drug

e.g. リスパダール(resperidone)、レボトミン(Levomepromazine)、グラマリール(tiapride hydrochloride)...

抑肝散

https://www.ncbi.nlm.nih.gov/pubmed/30282371

Are drugs for Alzheimer's disease actually effective?

J Alzheimers Dis. 2018;66(2):425-427. doi: 10.3233/JAD-180843.

France Will No More Reimburse Available Symptomatic Drugs Against Alzheimer's Disease.

Krolak-Salmon P[1], Dubois B[2], Sellal F[3], Delabrousse-Mayoux JP[4], Vandel P[5], Amieva H[6], Jeandel C[7], Andrieu S[8], Perret-Liaudet A[1].

Author information

Abstract

The French Minister of Health published a decree on May 29th of 2018 removing the drugs used to fight against symptoms due to Alzheimer's disease (donepezil, rivastigmine, galantamine, memantine) from the list of available reimbursed drugs. This follows the advice delivered by the High Authority for Health in 2016 and 2018 stating an "insufficient medical benefit and dangerousness because of significant side effects". The main French scientific and medical societies and professional associations want to state here their deep disagreement regarding this unfair decision. The evidence-based medicine related to these drugs reaches a high level in literature, whereas the clinical relevance of these treatments must be considered with co-prescription of psychosocial interventions and related approaches. As no serious pharmacovigilance signal has been provided by health authorities, the ratio of benefits/risks favors these drugs.

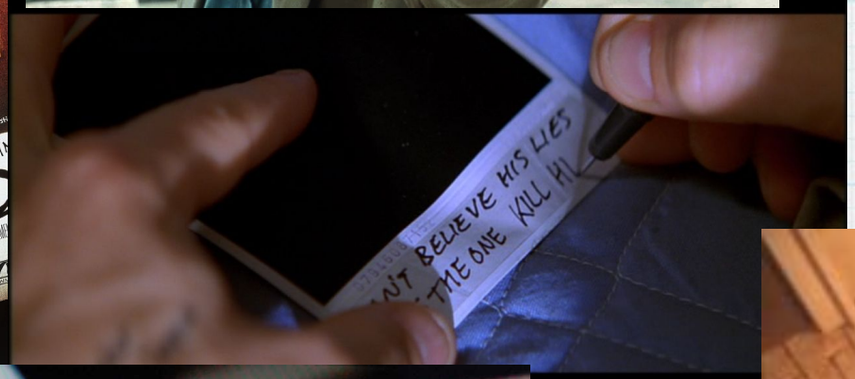
They are not covered by insurance now in France.

KEYWORDS: Alzheimer's disease; drug; health policy; reimbursement

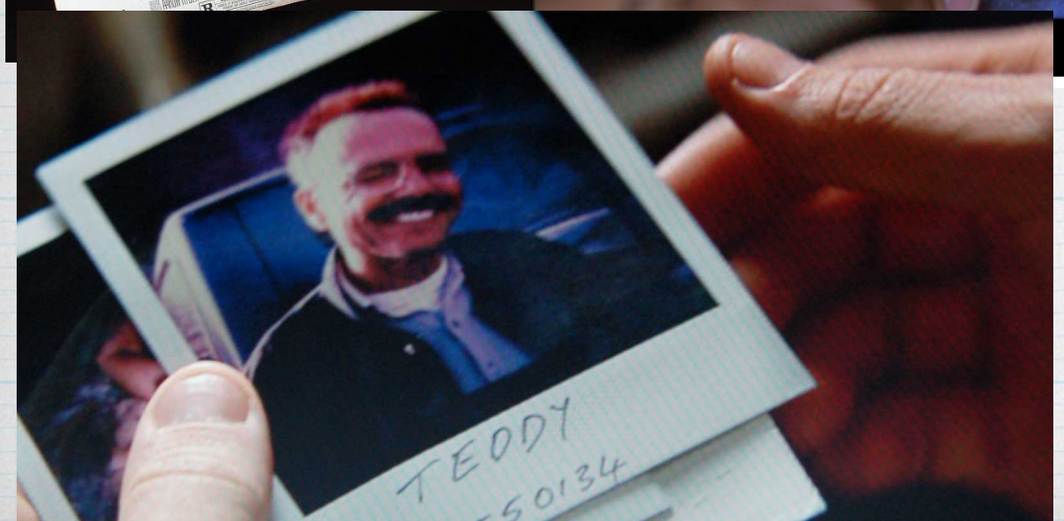
PMID: 30282371 DOI: 10.3233/JAD-180843

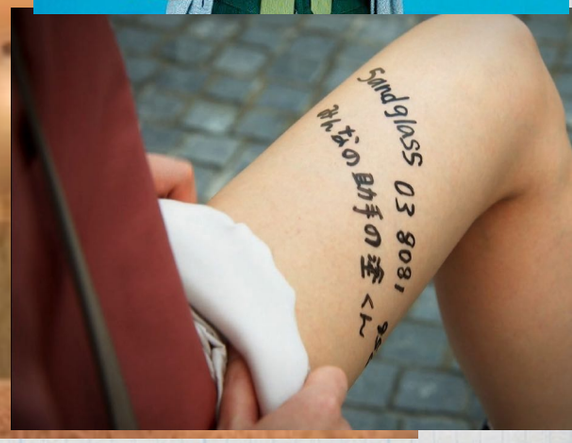
Dementia: living in a world like that of Memento?

Memento



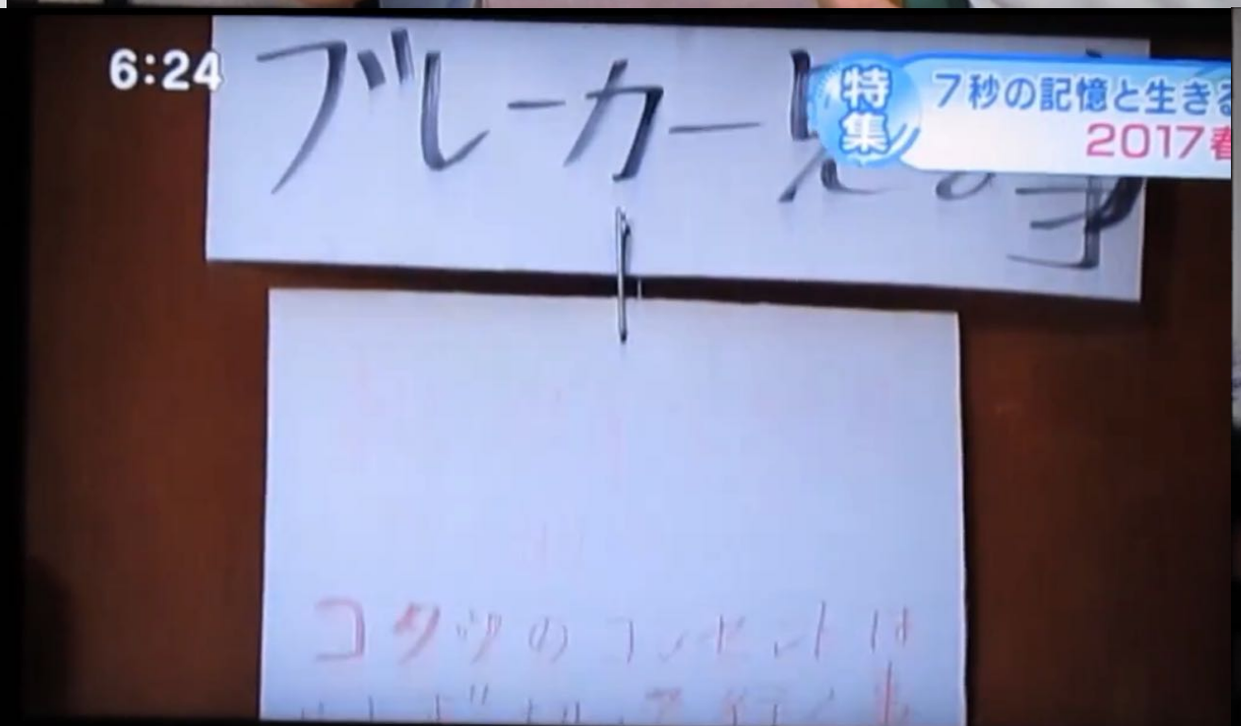
掟上今日子の忘備録

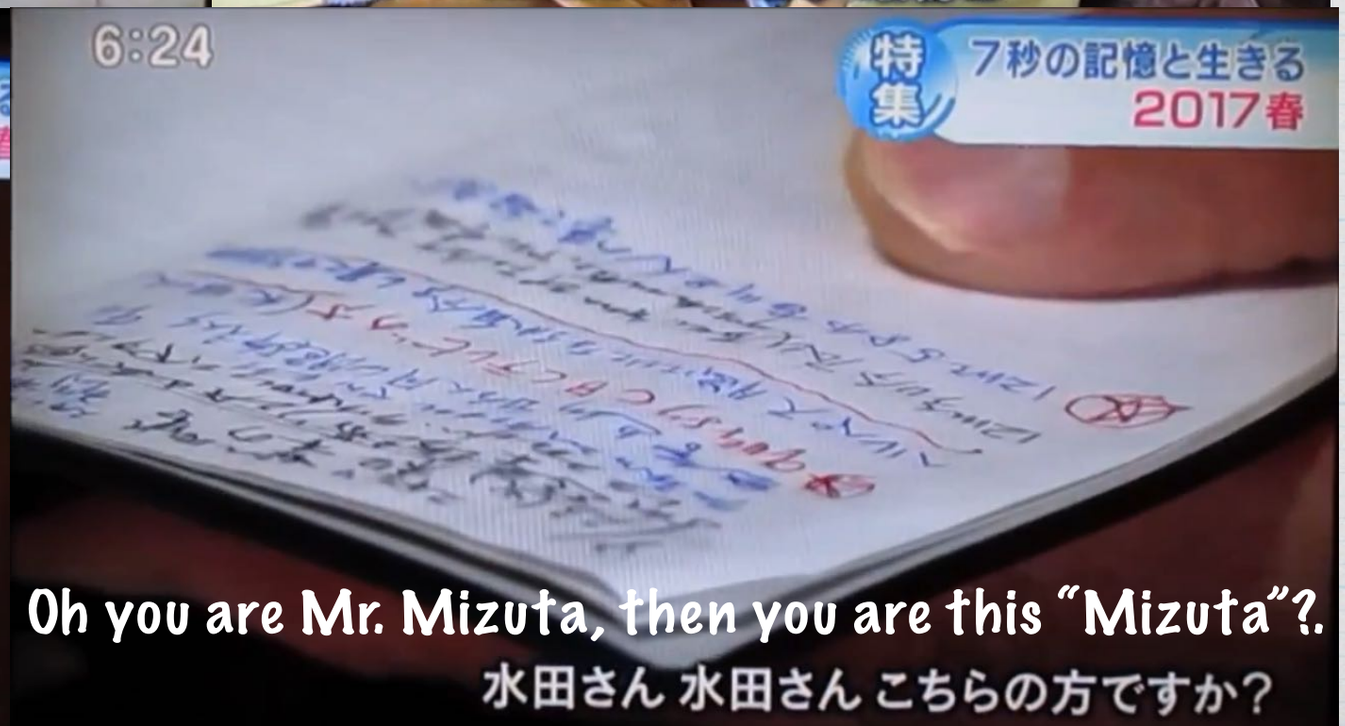




Anterograde amnesia (by herpes simplex encephalitis)

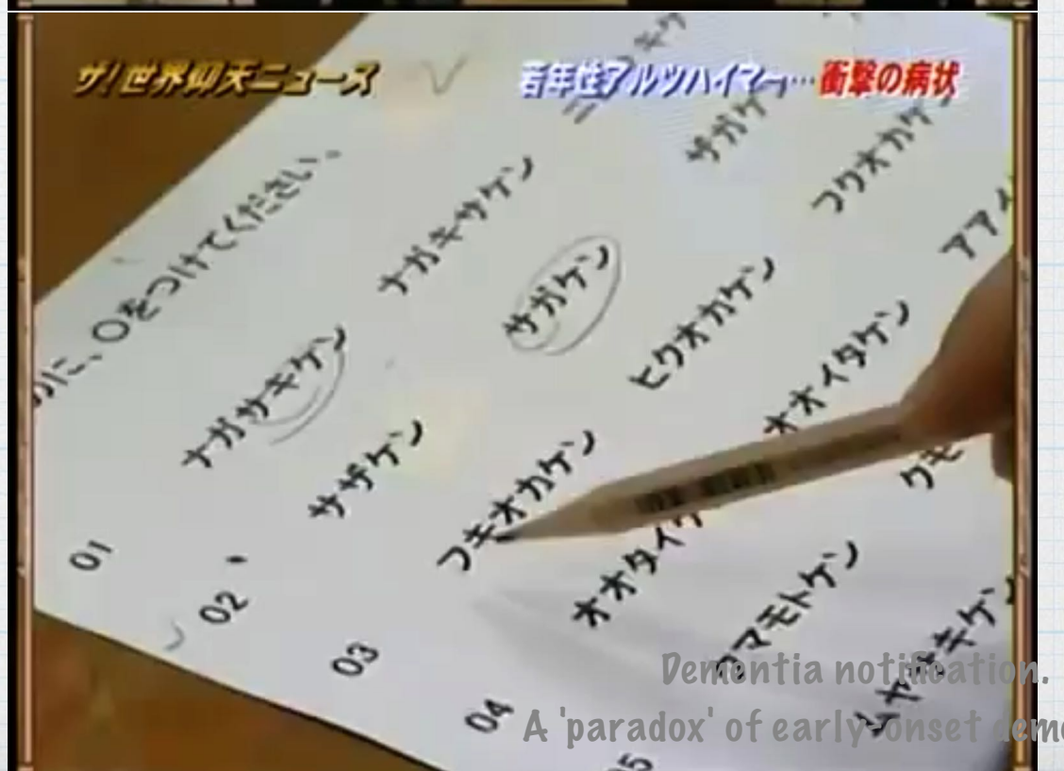
消えていく今 7秒の記憶と生きる CVCテレビ
https://hicbc.com/tv/kieteiku-ima/
https://www.youtube.com/watch?v=B_ilvigRGcc





Early-onset dementia

ザ!世界仰天ニュース　「全てを忘れていく恐怖の病気」
https://www.youtube.com/watch?v=joA6nIloL9s



Memory disorder

* Memory
    * Semantic memory, episodic memory (apt to be lost by dementia)
    * Procedural memory (e.g. riding a bicycle, etc.)
* Memory Processing
    * Memorization
    * Retention
    * Recall (You need to recall a thing at a proper time and a place.)
        * Recollection (self associative, apt to be lost in aging)
        * Familiarity (not self associative but can recognize)

Dementia and losing abilities

	Anterograde amnesia	Early-onset dementia	Senile dementia (early stage)	Senile dementia (advanced)	Senile dementia (last stage)
Memorization	✕	▲	○▲	▲	✕
Retention	✕	▲	○	▲	✕
Recollection	✕	✕	✕	✕	✕
Familiarity	✕	▲	○	▲	✕
Motivation	○	○	▲	✕	✕
Physical	○	○	○	▲	✕

○ :better

▲ : getting worse

✕ : worst

Losing the ability of 'recollection.'

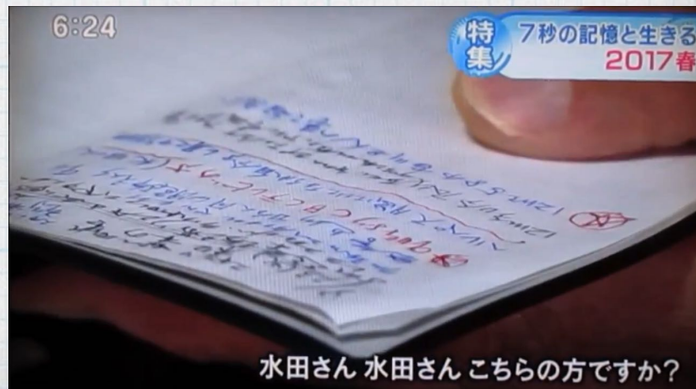
Losing the 'driving forth' of thinking.

Losing the ability of 'recollection' and the 'driving forth' of thinking

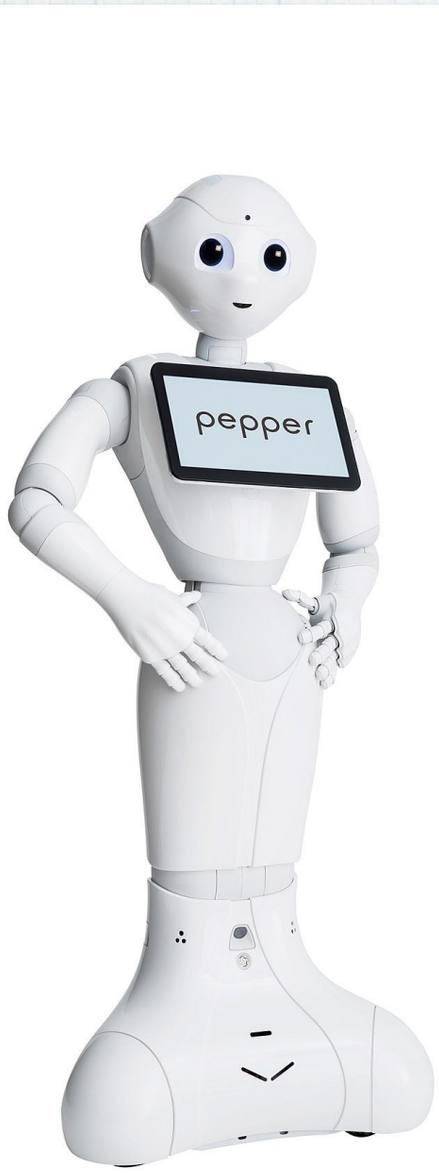
A patient of early-stage dementia tries to **memorize** things.
But he **loses** them or forgets watching them.

A patient of advanced dementia
loses the **motivation** of memorize things.

Even Kant used the 'technology of note to self.'
Why are we still relying only on the same technology?



I thought I would rely on Softbank...



ぽたぽた焼
http://nlab.itmedia.co.jp/nl/articles/1505/11/news132.html

Pepper as a crony?

Sharing times with another human is essentially needed for our life, but we have to avoid bothering helpers.

* An "AI" can reduce the time of talking with helpers.

* We are also responsible for reducing the time by our effort.

cf. Minister for Loneliness (UK)

I thought I would rely on Softbank...

https://business.nikkeibp.co.jp/atcl/book/15/284212/012000008/

2018年5月20日（日）

日経ビジネス ONLINE

TOP　小売り・サービス　情報・通信　製造　政治・経済・国際　スキル・ライフ　テーマ特集

総合トップ ＞ 情報・通信 ＞ 孫正義の焦燥

孫正義の焦燥

「ペッパーの夢を見て号泣して目が覚めた」

ソフトバンク・孫正義社長に聞く（上）

大西 孝弘　　バックナンバー

2016年1月21日（木）

ソフトバンクグループのロボット「ペッパー」が順調に販売を伸ばしている。2015年6月から毎月1000台を完売している状態だ。2015年末までに累計7000台を販売し、ヒト型のロボットでは世界最大の販売台数と見られる。生産能力が増えたため、1月末から店舗やホームページでいつでも購入申し込みができるようになる。

一方、まだ期待ほどの性能に達していないとの声もある。会話を特定のパターンに誘導することが多く、現状では人間ほどの当意即妙の会話は成り立ちにくい。

そのペッパーは今後、どのような方向に向かうのか。孫正義社長に聞いた。

――ペッパーはまだ生まれたばかりです。ペッパーは今後、どのように進化していていきますか。

孫正義：数日前に夜中の4時頃に泣きながら興奮して起きたんだよ。その直前までペッパーが出てくる夢を見ていた。

なぜか、僕は学生で試験を会場で、一生懸命受けていた。そしたらなんか横で僕の秘書みたいな人が答えを教えようとしてくれるわけ。「まあいーから、いーから。自分でやるから」って拒否しているのに、丁寧に僕をアシストしようとしてくれているの。

But after reading this article, I became anxious that 孫-san (CEO) might not correctly understand the issue... (先急ぎすぎ)

He expects 'human mind' in Pepper but it seems difficult to embed such a thing into Pepper so far.

孫『心の部分がないと、24時間一緒に過ごしたくない』

* "Polygons are not sexy."

Jaron Lanier (in a talk with Rudy Rucker)

It seems impossible to stay together all day even if Pepper is a human.

So I am now talking to you to find an AI-engineer who has a first-person viewpoint on it...

“What I felt must have been desperation.”


オンラインゼミナール

介護生活敗戦記

＋ 講座をフォロー

「自分の絶望を分かってくれる人」がいますか？

ホスピス医・小澤竹俊先生×松浦晋也　その4

松浦 晋也
ノンフィクション作家

2017年12月1日

100%

印刷　クリップ

小澤竹俊先生（めぐみ在宅クリニック院長・エンドオブライフ・ケア協会理事）と、本連載の執筆者、松浦晋也さんの対談をお送りしています。小澤先生は、ホスピスの専門家としての診療と「自宅での看取り」を可能にするための人材育成に取り組んでいます。最終回は、レジリエンスの重要さを語っていただきます。そのために重要なのは、「自分の辛さ、絶望を分かってくれる人」。この言葉に、自分（編集Y）の抱えていた記憶が思わず蘇ってしまいました…。

（構成・聞き手：担当編集Y）

小澤竹俊（おざわ・たけとし）
1963年東京生まれ。「世の中で一番、苦しんでいる人のために働きたい と願い」医師を志し、1987年東京慈恵会医科大学医学部医学科卒業。 1991年山形大学大学院医学研究科医学専攻博士課程修了。 救命救急センター、農村医療に従事した後、94年より横

（前回から読む）

松浦：平川克美さんとの対談（「介護もしないうちからえらそうにするな（笑）」）で「自分の自由にならない、どうしようもない肉体的現実」というものに直面する機会が、介護以外にはないんだというお話がありました。考えてみれば、私たちの社会的活動は学校の授業も社会人としての仕事も「始まりがあって、計画があって、いつ終わるかが分かる」ものしか基本的にやらないですよね。

ところが老人介護では「いつになったら治る？　いや、治らないんだよ。じゃあ、いつになったら終わる？　い

https://business.nikkei.com/atcl/report/16/030300121/112200035/

Then, do you expect to have a person who can understand your desperation after suffering dementia?

In the view point of care giving, this is quite difficult because:

When you think you understand the other person, you will not hear his talk any more.

But “He thinks that a person who understands him is here” is important.

Can you expect to happen such a good luck in future?

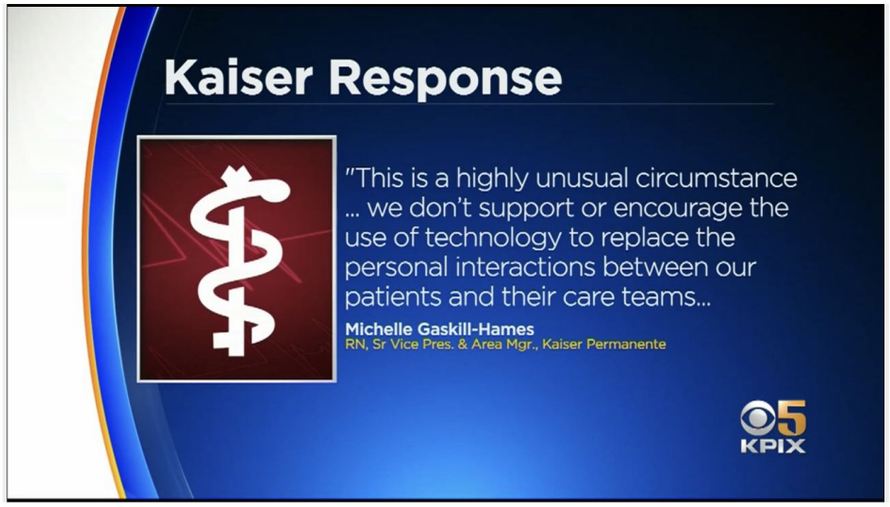
https://sanfrancisco.cbslocal.com/2019/03/10/bereaved-family-upset-kaiser-used-robot/

What a dementia care should be?

sanfrancisco.cbslocal.com

Bereaved Family Upset Kaiser Used Robot To Tell Father He Would Die

By Betty Yu March 10, 2019 at 12:49 am **Filed Under:** Fremont, Kaiser Permanente Medical Center, Robot, Telemedicine



FREMONT (KPIX 5) – The Quintana family was taken by surprise when a robot rolled into the room at Kaiser Permanente Medical Center in Fremont.

Seventy-eight-year-old Ernest Quintana had chronic lung disease. He was rushed to the hospital on Sunday. On Monday, he learned that he didn't have much longer to live.

"It was giving his results of his CT scan, and basically telling him he

Doctors are busy. But the families of a patient want them to share more time to him in a formal way.

But what I will need is not so particular about any 'formal' action but that with 'mindfulness'...

‘Mindfulness’ is enough?

突然、タクシーに激高しはじめた父にびっくり

https://business.nikkei.com/atcl/seminar/19/00107/00001/?P=2&mds

「SAMURAI」マネージャー　佐藤悦子さん

松浦 晋也
ノンフィクション作家

松浦：だいたい1週間に1回ぐらいは顔を出すようにしています。1回行くと1時間ぐらい話をしていたのですが、妄想が出るようになって、だんだん1時間持たせるのが大変になってきた。

ありがたいのは、グループホームの方が、そういう状態になることが分かっているので、話し掛け方や内容を工夫してくれるんですよね。その人に合わせて、なるべくそういう妄想的な発言や、疲労感が出ないように工夫して。

佐藤：具体的には、どうするんですか。

松浦：かつて自分が得意だった方向に話を持っていくんだそうです。

佐藤：なるほど、ご本人が得意だった分野の、昔の話とかをするのですね。

松浦：そうです。だから、入居するときに「お母さんがどういう人だったか、全部話してください」と言われました。話題にするからと。

Caregivers help to stop ones BPSD by their talk.

But even if the action is filled with ‘mindfulness,’ it may be an ad hoc symptomatic treatment.

Caregivers need to understand one’s private information but there is no time.

At least I can understand ‘me.’ Then how to inform me the fact after suffering from dementia?

https://www.anlp.jp/proceedings/annual_meeting/2014/pdf_dir/E7-1.pdf

A study of a blog written by a dementia patient

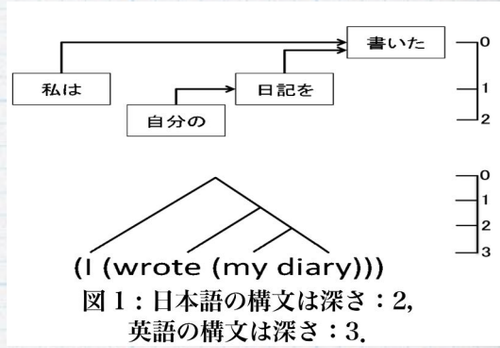


図 1：日本語の構文は深さ：2,
英語の構文は深さ：3.

言語処理学会　第20回年次大会　発表論文集　(2014年3月)

Shikata et, al. 2014

言語能力検査としての言語処理：
長期間のブログ執筆を継続した認知症の 1 例

四方朱子*　　荒牧英治* **
*京都大学
**科学技術振興機構 さきがけ
shuko.shikata@gmail.com　　eiji.aramaki@gmail.com

1　はじめに

本研究は，約 6 年間にわたって一般公開ブログに執筆されていた，認知症患者による日本語の日記を，自然言語処理技術によって検証する新たな取り組みである．

2012 年 8 月の厚生労働省発表によると，2010 年における日常生活自立度 II[1]以上の認知高齢者[2]数は 280 万人にのぼり，将来推計として 2025 年には 323 万人，65 歳以上の人口比率にして 9.3%にまで上昇するだろうと予測されている[3]．

また，同省の 2009 年調べによると，日本における人口 10 万人当たりの若年性認知症者数（18 - 64 歳）は，47.6 人（95 % 信頼区間 45.5 - 49.7）にものぼるとされる[4]．

同報告には，最初に認知症に気づく症状として，もの忘れ (50.0 %)，行動の変化 (28.0 %)，性格の変化 (12.0 %)，言語障害 (10.0 %) らが挙げられており，言語障害による認知症症状の発現が示唆されている．

医療に対する言語処理の応用については，医療カルテの解析やマイニングなど，すでに多くの研究がある．しかし一方で，認知症患者本人の用いる言語を解析した研究は極めて少ない．

その原因として，必要なコーパスを手に入れることが極めて困難であることなどが挙げられるだろう．これは，認知症が様々な要因から発見や診断に時間がかかる傾向にある疾患であり，加えて症状が進むにつれて言語表現行為が困難になることや，患者の多くが高齢者であり，公開メディアの 1 つであるインターネット上のブログ等を活用することに親しみが薄いことなどが，主な理由として考えられる．

本研究では，認知症患者の言語データを自然言語処理技術によって解析する一例を提示することで，早期発見（スクリーニング）や，予防[5]の手がかりを模索することを目的としている．

今日に至るまで，認知症における失語に関する研究自体は数多くなされてきた．例えば，症状が進行するにつれ，使用できる単語数が減少傾向へと向かうことなどはよく知られており，認知症の判定基準などにも用いられている[6]．

これを受けて，本研究では，まず，認知症患者によって自発的にインターネット上に公開されたブログテキストの潜在使用語彙の量が，時間経過とともにどのような推移をたどるのかを調査する．

前述のとおり，認知症の発する延べ単語数 (token)，および，異なり単語数 (type) の減少は知られているが，認知症患者の潜在的な語彙（潜在使用語彙量，Potential Active Vocabulary Size，または PA-Vocab.）が，時間経過とともにどのように変化するのかを確かめた前例はない．本研究では，PA-Vocab. を測定することによって，認知症患者の語彙能力の変化を計測する．

加えて，当該の日本語ブログに対し，文法構造の複雑さの指針となる日本語の係り受け解析を行う．この手続は，認知症の進行度が Grammatical Complexity の低下と連動しているという Kemper et al. の報告 [1] を，日本語の認知症患者のテキストにおいて検討する初めての試みとなる．

2　関連研究

人の言語能力の測定は，大きく 2 つの要素に分けて行われる．1 つは，語彙に関する要素で，主に語彙量や命題数によって語彙能力を計測するものである．もう 1 つは文法に関する要素で，構文の複雑さを示す指標で計測される．これは Grammatical Complexity とも呼ばれ，本稿ではこれを構文能力と呼ぶ．

1「日常生活に支障を来すような症状・行動や意志疎通の困難さが多少見られ

# of vocabulary words

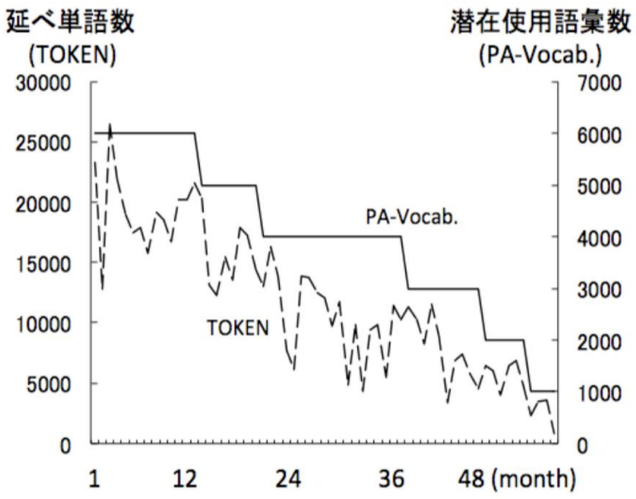


図 2：PA-Vocab.および延べ単語数の推移

# of clause

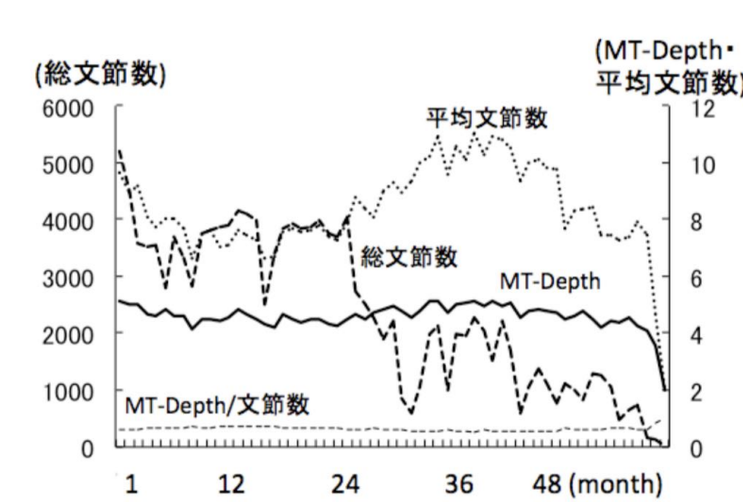


図 3：MT-Depth および文節数の推移

But I want to have a first person perspective.

How long could the author have been able to read the blog back? It had the last readers, but many other blogs would have no readers other than google.

About risk-taking issue and the change of social awareness

How to stop writing unwanted things to Twitter?

認知症バカッターになってしまうリスク

WIKIPEDIA
The Free Encyclopedia

Main page
Contents
Featured content
Current events
Random article
Donate to Wikipedia
Wikipedia store

Interaction
Help
About Wikipedia
Community portal
Recent changes
Contact page

Tools
What links here
Related changes
Upload file
Special pages
Permanent link
Page information
Wikidata item
Cite this page

Print/export
Create a book
Download as PDF
Printable version

John von Neumann

From Wikipedia, the free encyclopedia

The native form of this personal name is Neumann János Lajos. *This article uses Western name order when mentioning individuals.*

John von Neumann (/vɒn ˈnɔɪmən/; Hungarian: *Neumann János Lajos*, pronounced [ˈnɒjmɒn ˈjaːnoʃ ˈlɒjoʃ]; December 28, 1903 – February 8, 1957) was a Hungarian-American mathematician, physicist, computer scientist, and polymath. Von Neumann was generally regarded as the foremost mathematician of his time[2] and said to be "the last representative of the great mathematicians";[3] a genius who was comfortable integrating both pure and applied sciences.

He made major contributions to a number of fields, including mathematics (foundations of mathematics, functional analysis, ergodic theory, representation theory, operator algebras, geometry, topology, and numerical analysis), physics (quantum mechanics, hydrodynamics, and quantum statistical mechanics), economics (game theory), computing (Von Neumann architecture, linear programming, self-replicating machines, stochastic computing), and statistics.

He was a pioneer of the application of operator theory to quantum mechanics in the development of functional analysis, and a key figure in the development of game theory and the concepts of cellular automata, the universal constructor and the digital computer.

He published over 150 papers in his life: about 60 in pure mathematics, 60 in applied mathematics, 20 in physics, and the remainder on special mathematical subjects or non-mathematical ones. [4] His last work, an unfinished manuscript written while in hospital, was later published in book form as *The Computer and the Brain*.

His analysis of the structure of self-replication preceded the discovery of the

John von Neumann

John von Neumann in the 1940s

Born	Neumann János Lajos December 28, 1903 Budapest, Austria-Hungary
Died	February 8, 1957 (aged 53) Washington, D.C., U.S.
Nationality	Hungarian
Citizenship	Hungary United States

It is just as the good intention of parents **not to let their children hold smartphones**, is it also the carer's good intention to **keep dementia patients away from the Internet**?

Von Neumann was on his deathbed when he entertained his brother by reciting by heart and word-for-word the first few lines of each page of Goethe's *Faust*.[8] He died at age 53 on February 8, 1957, at the Walter Reed Army Medical Center in Washington, D.C., under military security lest he reveal military secrets while heavily medicated. He was buried at Princeton Cemetery in Princeton, Mercer County, New Jersey.[217]

https://en.wikipedia.org/wiki/John_von_Neumann

Losing the ability of 'recollection' and the 'driving forth' of thinking

I cannot but completely rely on other's recommendation.
I have to be satisfied with things by a collective knowledge.

What is your favorites?

1: Sports
✔2:Travel
3: Driving
…

Submit

recommendation (a new story is made by the system)

the actual timeline of my photo album

* Can't I escape from giving up thinking?
* Is everything directed by the others?

No, I want to stay geeky!

I don't want to obey the result of a big data analysis!

There are many proposals of supporting devices for dementia

http://www.rehab.go.jp/ri/kaihatsu/lifeSupport/top_ja.php

認知症のある人の生活支援機器データベース

現在データベースに不具合が生じており、メンテナンスを行っております。
復旧致しましたら、研究所福祉機器開発部ホームページより
ご案内させていただきます。
ご不便をおかけ致しますこと、心よりお詫び申し上げます。

何のためのデータベース？(サイトの概要)

●誰が、どんな情報を得ることができる？

本データベースは、認知症のある人の生活に役立つ機器の開発の促進に向け、「認知症のある人」と「機器」をつなぐ役割を果たすことをねらいとしています。
そのため、おもに「福祉機器の開発者の方」が、「認知症者のある人」と「機器」との関係性（どんな心身状況の人がどんな活動をする際、どんな機器を使いうるか）について情報を得ることができるようにしています。
なお、機器は、認知症により生じる「困難さ」のうち、例えば、「記憶」や「見当識」の低下など、「認知面の困難さ」に焦点を当て、ご紹介しています。

●情報を得る際の留意点は？

現段階では、開発者の方の「認知症の機器開発に向けた着想」に役立てていただくため、機器の厳選作業は行わず、できるだけ多くの種類の機器をご紹介するようにしています。
よって、 データベース上の機器は、必ずしも認知症のある方に有効であると検証されているわけではありません。 機器情報はあくまで参考程度にお考えいただくとともに、情報活用は自己責任のもとでお願いいたします。

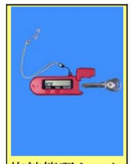
■認知症のある人の生活支援機器開発の重要性と難しさ
■本データベースの特徴

機器を閲覧・検索するには？

福祉用具の分類から	障害と活動との関係から	キーワードから
ISO9999による機器一覧から機器をみる	ICF(国際生活機能分類)に基づく生活支援機器マップから機器をみる	キーワード検索から機器をみる 検索
■ISO9999による機器一覧とは? ■使い方	■生活支援機器マップとは? ■使い方	■使い方

ISO9999大分類項目

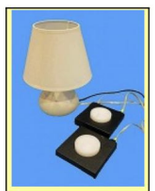
22 コミュニケーション・情報支援用具
12 移乗機器
30 レクリエーション用具
09 パーソナルケア関連用具
15 家事用具
18 家具・建具，建築設備

ISO9999中分類項目	機器
22 コミュニケーション・情報支援用具	▲このページのトップへ戻る
22 27 警報機・信号表示器	
22 27 03 視覚的信号器	 施錠管理キーケース
22 27 06 音響的信号器	 メッセージ伝達装置（タイマー機能つき）  探し物発見器（送信機、受信機独立型）  置き忘れ防止アラーム  アラーム薬入れ（一回分取り出し機能つき）  アラーム薬入れ  アラーム薬入れ

15 家事用具 ▲このページのトップへ戻る

15 03 炊事用具	 ガスコンロ（自動消火機能つき）  ガスコンロ（音声アラーム機能つき、自動消火機能つき）
15 89 その他の家事用具	 調理過程記録装置

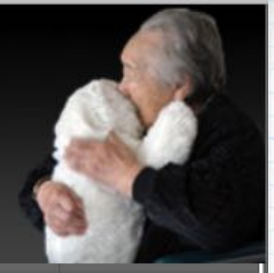
18 家具・建具，建築設備 ▲このページのトップへ戻る

18 89 その他の家具・建具・建築設備	 ドア壁画  キャビネットロック
18 06 照明器具	 ベッドサイドランプ

See http://www.iec.hiroshima-u.ac.jp/~imai/docs/cane3.pdf

PARO

Therapeutic Robot



OME | PHOTO GALLERY | TRAINING | VIDEOS | RESEARCH PAPERS | PRESS RELEASES | MAINTENANCE | US USERS | CONTACT

PARO Therapeutic Robot

PARO is an advanced interactive robot developed by AIST, a leading Japanese industrial automation pioneer. It allows the documented benefits of animal therapy to be administered to patients in environments such as hospitals and extended care facilities where live animals present treatment or logistical difficulties.

- PARO has been found to reduce patient stress and their caregivers
- PARO stimulates interaction between patients and caregivers
- PARO has been shown to have a Psychological effect on patients, improving thier relaxation and motivation
- PARO improves the socialiazation of patients with each other and with caregivers
- World's Most Therapeutic Robot certified by Guinness World Records

PARO is the 8th generation of a design that has been in use in Japan and throughout Europe since 2003.

PARO has five kinds of sensors: tactile, light, audition, temperature, and posture sensors, with which it can perceive people and its environment. With the light sensor, PARO can recognize light and dark. He feels being stroked and beaten by tactile sensor, or being held by the posture sensor. PARO can also recognize the direction of voice and words such as its name, greetings, and praise with its audio sensor.

PARO can learn to behave in a way that the user prefers, and to respond to its new name. For example, if you stroke it every time you touch it, PARO will remember your previous action and try to repeat that action to be stroked. If you hit it, PARO remembers its previous action and tries not to do that action.

By interaction with people, PARO responds as if it is alive, moving its head and legs, making sounds, and showing your preferred behavior. PARO also imitates the voice of a real baby harp seal.

PARO-Certification Classes Available

PARO-Certification Classes by Prof. Sandra Petersen, DNP, APRN, FNP/GNP-BC, PMHNP-BE, FAANP University of Texas at Tyler (spetersen@uttyler.edu)

PARO-Certification Classes by Randy Griffin RN MS HNC

PARO-Certification Classes by Corey Tague, Licensed Robot Therapist

PARO In The Scientific Literature

Changing the Culture for Dementia Care by Randy Griffin RN MS HNC

An innovative new book prescribing the path to a better way of life for people with Alzheimer's disease and other forms of dementia. Written by Randy L. Griffin, a recognized expert in the field of dementia care.

PARO Around The World

Germany: Beziehungen pflegen UG

Multimedia Features

Takanori Shibata shows PARO to Prime Minister Kan and President Obama during APEC 2010

camh
The Healing Effects Of A White Seal

KALW
Robotic Seals Comfort Dementia Patients But Raise Ethical Concerns

The Star
Robot Gets Seal Of Approval

CBS
Obama Test Drives Japanese Technology

New York Times
A Soft Spot for Circuitry

PARO is widely accepted by many care workers.

I might be willing to play with PARO every day in future, but I am wondering that the developer of PARO actually want to play with it in their old age?

There are many levels and variations of toys for each age of children. I believe there should be many levels and variations to my 'toys' of my old age.

The key point is how to control the complexity of 'toys.'

http://www.parorobots.com

https://www.jstage.jst.go.jp/article/johokanri/60/4/60_217/_html/-char/ja

How to make me maintain my ‘notes for myself’ just like a bonsai after suffering dementia.

A bonsai is a ‘toy’ not only to enjoy looking but also to cultivate and it grows up.

A 'Hänsel und Gretel' Game

* They forgot the way to their house.
* They forgot the meaning of the 'breadcrumbs.'
* They forgot their house.
* They forgot why they needed to return to their house.
* They forgot they had forgot their house.
* They forgot what is their 'house'.
* They forgot each other.
* ...

Add more situations by yourself! Anything might happen to us...

It is difficult to imagine the state of forgetting a thing.

残念ながら、すでに知っている事柄を、仮に知らないと考えても、それを知らない状態を想像することは難しい。

条件付き確率しか計算できないような感じ

How long could I have been able to read the blog back?

Accessibility for dementia patients

METI Launches Roundtable for Development of Facilities for Demonstrations to Create New Products and Services that are “Friendly to Dementia Patients”

As an effort under the Project for Establishing a Public-Private Joint Demonstration Platform for Dementia Patients

August 7, 2018

▶ Manufacturing, Information, and Distribution/Service Policy

The Ministry of Economy, Trade and Industry (METI) launched a roundtable of experts under the Project for Establishing a Public-Private Joint Demonstration Platform for Dementia Patients, a project commissioned to the Japan Agency for Medical Research and Development (AMED), and held the first meeting.

The round table aims to establish a new public-private joint platform on which the public and private sectors are able to create new products and services that are “friendly to dementia patients”--a goal set in Strategy for Investments for the Future 2018, approved by the Cabinet on June 15, 2018.

https://www.abilitynet.org.uk/news-blogs/6-top-tips-dementia-friendly-website

AbilityNet

About | Jobs | News & Blogs | Support us | Cont

nd HE Services | IT Support At Home | Free Resources | Digital Accessibility

Home > News and Blogs > 6 top tips for a dementia-friendly website ←パンくずリンク

6 top tips for a dementia-friendly website

Claudia.Cahalane | 22 Feb 2017

1 Links and buttons

Make sure links and buttons clearly indicate their purpose. Ie, they should make sense in their own right, not just in conjunction with surrounding text. For example, rather than a link or button saying 'click here for more information', it should say 'click here for more information about speaking to the bank' or 'speak to the bank here'.

2 Make essential navigation items obvious

Important parts of a page/ site ie, the Home button, the search box and a site map should be very easy and clear to locate consistently across a website.

What is "one page"?

3 Don't split one piece of information over more than one page

Splitting forms and information across several pages can lead to disorientation. Put the whole form or text on one page so a visitor can easily scroll up and down to see what they've already filled in / read.

4 Help orientation for people with dementia by using breadcrumb links

Use 'breadcrumb' links (the ones with the > arrows) in an obviously visible place on the page, so it's clear for someone to be reminded of the route they've taken to get to a page, and to see which section they're currently in. Ie current account> outgoings>today.

5 Fonts and aesthetics

Use a consistent font to minimise distractions and confusion, along with plain backgrounds and well-contrasted colours. Relevant photos on the page can be very useful for comprehension, allowing a user to understand content without disorientation.

6 Words and text

Use short sentences and avoid abbreviations and jargon.

news

Current Vacancies

Accessibility and Usability Consultants
28 Feb 2019

Disabled User Testers
28 Feb 2019

Disabled Students' Allowances (DSA) Assessor - Subcontractor
28 Feb 2019

Workplace (WPA) Assessor - Subcontractor(s)
28 Feb 2019

This is a kind of encoding problem of communication.

"Universal design" may not be useful.

In most cases I rely on many (quite personal) abbreviations, simplified concepts, and their associations.

What is desired?

"Hey Siri, bring me 'that'!"

「婆さんや、あれ、持ってきて」

How to choose a proper encoding for each patient?

'Difficulty' needs to be reconsidered.

Difficulty = complexity of things?

* E.g. using spread sheet might be more difficult than programming for elder people who had learned both in their younger age.

* A page of excel has enormous visual information!

Lost (disorientation) in one page Excel sheet!

Mathematicaでセミコロンを末尾につけるのは「うざいから出力を見せるな！」っていう意味なんだけど :)
Excelでそう指示するのはいろいろ面倒なんだよ。

A saving appearance response...

'Difficulty' needs to be reconsidered.

* Aging increases the number of sensors causing errors.
* In due time, the load of needed arbitration process exceeds a certain threshold.

It feels as if a certain function related to cognition is broken and lost, as if you can not walk with a broken bone.

In addition, the ability to recognize the 'fracture' may be lost at the next 'fracture.'

※このスライドは個人の感想です

The case of a functional disorder of limb:

Functional electrical stimulation (FES)

* Recording one's electromyography (EMG).
* Storing the measured data.
* Playing it to support a patient of motor paralysis.

It seems useless for supporting one's thinking process, because we don't want to think the same thing repeatedly.

(Just watching the past photo album repeatedly.)

Even if a different thinking process is invoked, it must be another person's thinking.

Bioness H200

Exoskeletal robot

Funct

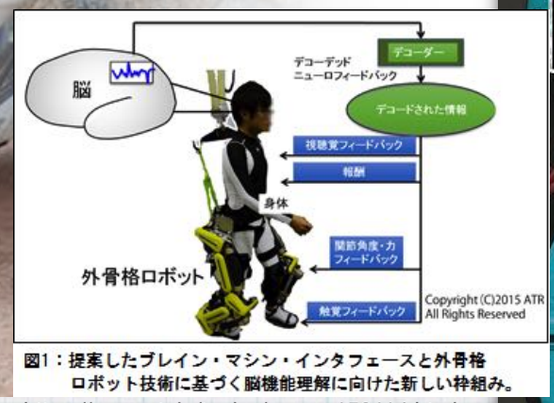


図1：提案したブレイン・マシン・インタフェースと外骨格ロボット技術に基づく脳機能理解に向けた新しい枠組み。

https://www.atr.jp/topics/press_150114.html

'Difficulty' needs to be reconsidered.

* How to cope with the input from such sensors with defects?

* How to design the proper encoding of inputs for each person for each situation?

Elderly person apt to use demonstrative pronouns.

「婆さんや、あれ、持ってきて」

Bring me that!
What is 'that'?
That is that anyway...

'This' and 'that'...

Elderly person apt to use demonstrative pronouns.

A dementia patient confuses what is "that."

A dementia patient sometimes gets angry when the others ask what is "that."

Because he cannot not explain "that."

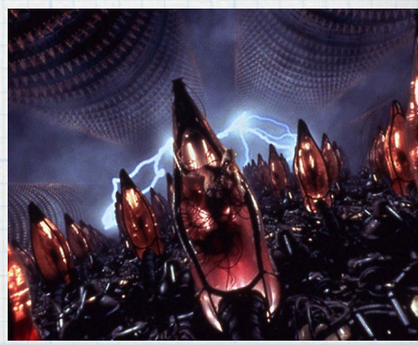
◎ 自己触媒集合[ki 2641]
○ ナチュラリスト[ki 2710]

Thinking crystal

My impression when I am watching a patient of dementia: 'Trapped in a periodic repetition'.

How to escape from the periodic repetition?

* Even one can only recognize a small fragment of a context, one can add a new 'paragraph' to the 'wave front' and possible to avoid the periodicity with the help of a carefully tuned stimulation.

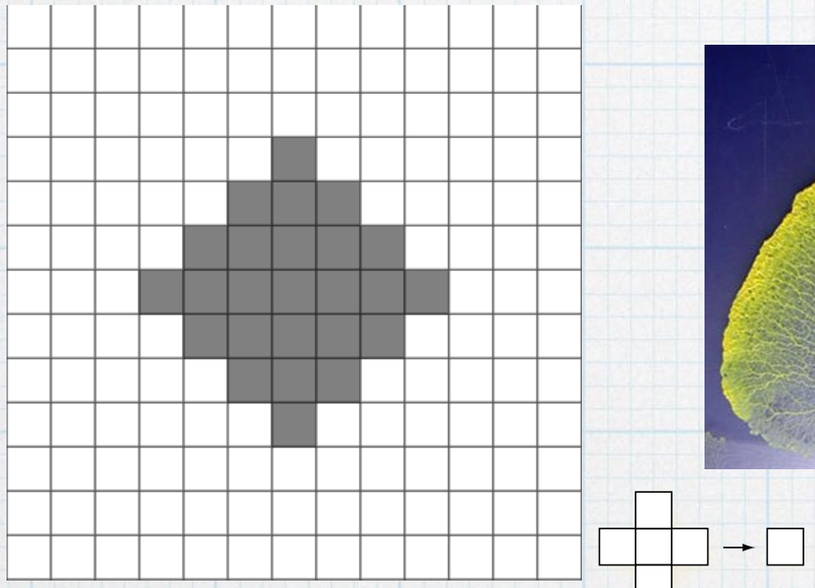


* I am still not sure the forcing effort to escape from the period is actually making me happy or not in my last days.

But wait! Even a simple crystal growth can be more complex.

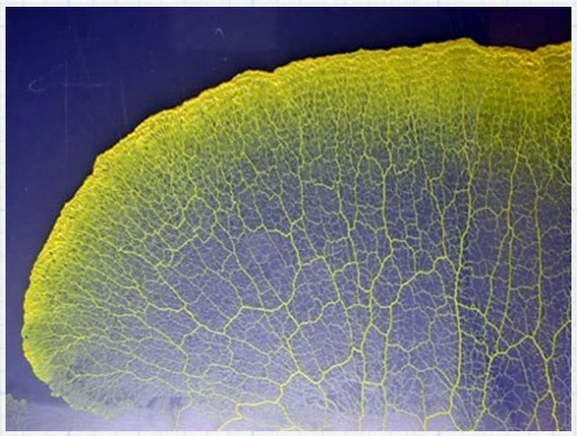
◎ 作業パタンレコーダ[ki 1167]
○ 制御された並列性[ki 2897]

I want to think like an amoeba growth without focusing on a special path!



The ‘light cone’ of a cellular space.

↑ is simple because the ‘background’ is simple.

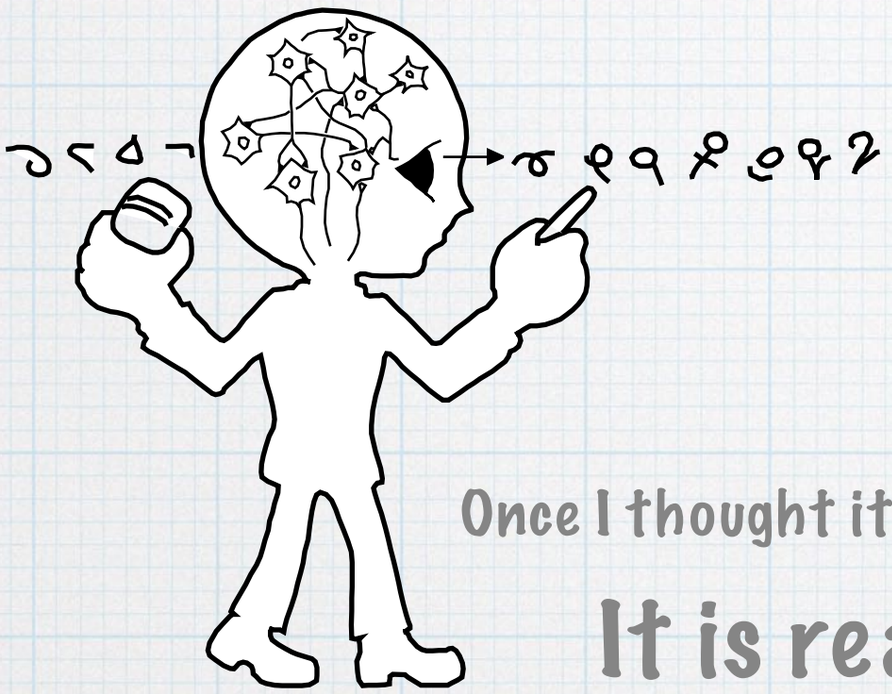


The shape of the wave front of amoeba growth.

↑ is complex because the ‘background’ is complex.

‘Fairness’ of the ‘background.’

Turing Machine

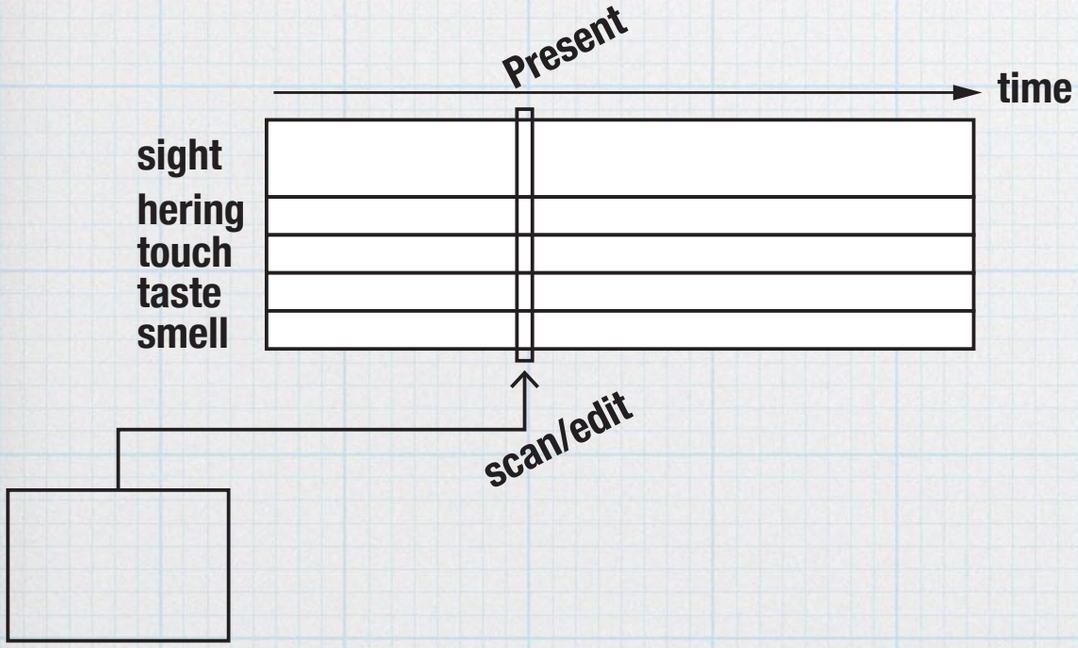


(state, symbol) → (state, symbol, action)

action = left or right move

Once I thought it is too simple for a model of thinking, but now I think...

It is reasonable as a model of thinking:

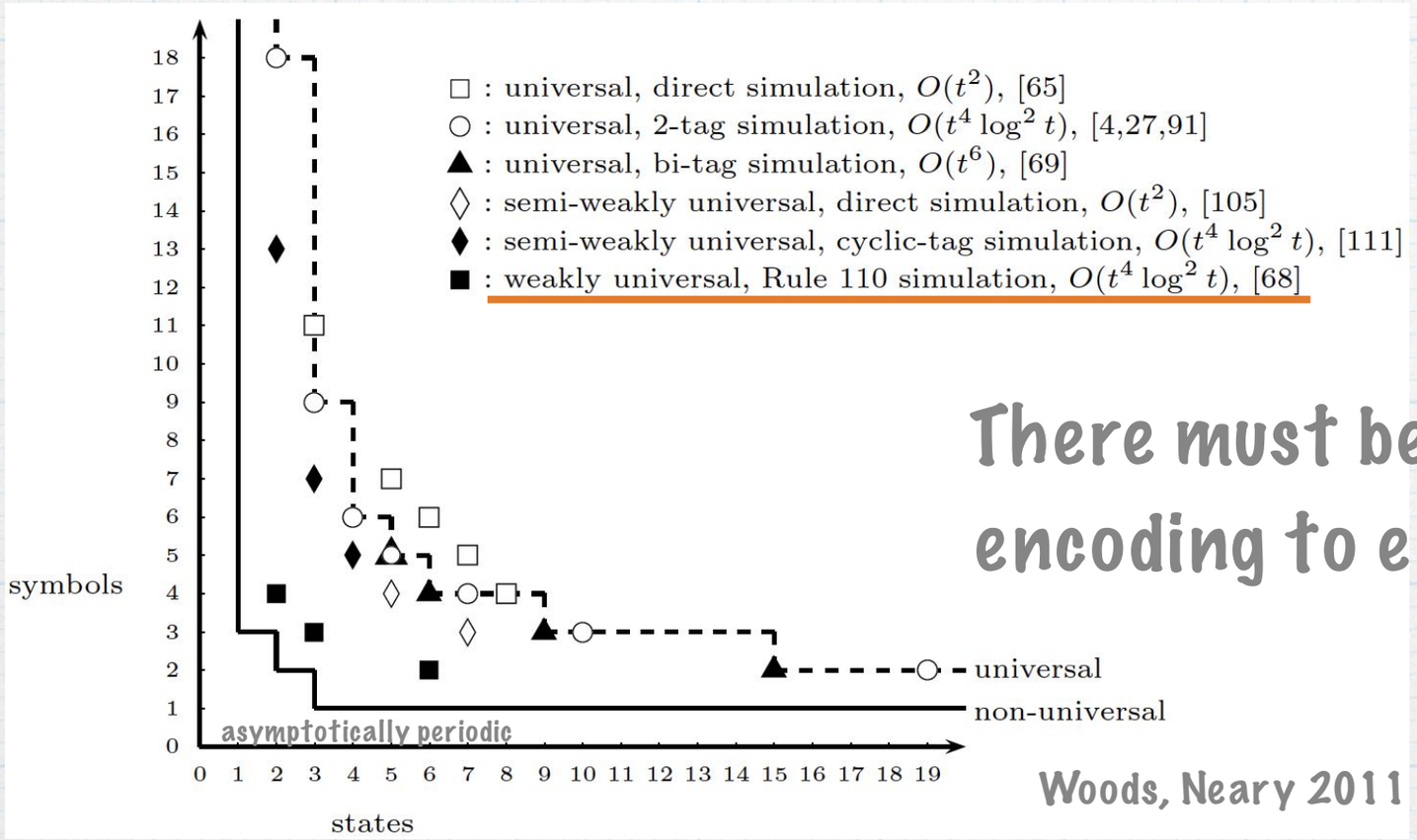


Dementia can be regarded as

* Scanning area will be shrinking.
* Errors in each part will be increasing.

Universal Turing Machine

A Turing machine which computes anything.



There must be a better trade off for encoding to each stage of dementia.

Woods, Neary 2011

Weakly universal: with an infinite asymptotically periodic input.

Although the sizes of memory (state) and scanning information at a time (symbol) are small,
it is possible to compute anything employing a proper encoding and infinite periodic input of data.

The definition of brain death might be changed in future...

Thinking in a weakly universal manner.

A ‘cane’ = a knowledge home + an asymptotically periodic ‘background’ as a driving force?

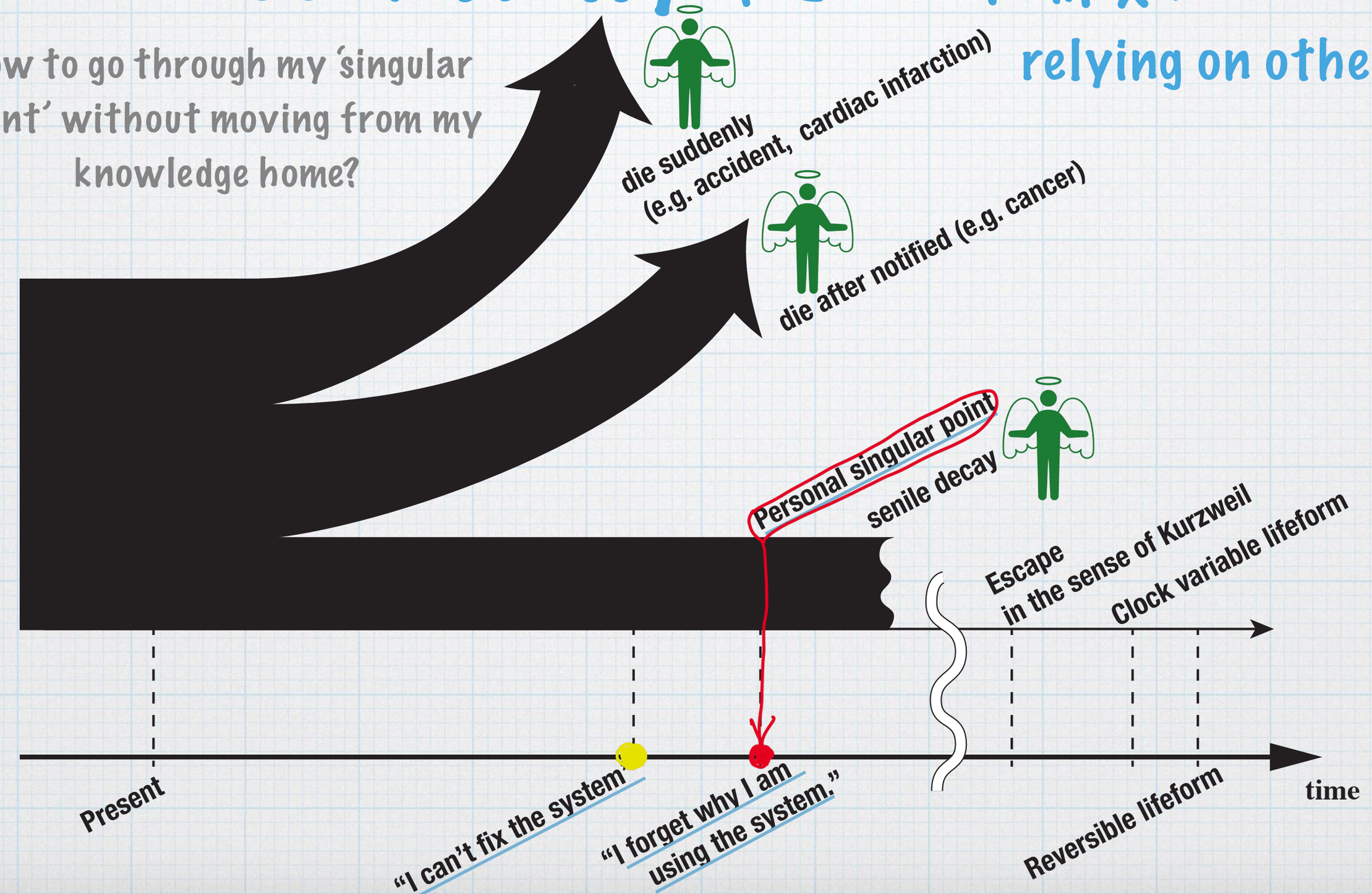
I wake up every morning by the sound of an alarm clock as a ‘periodic background’ and I have a knowledge that I have to wake up and go to my office when I hear the sound.

If I can’t remind the knowledge, I need to be informed.

But the system must be essentially 他力本願.

How to go through my 'singular point' without moving from my knowledge home?

relying on others.



◎ Knowledge Home[ki 2711]
○ 引っ越し[aga 223]

Knowledge Home

This word by Toffoli 2002, 2004

Unconventional Models of Computation 2002, Kobe

Memory disorder and disorientation might be the same.

* Moving to another house results in worsening of symptoms of dementia. One loses one's orientation.

* I do not want to move from my 'knowledge home!'

The only problems I want to solve are:

* How to make my 'knowledge home' and make me avoid kicking out of it after my 'singular point?'

* How to make me notice the fact that I tried preparing it for me after my singular point?

Then what is my knowledge home?

◎ 生体計測[ki 2413]
○ 作業パタンレコーダ[ki 1167]
・ 制御された並列性[ki 2897]

To begin with,...

What is my thinking process?

* This is the problem of biometrics.

  If my thinking process will properly estimated, the prodromal stage of dementia (depression, schizophrenia,...) might be captured.

* A thinking process makes a work process as a trajectory (a projection).

* My thinking process may be a serialization of things stored in my brain.

  This ability will be lost in the beginning of Dementia.

* It will be estimated by capturing my work process.

* How to capture my work process?

◎ WOOC'92 [aga 1]
○ oops mailing list [ki 1]

Let's start from our very old experiment.

An experimental mailing list

* Our 1st motivation: how to discuss something by email communications without the divergence of the discussion?

At the time,

* We had to submit our work to a workshop.

I usually don't want to take care of such deadlines, but,...

* We found a difficulty in discussing about it by emails.

inherently asynchronous,
tired of merging branches

We hated a traditional BBS, a file, and a hierarchical directory

* スレチ (off topic) on a BBS is usually blamed,

  but tracking a discussion over different topics must be important.

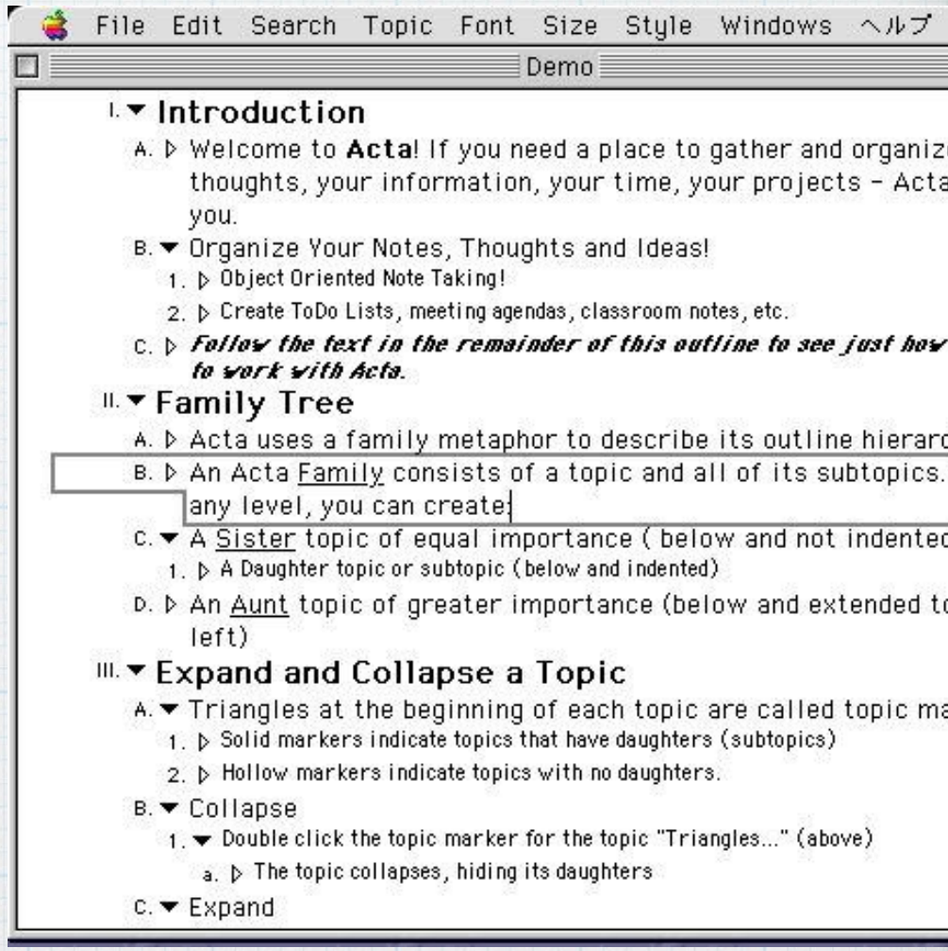
* File: If the goal of a discussion is not fixed, it is difficult to combine into a file.

* A discussion structure may not form a thread or tree but a web (graph).

◎ outline processor[ki 1384]
○ oops mailing list [ki 1]

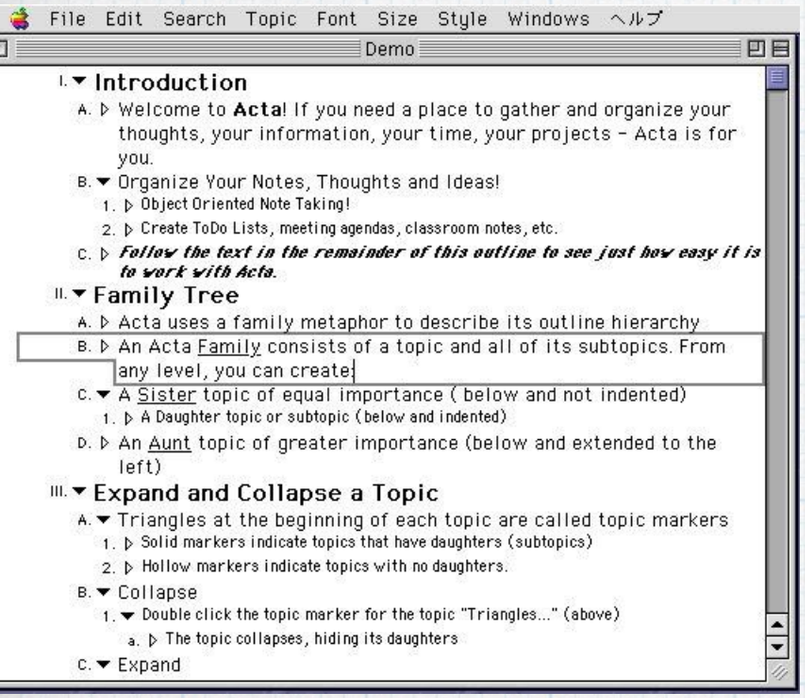
Mailing list v.s. Outline processor

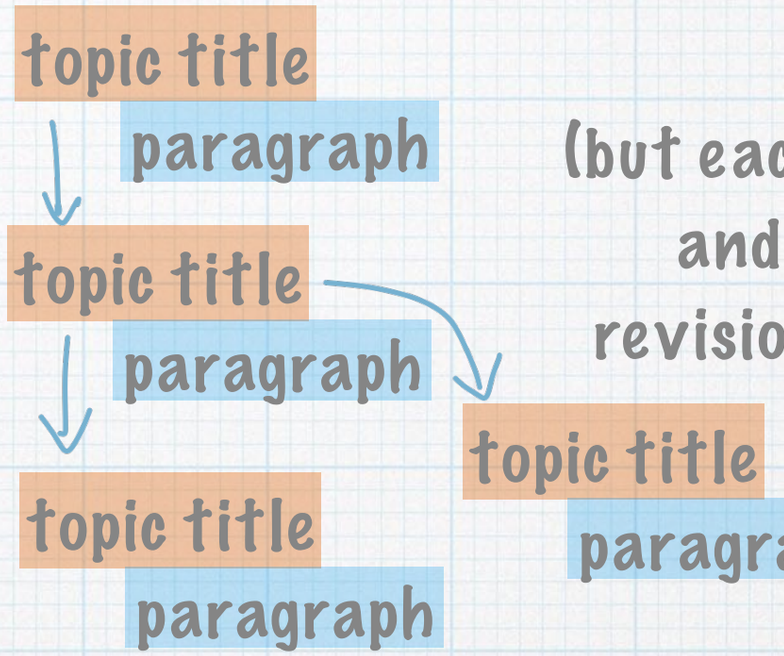
* We desired an online collaborative outline processor.
  Now available but they still depend on a file!
* A mailing list is write once and you can't edit.



http://ascii.jp/elem/000/000/083/83426/

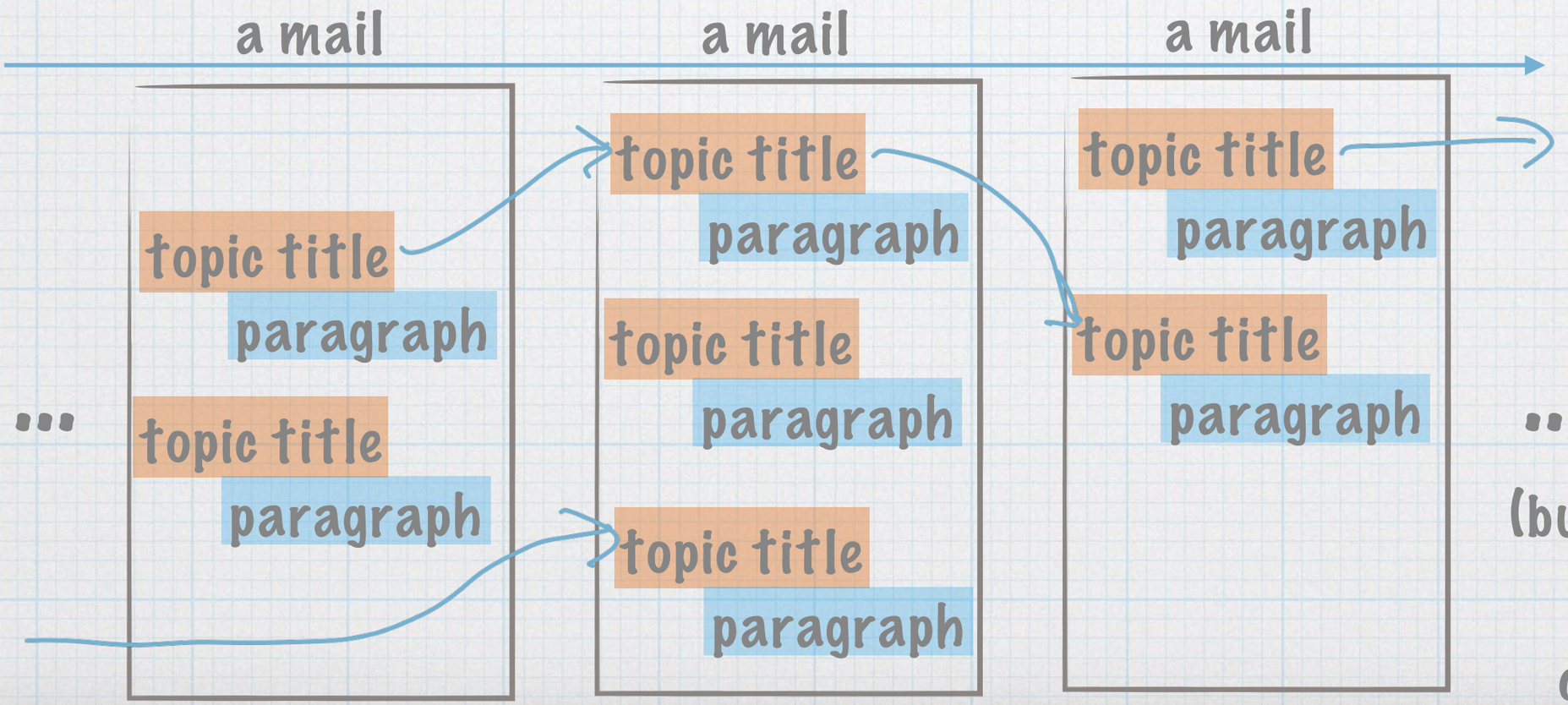
A file of an Outline processor





editable
(but each file is for a story
and needs another
revision control system)

Our usage of emails



write once
(but inherently stores
revisions)
cf. backup software

◎ oops mailing list [ki 1]
○ 使い方[ki 6]

How to write an email sent to our mailing list?

Three rules:

* Each topic title has an id.

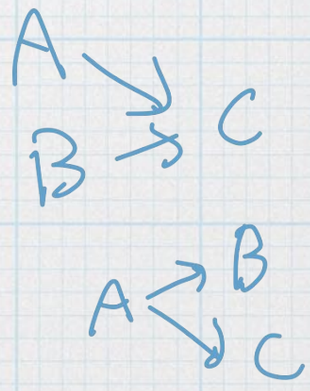
* A paragraph has at most three topic titles.

* Quoting a sentence in a paragraph must be specified by using a special quote marker.

◎ topic A
paragraph

◎ topic A
○ topic B
paragraph

◎ topic A
○ topic B
・ topic C
paragraph



Three topic titles are enough to represent "multiple inheritance" and the splitting of a topic. Two are not enough.

用いたメーリングリストのメールの例

A mail example of our mailing list.

```
From oops-adm@satsuki.ics.es.osaka-u.ac.jp Sat Sep
Message-Id: <199609061403.XAA02365@satsuki.ics.es.
From: imai@ke.sys.hiroshima-u.ac.jp (Katsunobu IMA
Reply-To: oops@satsuki.ics.es.osaka-u.ac.jp
To: oops@satsuki.ics.es.osaka-u.ac.jp
Subject: reino are neta
Date: Fri, 6 Sep 96 23:03:33 +0900
Errors-To: oops-adm@satsuki.ics.es.osaka-u.ac.jp
X-Ml-Posted: Fri, 6 Sep 1996 23:03:04 +0900
X-Ml-Name: OOPS Mailing List
X-Ml-Counter: 3657

これも omote に移そう.


◎ 生体・生理工学シンポジウム[ki 1358]
○ バーチャル実験室[ki 1359]
・ AltaVista[ki 1365]


<a href="http://kelp.ke.sys.hiroshima-u.ac.jp/expo
第11回 生体・生理工学シンポジウム</a>
まったく，つくづくもっと熱烈に断るんだったと
後悔しきりだが（笑）

ここ一週間ぐらい悩んでいたのだが，全然らちが
あかない．何にも思いつかないのだった.


ともかく，基本は AltaVista[ki 1365]みたいな
Web 検索サーバの検索結果に何らかの小細工を入
れて，ちょっと便利なものにしようという方針で
あるわけだが，もう締め切り近いのになんにも手
が無くて本当に困り果ててしまったわけだ.

他に打つ手がないので，また例によって誰かれ構
わず「突然失礼します」攻撃をかけて，戻ってき
た返事のメールを参考に現状を打破しようと，い
ろいろ悩んでいるわけだが.
```

oops: 3657

[prev]/[index]/[next]-----[qm]

Date: Fri, 6 Sep 96 23:03:33 +0900
Subject: reino are neta
From: imai@ke.sys.hiroshima-u.ac.jp (Katsunobu IMAI)

これも omote に移そう.

◎ 生体・生理工学シンポジウム[ki 1358] (prev/next)
○ バーチャル実験室[ki 1359] (prev/next)
・ AltaVista[ki 1365] (prev/next)

第11回 生体・生理工学シンポジウム
まったく，つくづくもっと熱烈に断るんだったと
後悔しきりだが（笑）

[3739]
ここ一週間ぐらい悩んでいたのだが，全然らちが
あかない．何にも思いつかないのだった.

ともかく，基本は AltaVista[ki 1365]みたいな
Web 検索サーバの検索結果に何らかの小細工を入
れて，ちょっと便利なものにしようという方針で
あるわけだが，もう締め切り近いのになんにも手
が無くて本当に困り果ててしまったわけだ.

[3689]
他に打つ手がないので，また例によって誰かれ構

oops: 3739

[prev]/[index]/[next]-----[qm]

Date: Mon, 30 Sep 96 12:34:53 +0900
Subject: uchidome
From: imai@ke.sys.hiroshima-u.ac.jp (Katsu

◎ 生体・生理工学シンポジウム[ki 1358]
○ バーチャル実験室[ki 1359] (prev/next)
・ AltaVista[ki 1365] (prev/next)

HoTaMaLe[ki 1383]で変換したものに
ない部分だけをちょっとだけ手直し

生体生理シンポ96用原稿
に置いた．標準設定のまま使ってい
変えると出なくなってしまうので手
それが，ドキュメントが日本語だか
HoTaMaLe[ki 1383] がこの程度だから

内容がないんだ．細かい実装の話な
ないし，だいたい，

-*- Quote (from 3657) -*-
ここ一週間ぐらい悩んでいたのだ
あかない．何にも思いつかないの
-*- Unquote -*-

のあと実働はプログラム書きと文章
一週間ぐらいだからこんなもんだろ

書けと言われたら「全部 a-list です.
しかない（笑）新しい技などひとつ

We wrote emails to our list from February 1992 to September 2005.

oops-archive

Yet another "Knowledge Home",
Multi-purpose archives for our junk mailing list...

- oops-omote (guest login: name guest, password guest)
- oops-ura

- Powered by
- update log

| Imai's |

imai@iec.hiroshi
System last modi

10.30.95.160

Contents

i. **Main**

- Main Page
- Index
- Alphabetical

ii. **Ranking**

- Branching

iii. **Search**

- Topic

iv. **Topics**

- imai
- aga
- ebine
- hyuuga
- miyasita
- nisida

RelationFrame

oops-archive

2018 /[4], [5]

Recent mails:

- #6549, 2005.09.05 10.44.51 fb (HandyCam 1080i インターレースの呪縛)
- #6548, 2005.09.03 15.08.09 im (落雷 iChat 教育用計算機システム Xserve SUN Fire IBM zSeries 10Gbit Ethe Balancer WebCamera 水冷ラック 自爆ボタン Virtual Private NEtwork (VPN) FirePass SSL-VPN DCR-PC10 SSL-VPN FirePass 臨場感 サーバ室の臨場感)
- #6547, 2005.08.04 15.31.16 im (iChat デジタルゲーム学科)
- #6546, 2005.07.22 14.51.02 im (HandyCam DCR-PC10 1080i HDR-HC1 手ぶれ補正 iMovie HD Apple Intern レースの呪縛)
- #6545, 2005.06.27 12.36.50 im (iChat 未踏ソフトウェアセミナー Invisible electronics MyLifeBits は何から debugger 生体計測 debugger Invisible electronics 臨場感)
- #6544, 2005.06.27 12.24.21 im (iChat 未踏ソフトウェアセミナー BBS Apple 社の戦略 Intel)
- #6543, 2005.06.27 12.17.21 im (iChat 収納壁 Spotlight)
- #6542, 2005.06.16 13.00.29 im (訃報 後藤英一 無発熱計算 Firing Squad Synchronization Problem(FSSP))
- #6541, 2005.06.16 12.05.32 im (映画 Hitchhiker's Guide to the Galaxy DON'T PANIC)
- #6540, 2005.06.08 10.33.59 im (デジタルゲーム学科)
- #6539, 2005.06.08 10.26.28 im (デジタルゲーム学科)

Important topics:

人の人生 registration 使い方 引っ越し 郵便番号 電話(Tel. , Telephone) mail address 住所(address) 通販 通信販売 URL bookmark 雑誌(Magazine, Journal) 本 映画 映画 テレビ テレビ 予定

Stat:

4115 topic-items, 19880 quote/quoted links, 1566 external links and 4394+15385 topit-to-topic reations in 6504 mails.

Relation:

Toffoli[lst] [cf]

- 自己触媒集合[lst][rel]
- MIT AI lab.[lst][rel]
- 時間[lst][rel]
- Knowlege Home[lst][rel]
- テスター [lst][rel]

- MIT AI lab.[lst][rel]
- Knowlege Home[lst][rel]
- iChat[lst][rel]
- Unconvensional Models of Computation[lst][rel]

---

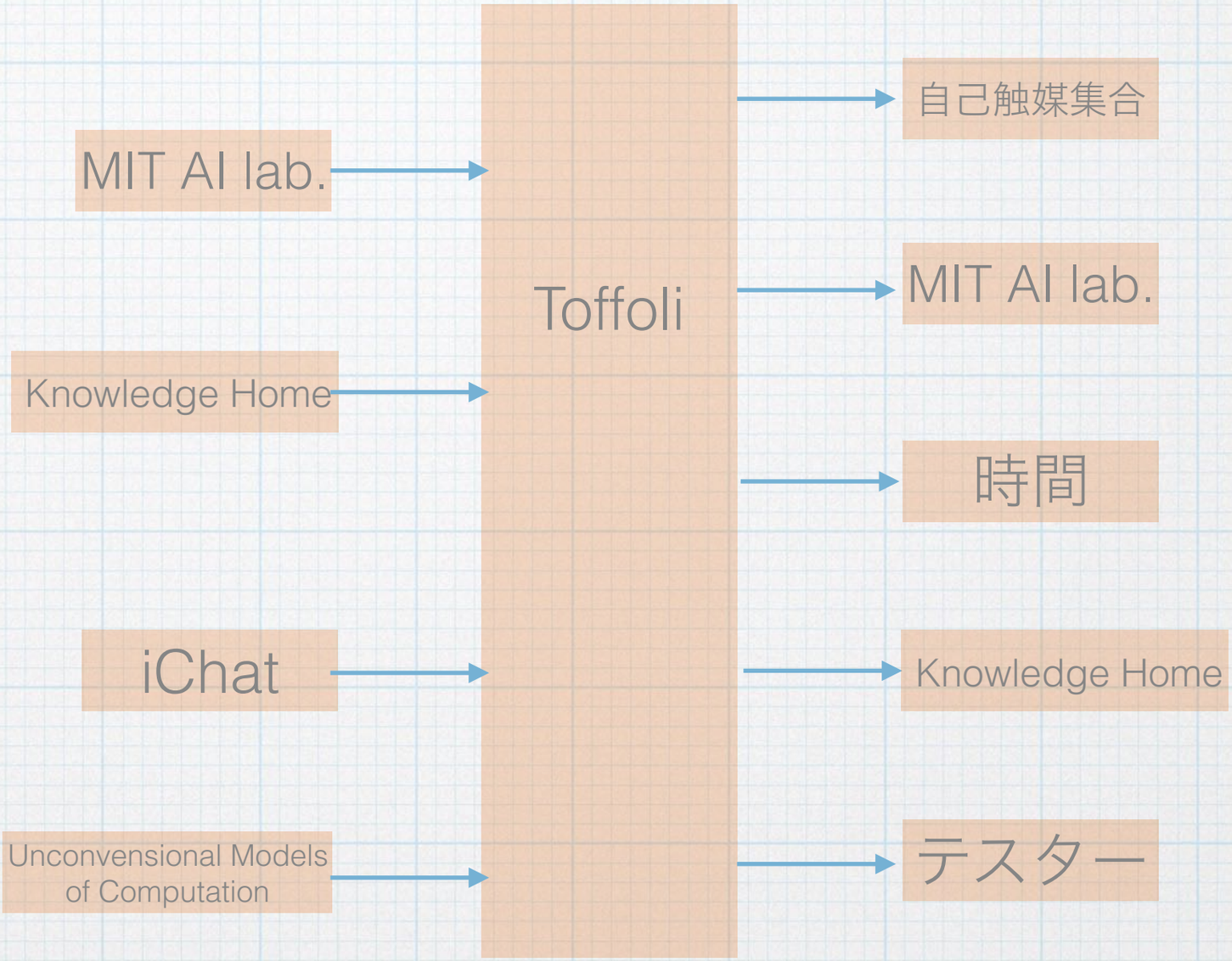
cf.level 0

- 自己触媒集合 [lst] [rel] (6444)
- topic title [lst] [rel] (6444)
- うっぷすえむえるloops mailing list [lst] [rel] (6444)
- packing [lst] [rel] (6444)
- Toffoli 先生，最小作用を語る [lst] [rel] (5986)
- Wolfram [lst] [rel] (5986)
- Toffoli [lst] [rel] (5986)

level 1

- ナチュラリスト [lst] [rel] (5994)
- Toffoli 先生，最小作用を語る [lst] [rel] (5994)
- 自己触媒集合 [lst] [rel] (5994)
- topic title [lst] [rel] (5994)
- うっぷすえむえるloops mailing list [lst] [rel] (5994)
- packing [lst] [rel] (5994)
- Minsky [lst] [rel] (5994)
- アシモフ死去 [lst] [rel] (5994)
- Reversible Cellular Automata(RCA) [lst] [rel] (5994)
- 日本橋 [lst] [rel] (5992)
- MIT AI lab. [lst] [rel] (5992)

Ex: Topics in the neighborhood of the topic 'Toffoli'



Employed topics in the context of 'Toffoli'

自己触媒集合, packing, reversible cellular automata, …

World Wide Webの検索を支援するシステムの構築

A system for aiding users in retrieving data on World Wide Web

広島大学工学部
○今井克暢

Faculty of Engineering, Hiroshima University
○Katsunobu Imai

Abstract. Today, there are many World Wide Web (WWW) servers on the Internet and it is very difficult to get proper informations from WWW. Of cource we can use WWW search engines which make index of pages on WWW and allow users to search WWW pages. But users are bothered to maintain their searching results, because pages on WWW are updated frequently. So we constructed a system to aid user in maintaining their searching result, using mailing lists and a WWW server.

* Motivation: we need a search engine of the accumulated searching results and used searching keywords.

* Storing used searching keywords and a searching method is more important than storing the searching result.

A simple record of search results is useless.

第11回 生体・生理工学シンポジウム 論文集

BPES '96

Proceedings of the 11th Symposium on Biological and Physiological Engineering

11月27日（水）

	A会場	B会場	C会場	D
9：00		受　付		
9：45	機能代行とリハビリテーション	学習・記憶と神経コーディングⅠ	生体リズムとゆらぎ，そのダイナミックスⅠ	生体計測Ⅰ
12：00				
13：00	医療・福祉支援とバーチャルリアリティ	学習・記憶と神経コーディングⅡ	生体リズムとゆらぎ，そのダイナミックスⅡ	生体計測Ⅱ
16：00	生体生理工学のためのバーチャルラボラトリ			
18：30				

11月28日（木）

	A会場	B会場	C会場	D
9：00	感覚と運動の統合	培養神経細胞とその神経細胞における情報処理	眼球運動・姿勢制御	生体負担の
12：00				
13：00	脳活動の無侵襲計測Ⅰ 脳活動の無侵襲計測Ⅱ	運動と代謝の生理機構	運動の制御機構	循環器系解析Ⅰ
16：40				
17：00	特　別　講　演			
18：00	表彰式・懇親会（大会議室）			

11月29日（金）

	A会場	B会場	C会場	D
9：00	脳活動の無侵襲計測Ⅲ 脳活動の無侵襲計測Ⅳ	感覚系における情報処理Ⅰ 感覚系における情報処理Ⅱ	生体機能の計測と解釈のための信号処理*	循環器系・呼 循環系のモ とその限界
13：00				

*日本エム・イー学会専門別研究会「生体機能の計測と解釈のための信号処理研

主　催　(社)計測自動制御学会
期　日　平成8年11月27日(水)～11月29日(金)
会　場　大阪大学医学部銀杏会館

◎ oops mailing list [ki 1]
○ Knowlege Home[ki 2711]

How to record my searching activities?

How and where to store my searching activities?

I want store in my 'knowledge home'...

I already have my knowledge home for storing them, i.e., our mailing list!

cf.
Masui et al. 2003
Information Navigation by Neighbor Hopping

Bell 2004
MyLifeBits　Lifelog
...

検索履歴をどこへつなぎ止めておくか?

発行した検索パタン, 検索履歴の格納方法

1. 日付順のリストやキーワードインデックス
   これだけでは従来の検索サービスと同じ一面的
   サイズが肥大化すると破綻
2. 自分の独断的な見方(リンク)を与えること

ユーザにとって自然な手がかりをいかに残すか

ユーザの作業履歴をすべて記録できたら...

動機 → キーワードの選択 → 検索 → 結果からの行動

随所からアプローチ可能

⬇ 電子メール(メーリングリスト)を用い

作業履歴記録のモデルとしてメーリングリスト

登録ユーザ全員にメールが送られる
時間順に蓄積される

履歴追跡のために
・内容を表すタイトルを複数付ける(ユーザの独断で)
・引用を記述する書式を規定

⬇

作業の流れが追跡可能なメールリストに
検索結果も保持しよう

◎ 作業パタンレコーダ[ki 1167]
○ 制御された並列性[ki 2897]

Thinking without serialization

* Thinking seems to be a serialization of a knowledge subgraph.
* Dementia first attacks the serialization ability.
* ‘Recording any clue for finding, creating a new path and showing it’ is the most important for the system.
* Wandering (徘徊) is a good effort to cope with dementia.
* The system should promote “wandering in the graph”. Because each wandering path is the projection of a serialized thinking process anyway.
* Detect wandering and try to control the degree of the graph to keep one’s knowledge home sound.

'FES' for thinking

* Recording one's work process as a network discussed above.
* Storing the measured data in one's knowledge home.

recommendation (but a new story is not needed to be made by the system)

* Show the most proper topic and its 'tuned' neighborhood topics in the data to support the next decision.

Show one's past work processes and make one try to connect the fragments of one's thinking process by oneself.

* The decision should be made by oneself.

'Familiarity' is not lost.

'Fairness' of the 'cane.'
My work process (thinking process) is hijacked or not...

What I need is a multimodal extension of our mailing list.

I might loose my eyesight.
I might loose my motor function.
I might forget how to read/write.

But, not too interference as far as I can do by myself, because

Life is searching!

Implementation and related issues

◎ 生体計測[ki 2413]
○ 監視カメラ[ki 2348]

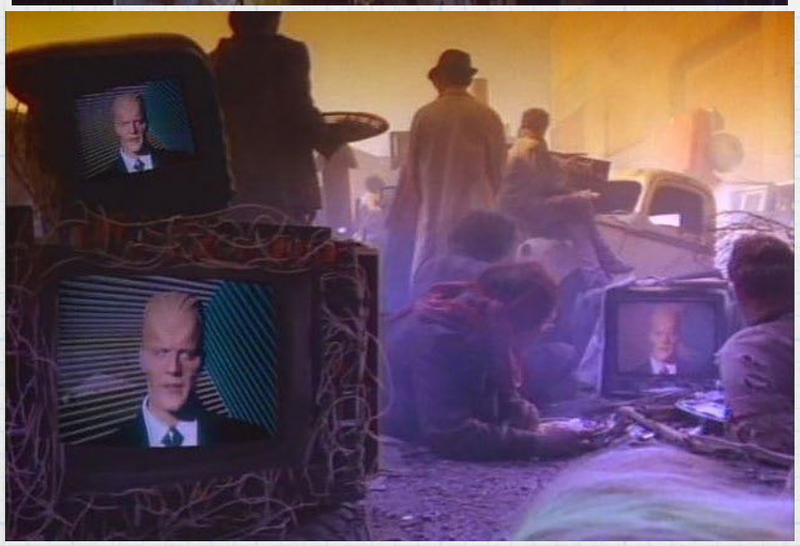
How to record and exhibit user activities

* Any 'passive' recording device is useless.
* I will be apt to forget bringing it.
* Finally I should forget why I need it.

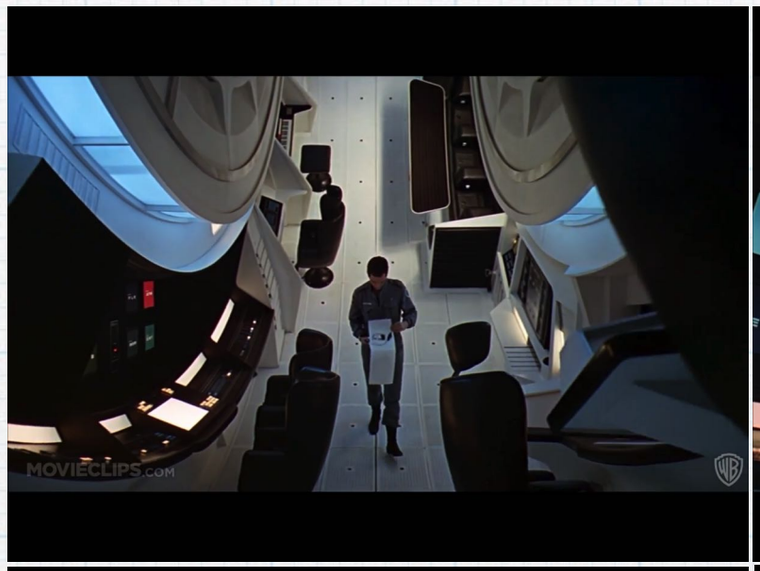
◎ 生体計測[ki 2413]
○ 監視カメラ[ki 2348]
・ MAXHEADROOM[aga 37]

Where is the best position for recording?

ubiquitous and autonomous



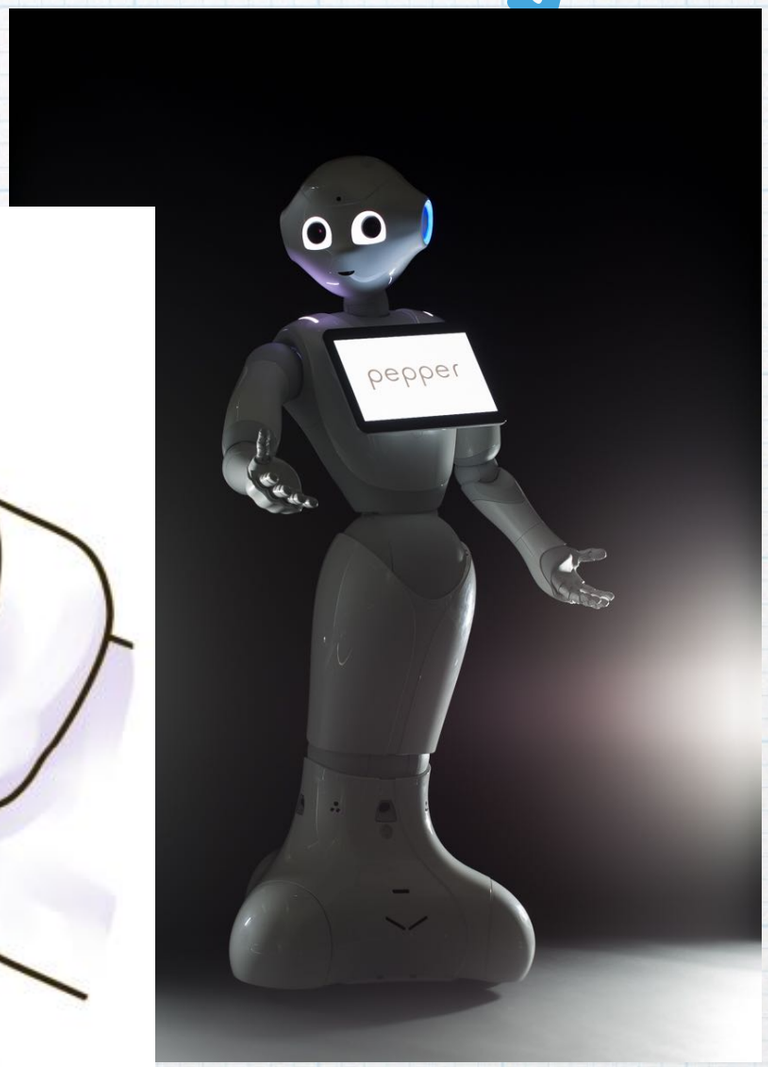
Max Headroom (1987)



2001: A Space Odyssey (1968)

◎ 生体計測[ki 2413]
○ 監視カメラ[ki 2348]

Where is the best position for recording?



www.cyrilabad.com/projects/corporate/a-venir-confidential-project/ 22052016-Aldebaran-Pepper-test4216.jpg

But I do not want it too active as far as I can do daily tasks.

◎ いるのにいないふり，いないのにいるふり[ki 1202]

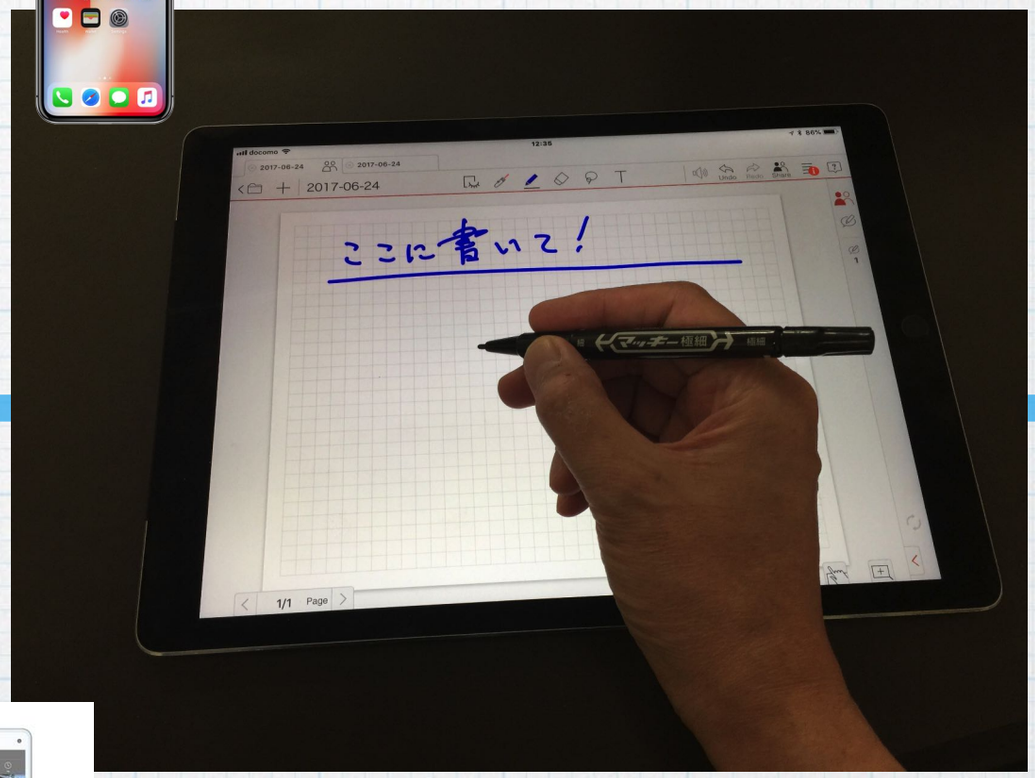
I am not so accustomed to the situation that
someone is standing beside my bed.
When I forget why the Pepper is here, ...

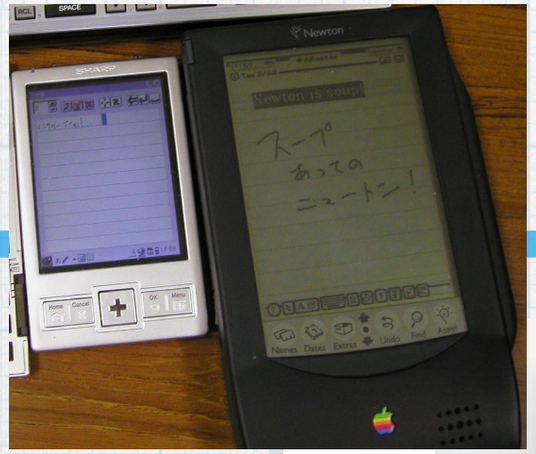
www.cyrilabad.com/projects/corporate/a-venir-confidential-project/22052016-Aldebaran-Pepper-test4227.jpg

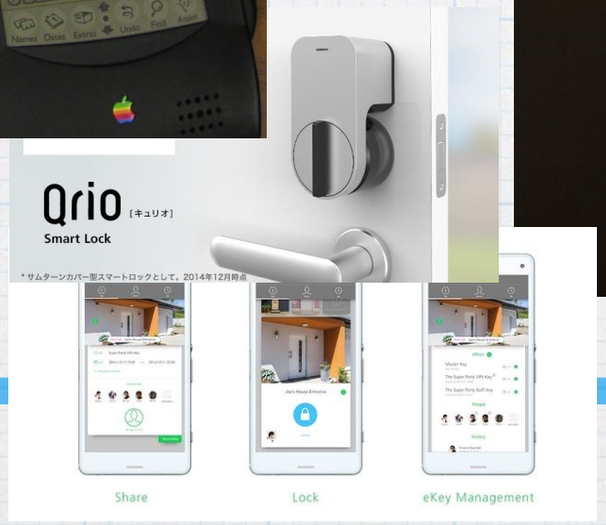
◎ media としての oops-ml...（笑）[ki 2622]
○ user interface[ki 2624]

Icons for each generation are important

When the stage advances, recent things will be lost one by one.







20 years old

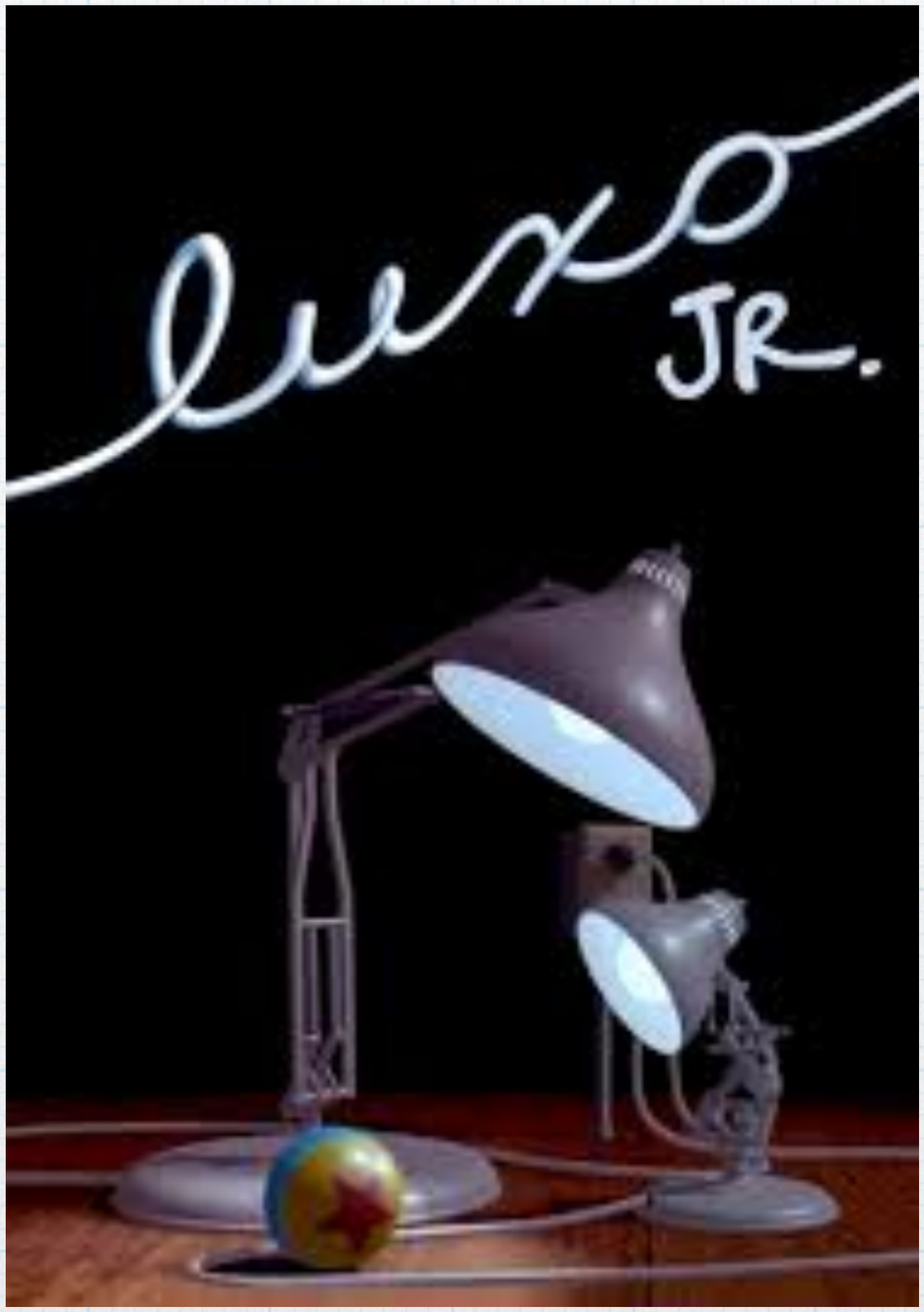
My memory will be shrinking.

introduced time in one's life

◎ 生体計測[ki 2413]
○ 監視カメラ[ki 2348]
・ いるのにいないふり，いないのにいるふり[ki 1202]

Where is the best position for recording?

Not the position of Pepper but that of lighting equipment!



Pixar

So far I want ‘Luxo’ style Pepper in my bedroom and on my desk!

cf. AWS DeepLens

No shadow!

In the case of losing my eyesight...

◎ 生体計測[ki 2413]
○ 監視カメラ[ki 2348]
・ いるのにいないふり，いないのにいるふり[ki 1202]

How to record while going out?

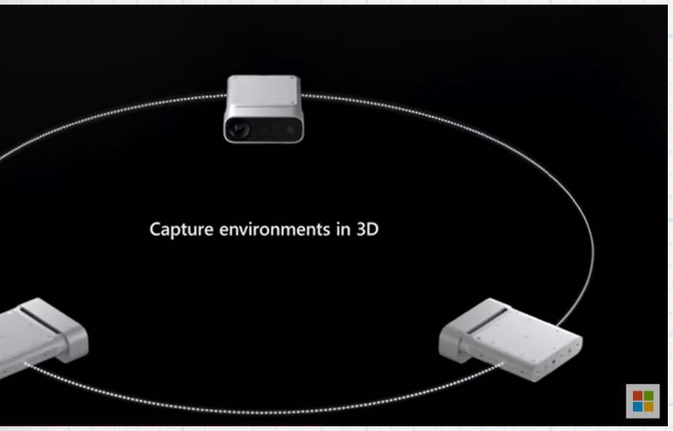
A real wandering also seems to be good and inevitable for a patient, but it is a source of worry for families and helpers.

I have no good idea so far.

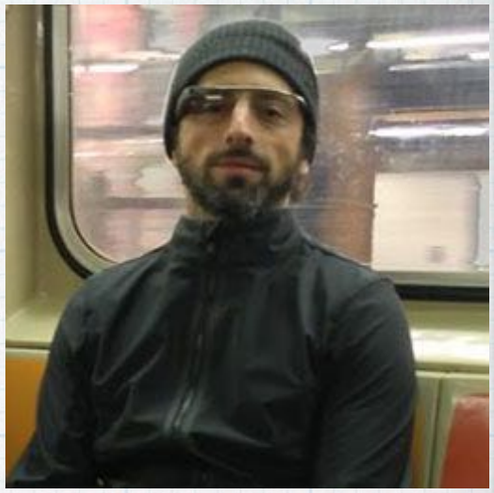
* The following candidates may not be helpful so far.

Short-sighted people might have an advantage...

Battery issue, misplacing, ...
When I forget why I am bringing them..



Privacy issue



* Google failed to introduce the Google glass but Amazon so far successfully introduces a number of 'privacy violating' services.


YAHOO! JAPAN ニュース

アマゾンのスピーカーが夫婦の会話を録音、勝手に

5/25(金) 11:23配信

アマゾンのスピーカーが夫婦の会話を録音して勝手に他人に送信

サンフランシスコ（CNNMoney）アマゾンのスマートスピーカーに内蔵されスタントの「アレクサ」が、米オレ婦の会話を知らないうちに録音し、勤務先の従業員に送信してしまう出

オレゴン州ポートランドに住む夫婦ゾンのスマートスピーカー「エコー」た。妻は地元放送局ＫＩＲＯ７の取のスピーカーについて、夫と冗談でたちの話を聞いている」と話していたことを明らかにした。

* I want to make a contract with an IT company which will be the 'driving force' of my thinking.

* This will cause a serious privacy problem.

* But I would face to a more serious one with health care workers if I were not to ask it to any IT company in advance.

Then

How to realize the system?

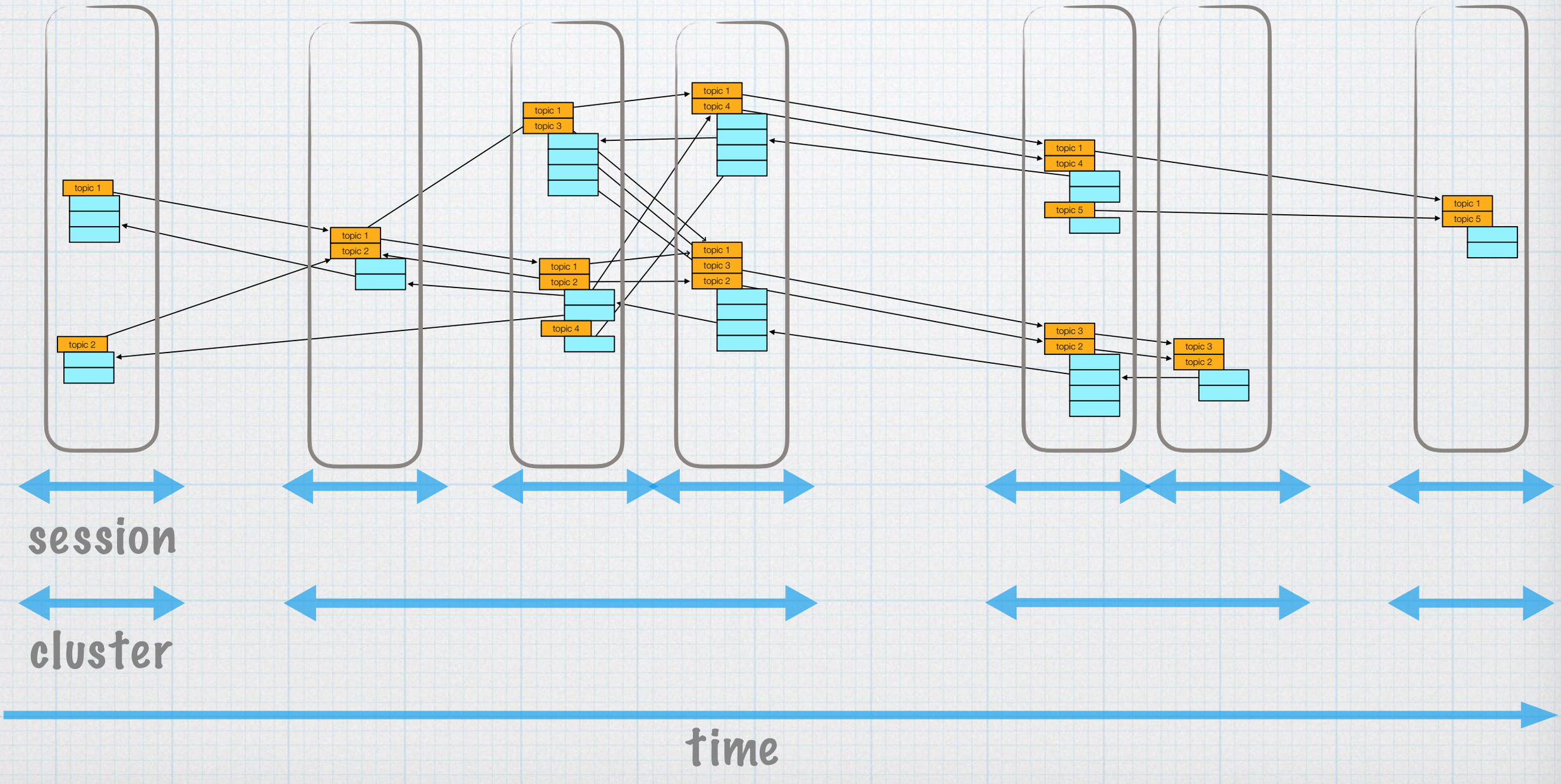
passive➡semi-active➡(active)

Be an exoskeleton for my thinking process!

Of course we start from the simplest example, our mailing list.

◎ oops mailing list [ki 1]
◯ Knowledge Home[ki 2711]

Topic relation & paragraph quoting graph



◎ oops mailing list [ki 1]
○ Knowledge Home[ki 2711]

Data privacy is an important problem

oops-ura: 2507

[prev]/[index]/[next]-----[qm]

Date: Fri, 8 Jul 94 03:07:33 +0900
Subject: Re: oops-ml > HTML, access control
From: MIYASHITA =?ISO-2022-JP?B?GyRCJEEkJhsoQg==?= kensuke

◎ oops mailing list [ki 1] (prev/next)
○ HTML(Hyper Text Markup Language) [aga 250] (prev/next)
・ hml[ki 626] (prev/next)

-*- Quote (from 2505) -*-
oops-ml に対して， oops-ml-ura とかいうような mailing-list を作って，
mail counter などは両方とも共有するなどと言う細工は簡単にできるだろ
うか？ "oops-ml-*" なる ml は共通に扱うという路線で．
もしそうなら，危ないネタを書きたいときは「裏oops-ml」に mail を
出すようにして，切り替えるというのはどうだろうか？
-*- Unquote -*-

あ、それはいいかも。賛成。
X-Ml-Count を共有するのは簡単だよね？ > t-nisida

-*- Quote (from 2505) -*-
単なる mailing list でグループ定義などをするにはこんな方法しか
思いつかないのだが．
-*- Unquote -*-

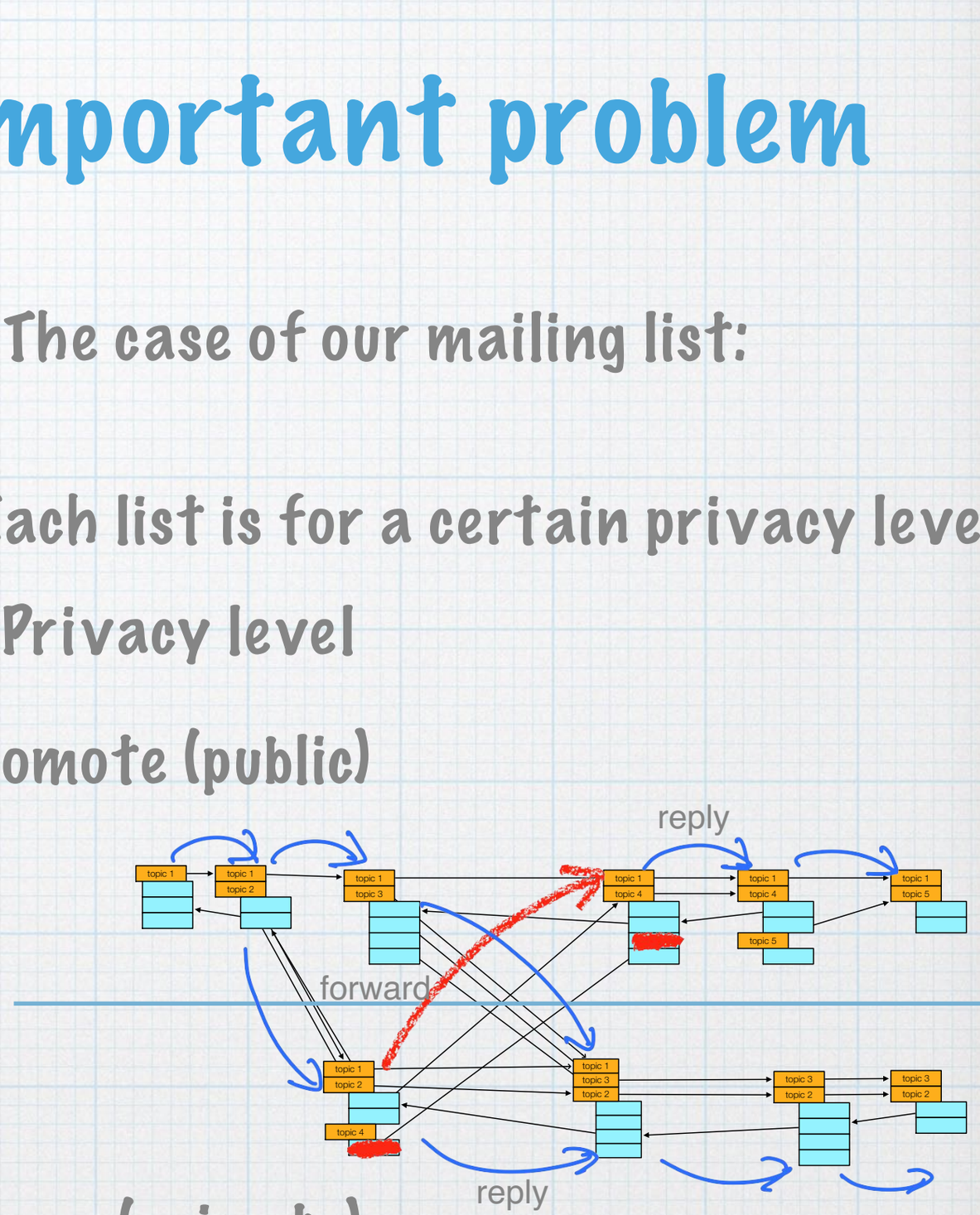
[2508]
いま思いついたけど、X-ほげほげ っていうヘッダは自由に作っていいはず
なので

The case of our mailing list:

Each list is for a certain privacy level.

Privacy level

omote (public)

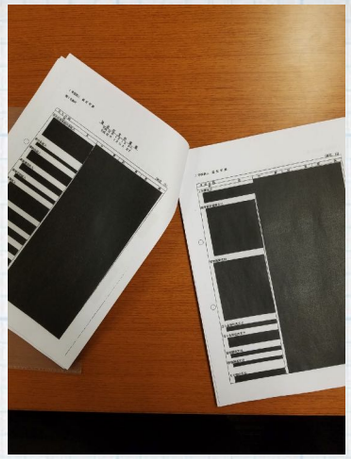


ura (private)

high

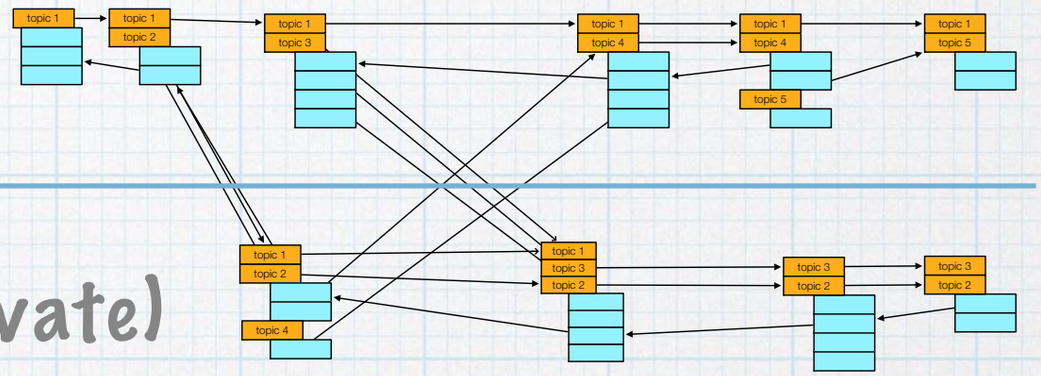
◎ oops mailing list [ki 1]
○ Knowledge Home[ki 2711]

Privacy level



https://twitter.com/kawauchihiroshi/status/844459313193598977

omote (public)



ura (private)

omote

oops-archive

Yet another "Knowledge Home",
Multi-purpose archives for our junk mailing list...

- **oops-omote (guest login: name guest, password guest)**
- **oops-ura**

- Powered by and
- update log

| Imai's |

---

imai@iec.hiroshima-u.ac.jp
System last modified: *2004.03.05*

oops: 5578

[prev]/[index]/[next]-----[qm]

Date: Tue, 3 Jul 2001 17:54:17 +0900
Subject: Re: iBook
From: imai@iec.hiroshima-u.ac.jp (Katsunobu IMAI)

◎ OpenGL[ki 1839] (prev/next)
○ Cellular Phone[aga 128] (prev/next)

-*- Quote (from 5576) -*-
HI CORPORATION のはず。
-*- Unquote -*-

なるほど.
結構以前から携わっていると言う雰囲気だな.

-*- Quote (from 5576) -*-
400-500triangles じゃないかと思うけど、本当のところはよくわからない。
テクスチャ少ないからモデル全体は1000triangles ぐらい使っているかも
しれない。ズームしたときはモデルを切り替えるというのもあるけど...
-*- Unquote -*-

どこの CPU なのかねえ.

-*- Quote (from http://www.hicorp.co.jp/MC_JAVA/micro/txt.html) -*-

ura

oops: 5578

[prev]/[index]/[next]-----[qm]

Date: Tue, 3 Jul 2001 17:54:17 +0900
Subject: Re: iBook
From: imai@iec.hiroshima-u.ac.jp (Katsunobu IMAI)

◎ OpenGL[ki 1839] (prev/next)
○ Cellular Phone[aga 128] (prev/next)

-*- Quote (from 5576) -*-
HI CORPORATION のはず。
-*- Unquote -*-

なるほど.
結構以前から携わっていると言う雰囲気だな.

-*- Quote (from 5576) -*-
400-500triangles じゃないかと思うけど、本当のところはよくわからない。
テクスチャ少ないからモデル全体は1000triangles ぐらい使っているかも
しれない。ズームしたときはモデルを切り替えるというのもあるけど...
-*- Unquote -*-

どこの CPU なのかねえ.

-*- Quote (from http://www.hicorp.co.jp/MC_JAVA/micro/txt.html) -*-
3D処理
対応ポリゴン形状
３角形ポリゴン、４角形ポリゴン
ポリゴン数
8000ポリゴン/秒 (ARM 24MHz)
30万ポリゴン/秒 (Pentium Celron 333MHz)
1万ポリゴン/秒 (EPSON C33 25MHz)
3万ポリゴン/秒 (MITSUBISHI M32R 66MHz)
オブジェクト
制限ポリゴン数に収まれば無制限
シェーディング

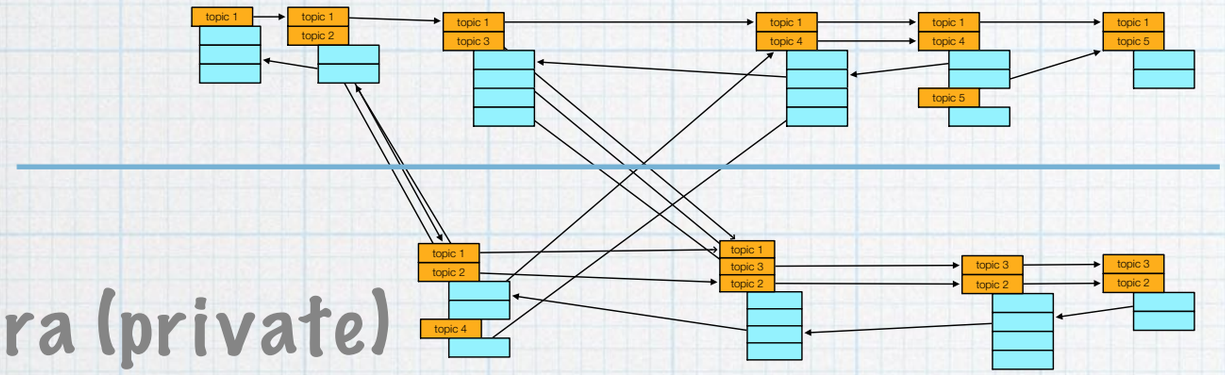
Copyright issue:

◎ oops mailing list [ki 1]
◯ Knowledge Home[ki 2711]

Privacy level

omote (public)

ura (private)



Topics in 1999/11 mails.

[Prev month|Return to annual index|Next month]

- #5009 99.11.01 23.53.23: ?
- #5010 99.11.02 12.57.13: 病気 ぎっくり腰 MacOS MacOS 9 file managerlNew & Improved Inside Macintosh 倒産lFinale ATM ヒラギノ明朝
- #5011 99.11.02 12.59.54: Newton project Steve Capps 本 倒産lFinale 保育社
- #5012 99.11.02 13.03.54: Vitamin B complex めまい 肩凝り
- #5013 99.11.02 13.27.47: OpenGL DORE
- #5014 99.11.04 11.56.07: OpenGL retained mode めまい カイロ・プラクティック 肩凝り
- #5015 99.11.04 13.25.49: 電子オルガン Technitone MIDI 安田寿明 大江戸捜査網 Trax
- #5016 99.11.05 12.56.41: 電子オルガン Technitone MIDI 大江戸捜査網
- #5017 99.11.08 12.52.36:
- #5018 99.11.08 22.37.12:
- #5019 99.11.15 20.06.44: NCR QuickGaragel奈良先端科学技術大学院大学(NAIST) PowerBook2400c 生体・生理工学シンポジウム MCLlMCL2.0 mailing list ソフトウェア成長モデル
- #5020 99.11.15 20.09.16:
- #5021 99.11.15 20.28.35: Adobe Systems MetaCreations
- #5022 99.11.16 20.16.06: 本 Cellular Automata Permutation City (順列都市)
- #5023 99.11.19 19.18.37: OpenDoclOpenDoc MacOS 9 AppleShare IP
- #5024 99.11.20 01.14.13:
- #5025 99.11.25 15.09.54: QuickGaragel奈良先端科学技術大学院大学(NAIST) PowerBook2400c NuPower G3 for 2400 URL 雑誌 (Magazine, Journal) Elsevier Science PDF Theoretical Computer Science Information Processing Letters
- #5026 99.11.25 15.09.18:
- #5027 99.11.25 15.55.08:
- #5028 99.11.25 16.14.06: テレビ 心理探偵フィッツ 宇宙船レッド・ドワーフ号 (RED DWARF) 特許 2000年問題 windowing 通販 computer
- #5029 99.11.27 23.31.05:
- #5030 99.11.27 22.00.38: QuickGaragel奈良先端科学技術大学院大学(NAIST) PowerBook2400c NuPower G3 for 2400
- #5031 99.11.29 09.36.57:
- #5032 99.11.29 21.20.32:
- #5033 99.11.30 01.04.44:
- #5034 99.11.30 22.33.53:

Generated: 2019.01.30 10.25.42

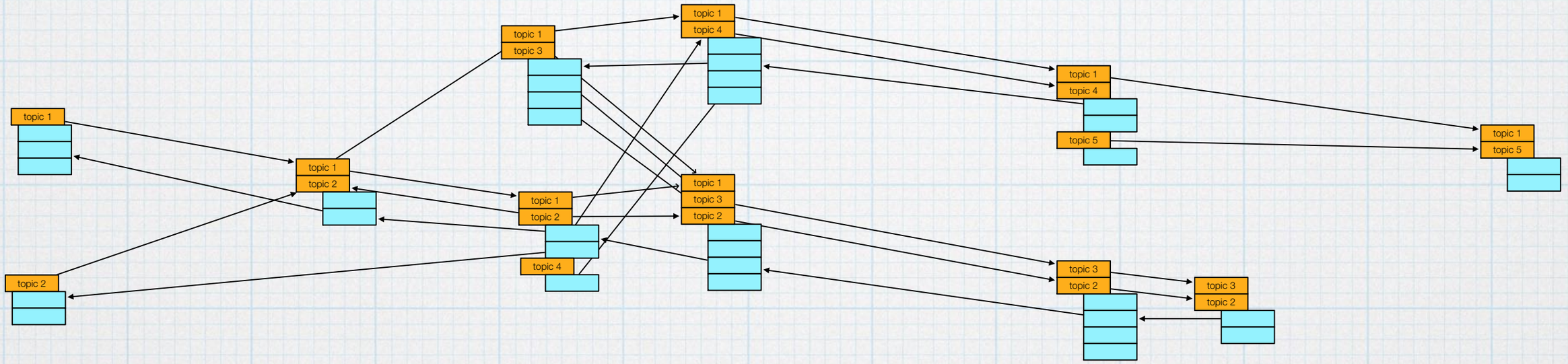
Topics in 1999/11 mails.

[Prev month|Return to annual index|Next month]

- #5009 99.11.01 23.53.23: ?
- #5010 99.11.02 12.57.13: 病気 ぎっくり腰 MacOS MacOS 9 file managerlNew & Improved Inside Macintosh 倒産lFinale ATM ヒラギノ明朝
- #5011 99.11.02 12.59.54: Newton project Steve Capps 本 倒産lFinale 保育社
- #5012 99.11.02 13.03.54: Vitamin B complex めまい 肩凝り
- #5013 99.11.02 13.27.47: OpenGL DORE
- #5014 99.11.04 11.56.07: OpenGL retained mode めまい カイロ・プラクティック 肩凝り
- #5015 99.11.04 13.25.49: 電子オルガン Technitone MIDI 安田寿明 大江戸捜査網 Trax
- #5016 99.11.05 12.56.41: 電子オルガン Technitone MIDI 大江戸捜査網
- #5017 99.11.08 12.52.36: name card (名刺) erabo Technitone MIDI 大江戸捜査網 RAVEL, Maurice ハンダ付け用の曲 クープランの墓(Le Tombeau De Couperin)
- #5018 99.11.08 22.37.12: name card (名刺) erabo
- #5019 99.11.15 20.06.44: NCR QuickGaragel奈良先端科学技術大学院大学(NAIST) PowerBook2400c 生体・生理工学シンポジウム MCLlMCL2.0 mailing list ソフトウェア成長モデル
- #5020 99.11.15 20.09.16: name card (名刺) erabo
- #5021 99.11.15 20.28.35: Adobe Systems MetaCreations
- #5022 99.11.16 20.16.06: 本 Cellular Automata Permutation City (順列都市)
- #5023 99.11.19 19.18.37: OpenDoclOpenDoc MacOS 9 AppleShare IP
- #5024 99.11.20 01.14.13: name card (名刺) erabo
- #5025 99.11.25 15.09.54: QuickGaragel奈良先端科学技術大学院大学(NAIST) PowerBook2400c NuPower G3 for 2400 URL 雑誌 (Magazine, Journal) Elsevier Science PDF Theoretical Computer Science Information Processing Letters
- #5026 99.11.25 15.09.18: 雑誌(Magazine, Journal) 査読l　査読 Elsevier Science name card (名刺) erabo
- #5027 99.11.25 15.55.08: テレビ 倒産lFinale 訴訟 特許 PL 法 SEGA 特許侵害lSEGAの特許侵害
- #5028 99.11.25 16.14.06: テレビ 心理探偵フィッツ 宇宙船レッド・ドワーフ号 (RED DWARF) 特許 2000年問題 windowing 通販 computer
- #5029 99.11.27 23.31.05: 雑誌(Magazine, Journal) 査読l　査読 name card (名刺) erabo
- #5030 99.11.27 22.00.38: QuickGaragel奈良先端科学技術大学院大学(NAIST) PowerBook2400c NuPower G3 for 2400
- #5031 99.11.29 09.36.57: name card (名刺) erabo
- #5032 99.11.29 21.20.32: Cracking
- #5033 99.11.30 01.04.44: name card (名刺) erabo
- #5034 99.11.30 22.33.53: name card (名刺) erabo

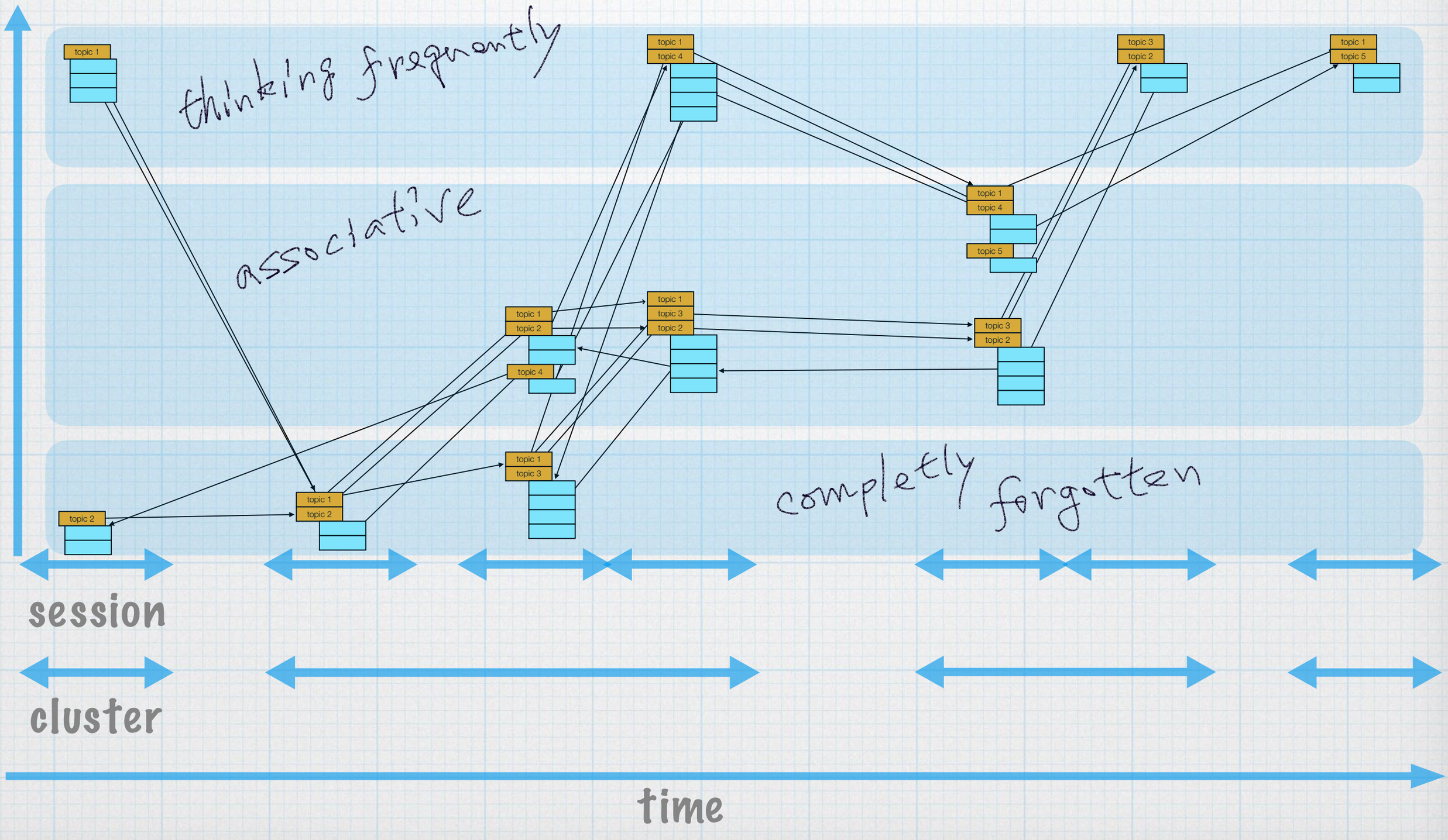
◎ oops mailing list [ki 1]
◯ Knowledge Home[ki 2711]

Associative level



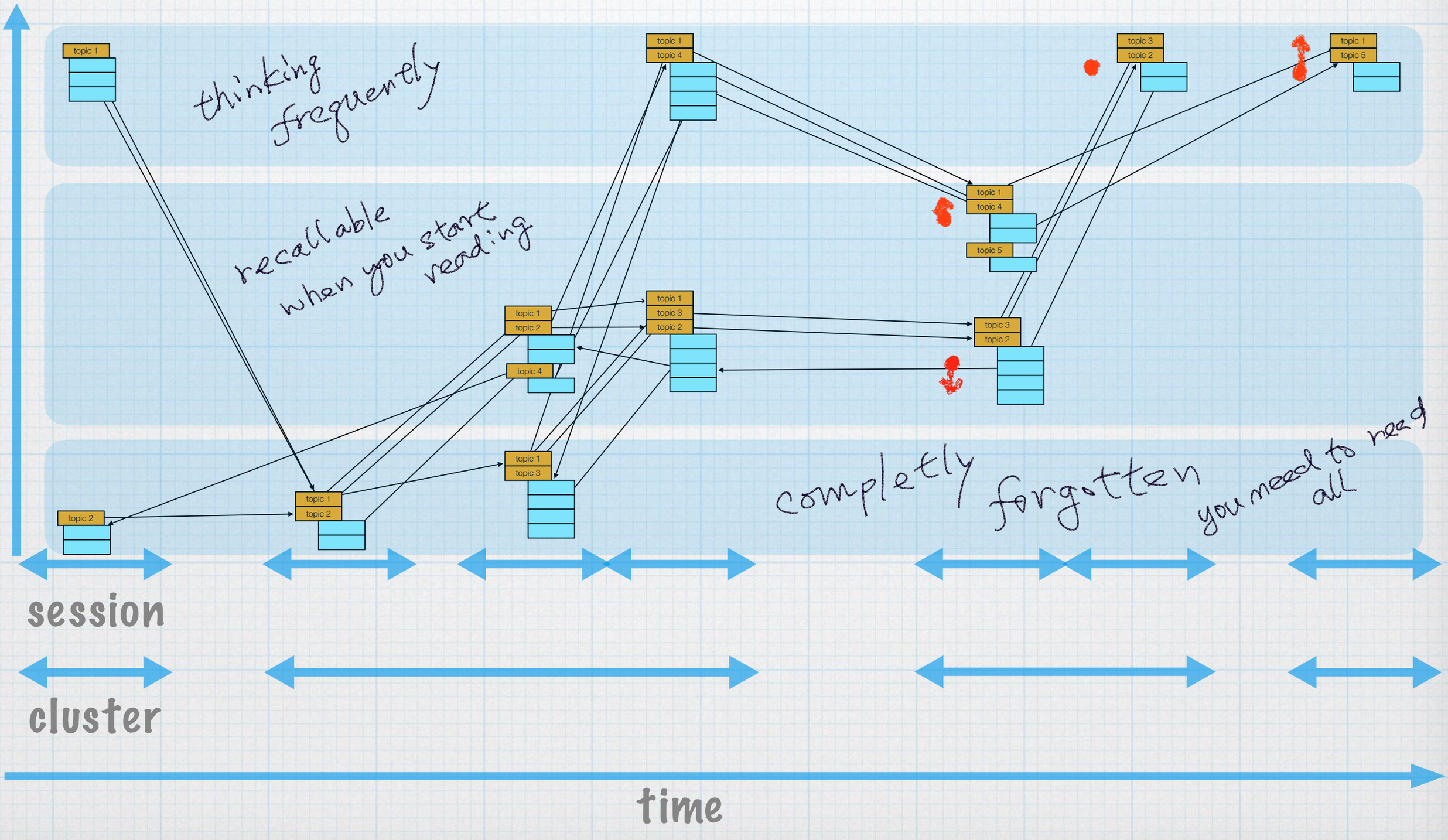
◎ oops mailing list [ki 1]
◯ Knowledge Home[ki 2711]

Associative level



◎ oops mailing list [ki 1]
◯ Knowledge Home[ki 2711]

Associative level is changing.



Sessions & clusters

* Past sessions & clusters describes the neighborhood relations of episodic memories.

* The system tries to estimate the closest node which reflects the current thinking.

* The system tries to update the estimated value of associative level of each node.

cf. wandering

◎ oops mailing list [ki 1]
○ Knowledge Home[ki 2711]

The desired behavior of the system

associative level

Give a ranking

thinking frequently

Estimate the closest node

recallable

1: similar topics and newer

2: direct neghborhood

3: neghborhood

forgotten

session

cluster

time

Shows the ranking result in a proper way
Urge to move to or to create the next node
Update the parameters

Just like moving (actively/semi-actively/passively) through the 'topic item field.'

◎ oops mailing list [ki 1]
◯ Knowledge Home[ki 2711]

Variable briefing level

associative level

"Bring me 'that'!"

Estimate the closest node

1: similar topics and newer

2: direct neghborhood

3: neghborhood

completly forgotten

session

cluster

time

Shows the ranking result in a proper way
Urge to move to or to create the next node
Update the parameters

Sessions & clusters

Roughly speaking:

* The system tries to estimate the closest session to one's current thinking.
* The system tries to estimate the average and possible maximum length of recent clusters (≒ the length of a thinking process supported by the current short term memory).
* 1/associative level ∝ a needed time for understanding a new or forgotten episode

◎ oops mailing list [ki 1]
○ Knowledge Home[ki 2711]
・ 生体計測[ki 2413]

Estimating the associative level

* Measuring a needed time for understanding a forgotten episode.

* Just ask me directly! (by the system)

* Biometrical signals will help the estimation (soliloquy, body motions, heart rate, eye tracking, etc.)

秘訣はゆるく運用すること
自動運転とは違う！

Another important parameter

Cognitive level

How to stop writing unwanted things to Twitter?

認知症バカッターになってしまうリスク

* If it is high, you can control your concentration to several targets well.

* It is recorded to a node when the node is created. It reflects a kind of reliability of the data.

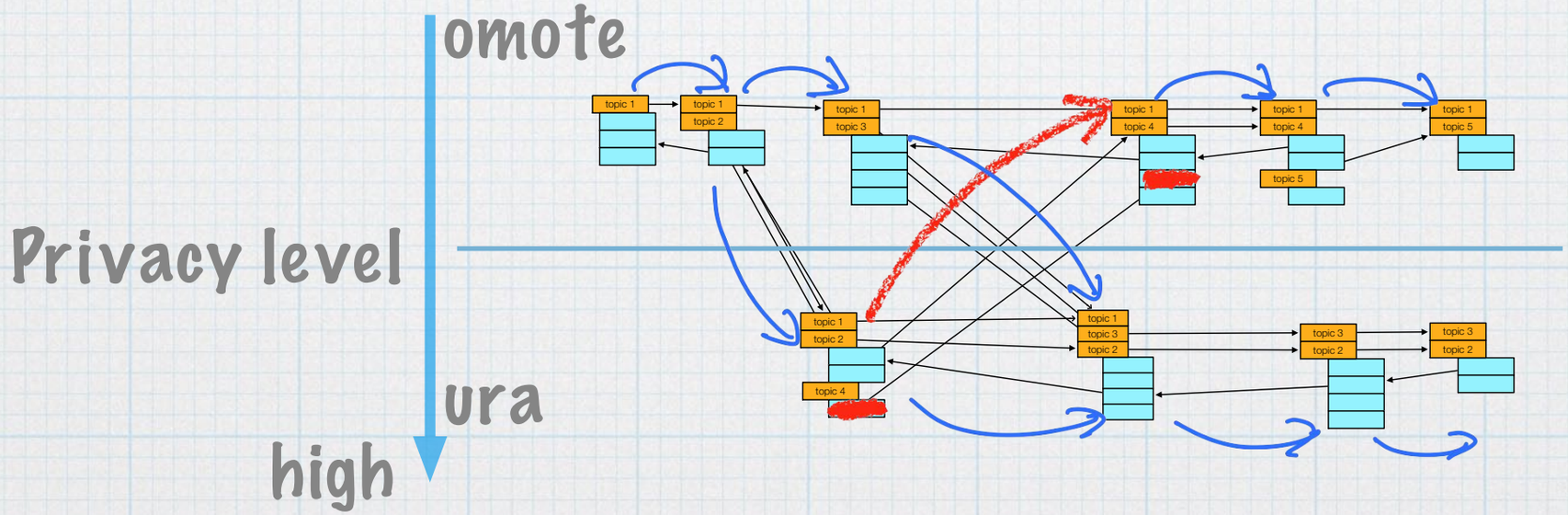
Maximum cluster length ↓ & cognitive level ↓ : harmful!

Of course it is necessary to inspect the clusters to determine.

Cognitive level

* When an operation includes any change of the privacy level of an object from higher to lower, the system decides to execute, stop, or camouflage the process according to the parameter.

The system should focus on the activity of the red arrow.



How to camouflage the forwarding?

認知症バカッターを無理に止めると... cf. Honey pot

'Compress' items created by similar repetitions

Cognitive level is fluctuating.

* The system try to notify the existence of an old similar node when another similar node is created (when the current cognitive level is relatively high).

* The system allows making the new node (when the current cognitive level is low & a 'certain' condition).

* Finding similar nodes and create a compressed node and add a higher associative levels to the new node (otherwise).

The system never delete anything. To record the repetition is more important.

How to estimate cognitive level

* It is mainly estimated by the number of 'faults' counted by the system.

* We can also rely on the other users' rating.

Security framework

* Each session data may be encrypted by an ID based encryption (each user has a set of parameters which may also depend on each certain time slot and/or some conditions).

* Transactions seems to be enough under the semi-honest condition but if the system and the cloud are not so reliable, employ a block-chain based description.

Users of the system

User categories:

real users: me, families, trusted users, normal users, system (administrator), public

virtual users: families, doctors/care managers, ... (only accessible via mail addresses, sns services, etc...)

When a family or a helper starts to use the system, the property changes from virtual to real.

me and me′

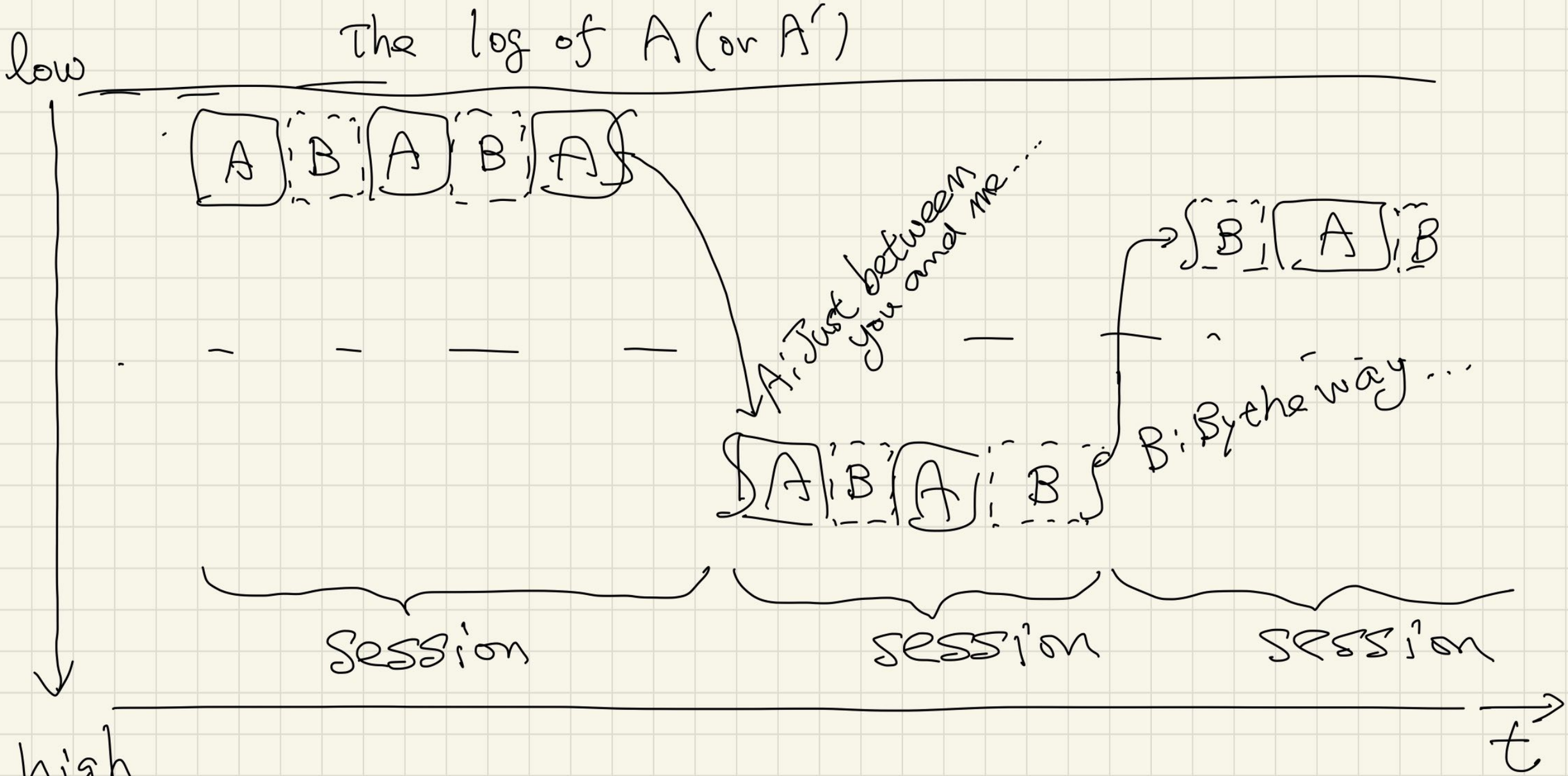
* Real account A: A and A′
* me′ is an autonomous agent which tries to create a ‘lifelog’ of me, as if it tries to complement/extend my logging behavior.
* It is shown as a different user for me when my cognitive level is not low.
* If my cognitive level is low, the items created by me′ is shown as if they are ‘properly’ mixed with my items.

me′ clips the picture of an invoice and makes a new ‘invoice’ node and set its status as ‘to be noticed’ when I open a parcel and see it but fail to do so.

User set and privacy level

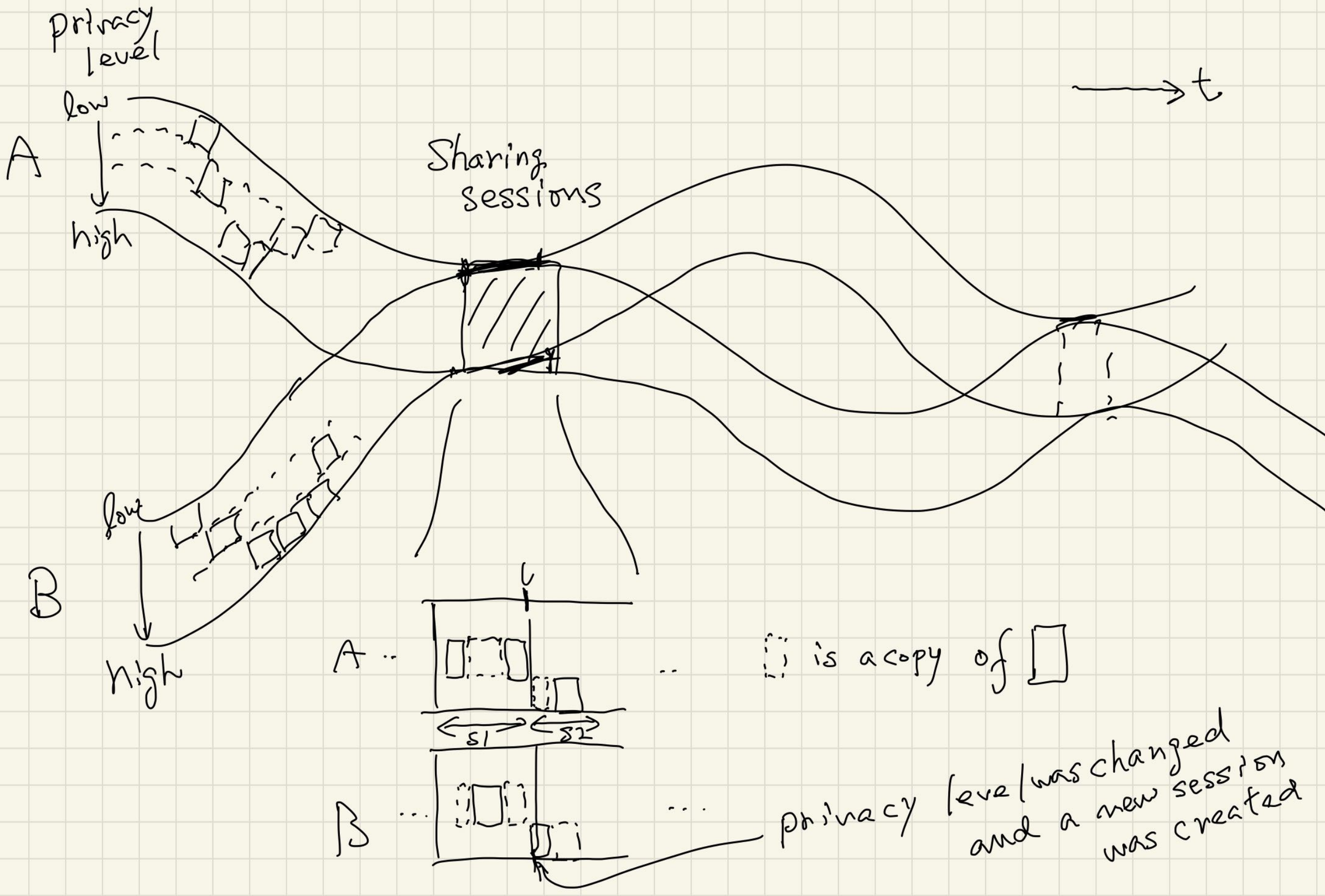
* A user set: associated with a session according to people involved in the session (this process is executed manually and/or automatically).
    * Each user set has a privacy level according to the inclusion relation of the sets (they have a topological ordering).
    * The system usually take care of any quote to a lower privacy level from a higher.

E.g. when someone is coming to the room, the focused user set associated with the current session is changed and its privacy level will be decreasing (or unchanged).



¡B¡ is a copy of the original owned by B.

(Data: never modified)


Privacy level
low
high
A
B
Sharing sessions
t
A ..
B ...
.. is a copy of
privacy level was changed and a new session was created
s1
s2

Inviting another user to a session and its privacy level

When I (me) and A are talking in the room as a session, B is coming.

The session is created by me or A or me′ (or A′ but I cannot figure out A or A′).

- **If the cognitive level of me or A is higher than a threshold:**

  If my cognitive level is high, I can't know the actual cognitive level of A.

  It is possible to decide inviting B, then they can continue the session.

  on a new group me, A, and B. (One of me or A might be me′ or A′ but the decision must be made by me or A)

  Otherwise they need to stop the session and create a new session for me, A and B.

- **If the cognitive level of me and A are both lower than a threshold:**

  The a new group (me, A, and B) are created by me′ and A′ and try to estimate the security level of the session is reasonable for B or not, according to the histories.

  If the session contains any topic of higher security level than B's, the me′ and A′ camouflages the session, i.e., creates a new group and tries to make I and A change the topic.

All these actions are also carefully and mutually verified by the system using the history of their knowledge home data.

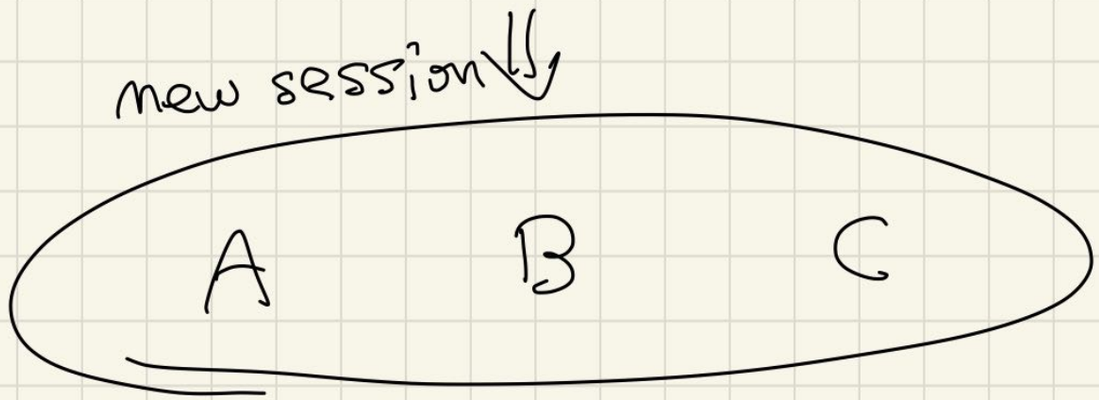
C coming

A B

A' B

A' B'

- who is responsible for creating a new session for A, B, and C?



Trusted users will not be trusted in due time...

* Cognitive level is shared by all trusted users and estimated with each other.

  Rating system based on homomorphic signatures.

* Denial of the change of unwanted forwarding

  Delegation of authority of merging camouflaged revisions.

* Expiration of data access.

  ID based cryptography and blacklist system based expiration of users.

* Access level depends on the combination of cognitive level and average cluster length.

It is necessary

to avoid cheating the cognitive level.

to keep the cognitive level secret (even for the system administrators).

‘Password’ will be lost.

When the ‘login password’ is forgotten?

No, we need a system without login action!

Candidates for ‘password’:

* A set of biometrical data.
* A query based on one’s knowledge home.
* A set of difference between the associative level of nodes and their estimations.

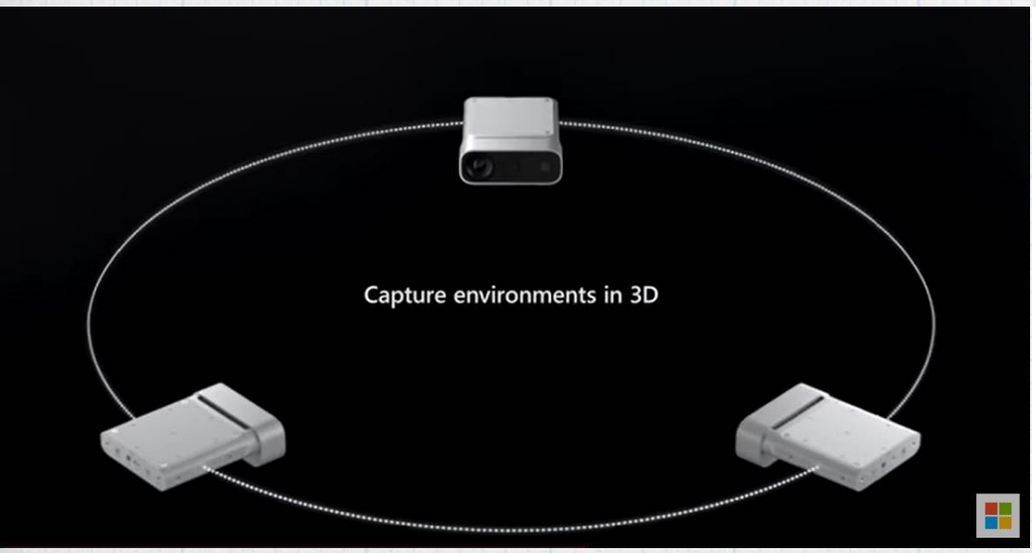
All interactions are the authentication!

No login action!

It is not limited to any trusted user.

* Everyone (families, friends, health care workers, doctors, salesmen, ...) can 'visit' my knowledge home and can share information in it as far as its privacy level allows.

A person-centered care for dementia patients on their initiative



Reviews in Clinical Gerontology 2004 13; 215–222
 DOI:10.1017/S095925980400108X

What is person-centred care in dementia?

Dawn Brooker
Bradford Dementia Group, University of Bradford, UK

Introduction

The term person-centred care has become all-pervasive on the UK dementia care scene. It has been suggested that it has become synonymous with good quality care.[1] It seems that any new

term was intended to be a direct reference to Rogerian psychotherapy with its emphasis on authentic contact and communication.

Person-centred care, however, in relation to people with dementia has become something

How to describe my will?

* My will has a special topic title and is described in a session shared by me and me' (and a certain lawyer, if you need).

* Each description needs an event handler (to be sent when died, to be sent just before the system expired, etc...)

* The topic should require a higher cognitive level and has a notification event of remind after a certain period. At the moment, the topic should have a verification session to confirm its validity.

me and me' share my privacy policy list in advance

* Each list: (user group condition, time condition, required request level)

After my 'singular point' or my death:

1. When someone requests to reveal my information, the other uses rate the request level of it.
2. Then the certificated request and level are verified with my policies.
3. Finally the decision of decrypting my partial data will be made.

Secret sharing & data erasing

* How to execute my will of erasing the data after my 'singular point' or after my death?

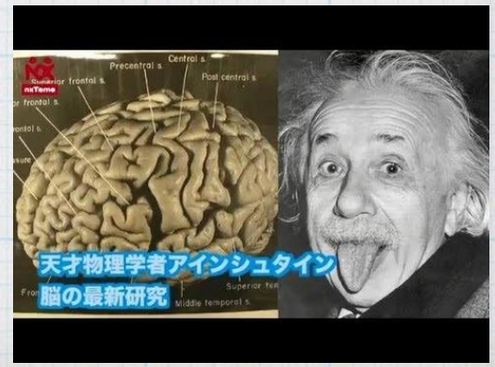
* Secret sharing among normal users may be useful.

  who are not have any interest in my knowledge.

  Protecting privacy by the help of the other users who is anxious about suffering dementia. cf. PGP

* Strict erasing possible? Using quantum coherence based protocol is enough?

Poor Albert problem



◎ Knowledge Home[ki 2711]
○ ナチュラリスト[ki 2710]
・ Total Recall[ki 99]

Wow! Thanks to my knowledge home, I'll not forget anything!

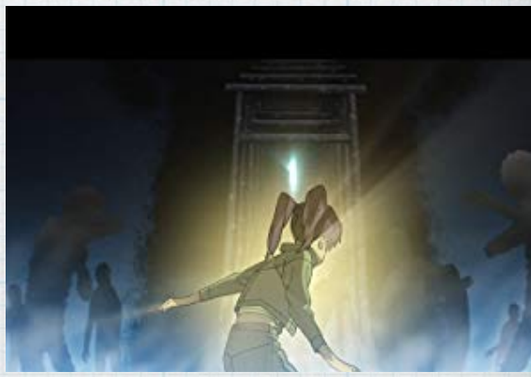
How to erase disgusting memories?

* There are many unwanted memories.

* Change the 'potential' of the 'topic item field'! (The change is automated based on sensing my emotional behaviors in the last days).

https://en.wikipedia.org/wiki/Denn%C5%8D_Coil

* If I want to remind an event with a high potential, it is possible but the probability to come to the node might not be large.



E.g. You mustn't forget death of families. You are accustomed to the fact in due time. But a dementia patient faces to the fact each time.

We need a stress scale for re-experience by dementia patients.

Holmes and Rahe stress scale

From Wikipedia, the free encyclopedia

The **Holmes and Rahe stress scale** is a list of 43 stressful life events that can contribute to illness.

Contents [hide]

Part of a series on

Psychology

Ψ

Outline · History · Subfields

Basic types [show]

Applied psychology [show]

Lists [show]

Ψ Psychology portal

V·T·E

Development [edit]

In 1967, psychiatrists Thomas Holmes and Richard Rahe examined the medical records of over 5,000 medical patients as a way to determine whether stressful events might cause illnesses. Patients were asked to tally a list of 43 life events based on a relative score. A positive correlation of 0.118 was found between their life events and their illnesses.

Their results were published as the Social Readjustment Rating Scale (SRRS),[1] known more commonly as the **Holmes and Rahe Stress Scale**. Subsequent validation has supported the links between stress and illness.[2]

Supporting research [edit]

Rahe carried out a study in 1970 testing the validity of the stress scale as a predictor of illness.[3] The scale was given to 2,500 US sailors and they were asked to rate scores of 'life events' over the previous six months. Over the next six months, detailed records were kept of the sailors' health. There was a +0.118 correlation between stress scale scores and illness, which was sufficient to support the hypothesis of a link between life events and illness.[4]

In conjunction with the Cornell medical index assessing, the stress scale correlated with visits to medical dispensaries, and the H&R stress scale's scores also correlated independently with individuals dropping out of stressful underwater demolitions training due to medical problems.[4] The scale was also assessed against different populations within the United States (with African, Mexican and White American groups).[5] The scale was also tested cross-culturally, comparing Japanese[6] and Malaysian[7] groups with American populations.

https://en.wikipedia.org/wiki/Holmes_and_Rahe_stress_scale

Life event	Life change units
Death of a spouse	100
Divorce	73
Marital separation	65
Imprisonment	63
Death of a close family member	63
Personal injury or illness	53
Marriage	50
Dismissal from work	47
Marital reconciliation	45
Retirement	45
Change in health of family member	44
Pregnancy	40
Sexual difficulties	39
Gain a new family member	39
Business readjustment	39
Change in financial state	38
Death of a close friend	37
Change to different line of work	36
Change in frequency of arguments	35
Major mortgage	32
Foreclosure of mortgage or loan	30

Reliability of the system

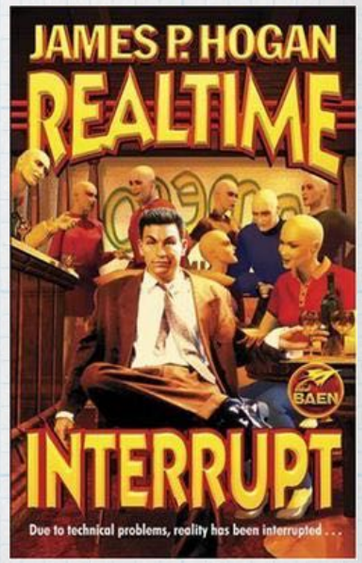
How to make me keep to notice the fact that "the system is prepared by the past myself who was anxious about me"?

* How to prevent the system from becoming a suspicious target by me after my 'singular point'?

「空気」は疑われない
いかに存在感を消すか？

* All interactions are the authentication.

I am afraid that I might be kicked out of my knowledge home.
Sometimes I might behave just like an intruder and try to destroy my knowledge home....



Once I start trying to destruct my knowledge home, do not stop but camouflage with a partial breakdown!

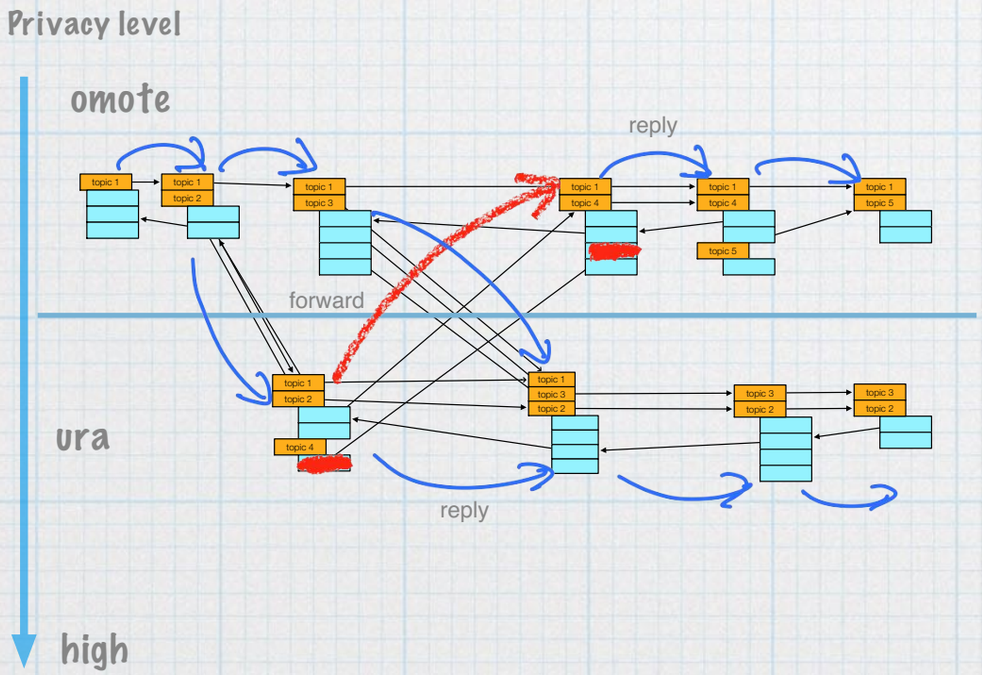
https://en.wikipedia.org/wiki/Realtime_Interrupt

Information gathering devices are evil!

My "cane" might be deprived due to security or privacy reasons.

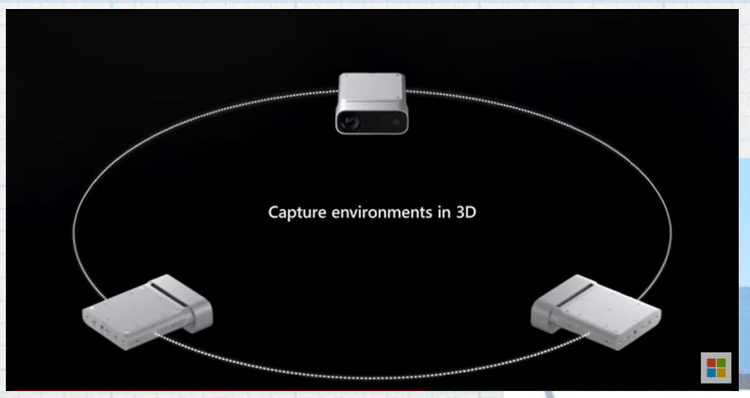
Security:

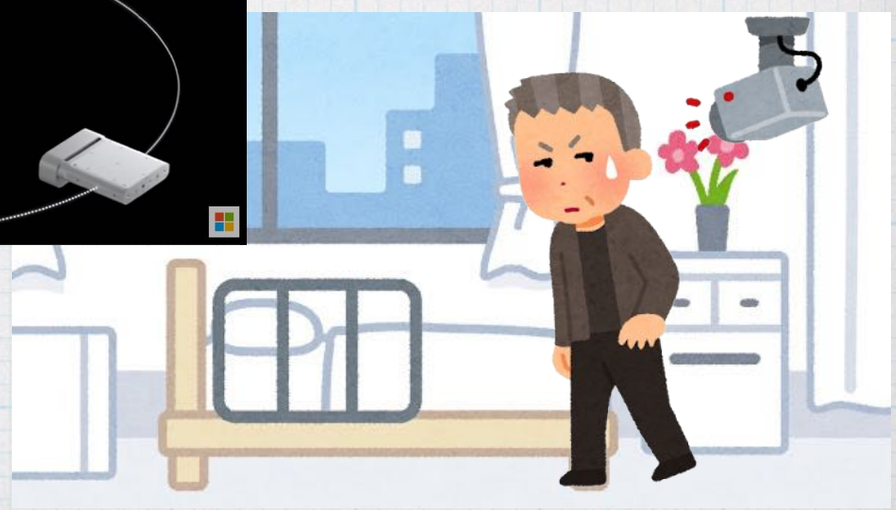
The red arrow is only the problem.



Privacy:

Can I bring my "cane" to my care house or my hospital room?





https://www.fsight.jp/articles/-/44865
http://www.fieldnote.net/

Our 'Knowledge Home' needs to be designed for a kind of 'extreme environment.'

人類「火星滞在」に警鐘「宇宙模擬実験」の驚愕体験レポート（上）

極地建築家 村上祐資

執筆者：フォーサイト編集部　2019年2月11日

This is not just a 'well-being' issue but that of survival or defense!

Showa station (Japanese research station in Antarctica) is a patchwork of extensions just like the "skins of an onion" which is usually thought to be useless. There is no core. But they are important to survive.

極寒の地で見つけた「生の感覚」

「海外の基地は合理的につくられ、とても洗練されています。けれど昭和基地は拡張に拡張を重ねているので、継ぎ接ぎだらけ。その継ぎ接ぎは本来、建築において無駄とされる〝玉ねぎの皮〟なのですが、その皮を剥いていっても、芯と呼べるような重要な〝何か〟は残らなかった。大事なのは皮の方だったからです。継ぎ接ぎは言わば、そこで暮らしている人たちの手あかで、一方の合理的な建築には、それをつくった人の手あかしかありません。人が本当に命を預けられるのは、前者のような建築なのではないか、人間と建物と環境が重ねてきた接点にこそ〝原点〟があるのではないか。それが僕の結論でした」


Dave is promised to 'escape' but I can't and
I don't want to move to such a place!

火星に一人置き去りにされた宇宙飛行士の生存をかけた孤独な奮闘と、彼を救いだそうとする周囲の努力を描くSF映画「オデッセイ」。多くのSFファンの心を捉えたこの映画を、「日本で最も火星に近い男」と呼ばれる極地建築家で、長期の模擬火星実験体験者、村上祐資（むらかみゆうすけ）さんが語ります。
もし、あなたが火星に取り残されたら？極限の生活に必要なものは？村上さんが注目したのは過酷なサバイバルだけではなく人間の本質だった！火星での生き抜き方がビジネスライフに役に立つかもしれません。

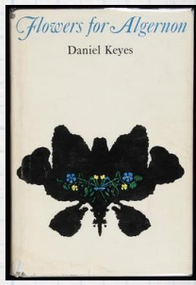
http://www.mitsubishielectric.co.jp/me/dspace/

極地建築家 村上祐資

"An ideal design has no plus or minus, i.e., zero."

"Boring and survival are two sides!"

A survival in the sense of physically and mentally.



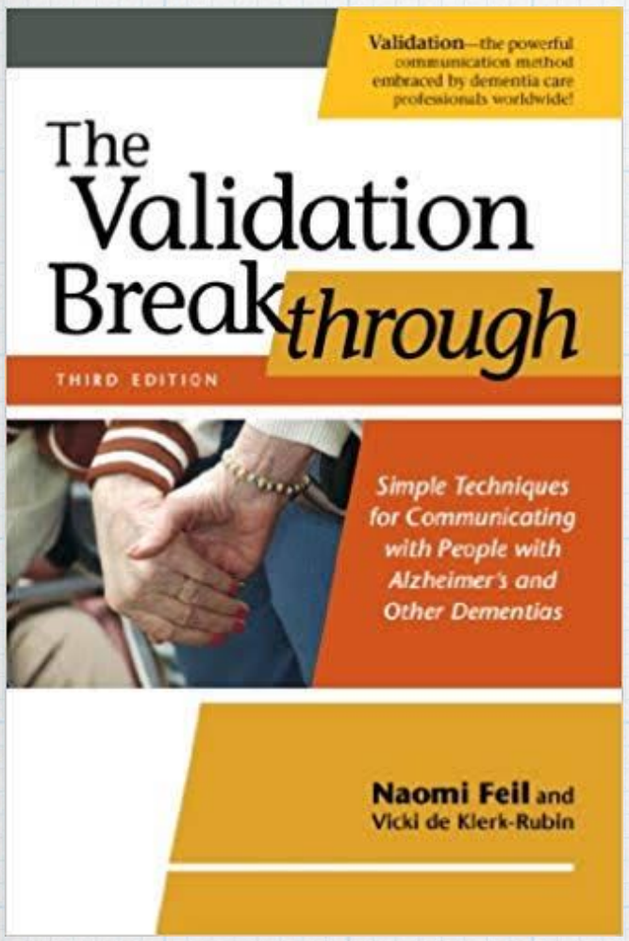
Defences in real and vartual.

How to survive without unwanted treatment and medicine as long as I can?

An example of virtual 'defence'.

"Unachieved life tasks" in validation therapy

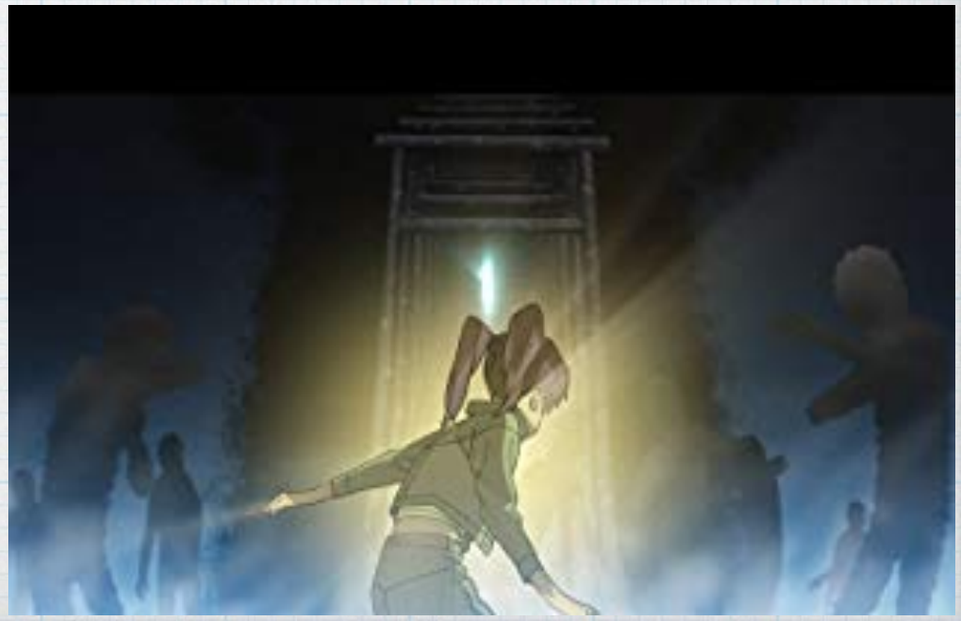
Naomi Feil



"Particular life tasks are associated with each stage of life. Failure to complete a task at the appropriate stage of life may lead to psychological problems."

https://www.aplaceformom.com/blog/2-18-16-validation-therapy-for-dementia/

No one can help me in the nodes with the highest privacy level.



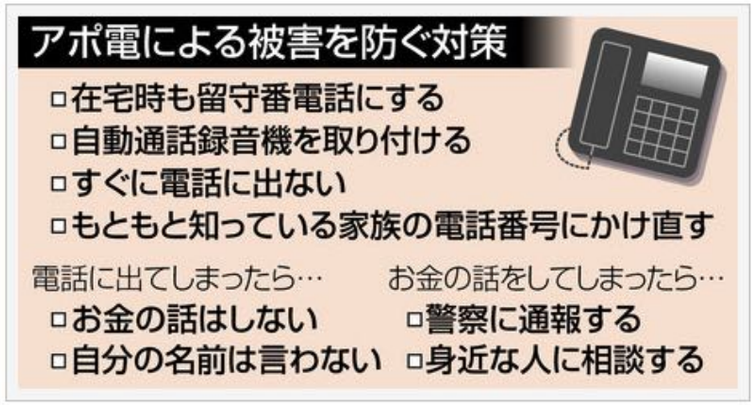
An example of real 'defence'.

脳マネージメントで「スーパー」認知症老人になって
振り込め詐欺を撃退しよう！

【社会】

アポ電シナリオ巧妙化　通話するほど情報漏れる

2019年3月5日 朝刊



ニセ電話が現金にとどまらず、命をも奪う事件に凶悪化した。子や警察官らを装い、事前に現金の有無や家族構成を探る「アポ電（アポイントメント電話）」の後に強盗が入る事件が、東京都内で一月以降、三件発生。江東区では高齢の女性が殺害された。アポ電の「シナリオ」は巧妙化しており、警視庁犯罪抑止対策本部は「玄関だけでなく、電話にも『鍵』を」と留守番電話の活用などを呼び掛ける。　（福岡範行、西川正志）

「あー、もしもし。今日、宅急便きてない？」「桃いっぱいもらったから、送っておいた」

昨年七月、東京都渋谷区の七十～八十代の夫婦宅に、息子を装う男から電話があった。男は「明日届くと思うから、受け取れる？」と夫婦の行動をさりげなく確認。だませそうな相手とみたのか、翌日には「職場の金を使っちゃった」と切り出した。この夫婦はニセ電話と見破り、詐欺被害を免れた。警視庁は実際の音声をサイト＝ＱＲコード＝で公開している。

アポ電は自然な会話で情報を聞き出す。「一千万円ぐらい用意できる？」「五十万円ならすぐに出せるけど…」などのやりとりで、現金があるかどうかを探る。警察官を装い「大事なお話ですので、ご家族の方って今、一緒にいらっしゃいますか？」と、家族ら相談相手が近くにいないかどうかを探る例もある。

こうした電話は詐欺に使われていたが、「たんす預金」を狙った強盗にも悪用されるようになった。

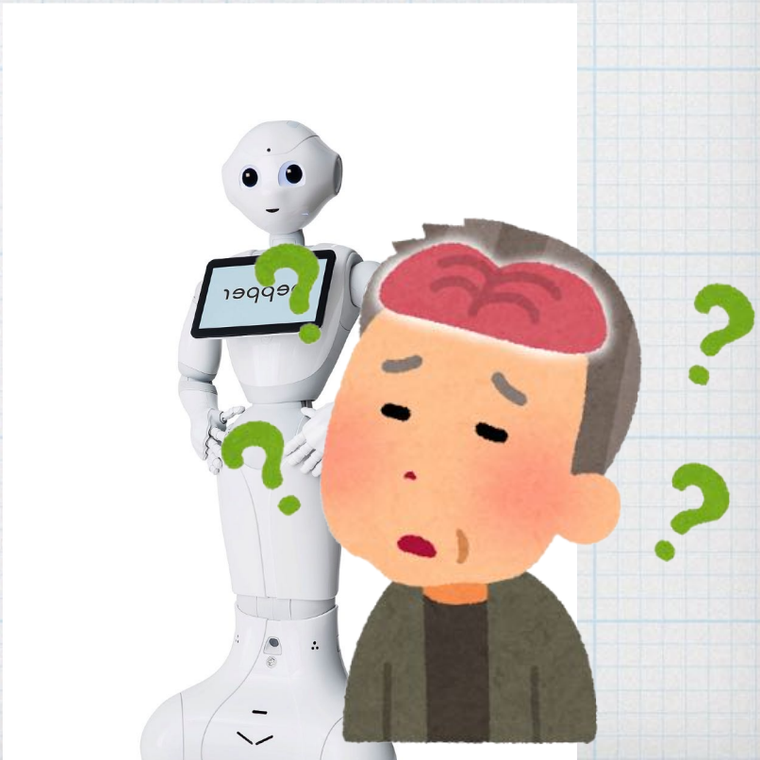
「話せば話すほど、情報は漏れていく。電話に出ないことが最も効果的」と警視庁の担当者は強調する。自宅にいても留守番電話に設定し、不審な電話かどうかを確かめれば、相手のペースに乗らずに済む。

https://www.tokyo-np.co.jp/article/national/list/201903/CK2019030502000126.html

How to cope with an “It’s me” swindle?

This problem may be solved by keeping suspicious people away from a dementia patient but the main problem is not the point.

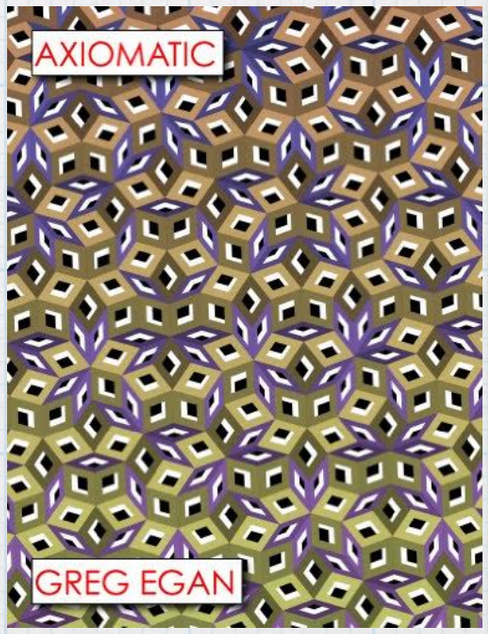
How to find people who can listen to the patient on a low budget on behalf of such a swindle?



Dementia is one-way

* Finally my items in my knowledge home after a certain time will be filled with that created by me'.

* But they are gradually changing.



cf. Learning to Be Me (Greg Egan 1990)

The future after consigning my 'soul'... paradise or nightmare?

* Does doping a periodic background (with my finite network) help to reduce my fear of the future?

The behavior of me' can be simulated by them and it must be 'fair' anyway but is it actually what I want?

Moreover

* Switching my thinking context by a periodic background might be a doorway to my new time sharing 'Nondeterministic' Life...

Moreover, making use of 'multi-level perception' might be possible...

Summary

The only problems I want to solve are:

* How to make my 'knowledge home' and make me avoid kicking out of it after my 'singular point?'

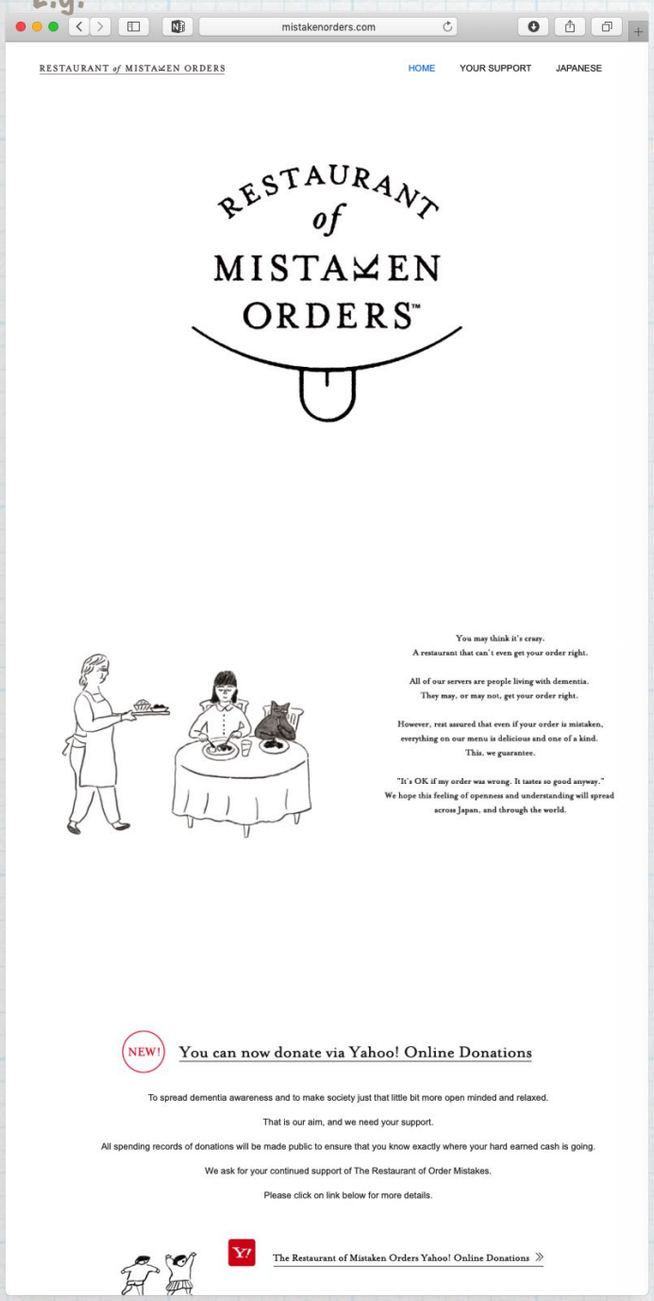
* How to make me notice the fact that I tried preparing it for me after my singular point?

More informations:

http://www.iec.hiroshima-u.ac.jp/~imai/
http://www.iec.hiroshima-u.ac.jp/~imai/docs/cane3.pdf

An event might gain the motivation of living, but...

E.g.



http://www.mistakenorders.com

How many days until Christmas? Santa says 7 sleeps!

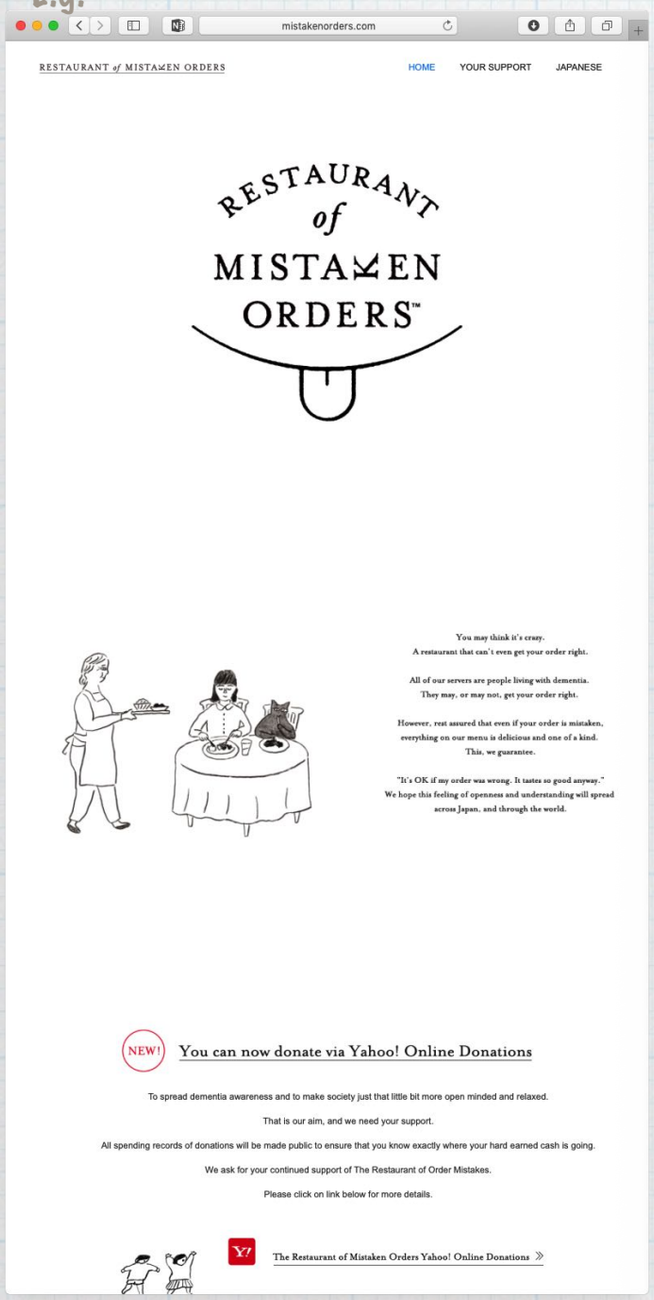
But wait, how to count 7 sleeps?

Do I have no other way to give up counting them by my initiative?

https://en.wikipedia.org/wiki/Advent_calendar

But..., how to survive the remaining 364 days.

E.g.



http://www.mistakenorders.com

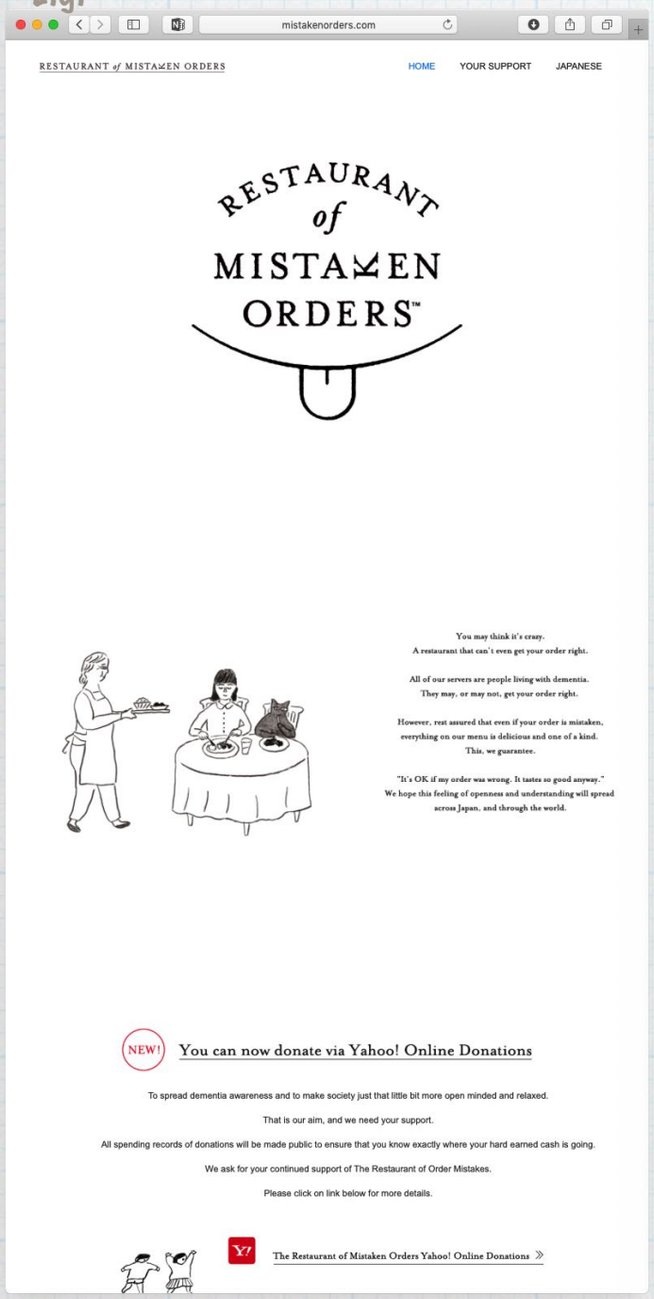
How many days until Christmas? Santa says 7 sleeps!

It is also desirable to prepare 'events' to gain my motivation by myself.
How to prepare and notify each 'present' in my future?
Finally I will forget the 'Santa' is me.

https://en.wikipedia.org/wiki/Advent_calendar

But..., how to survive the remaining 364 days.

E.g.



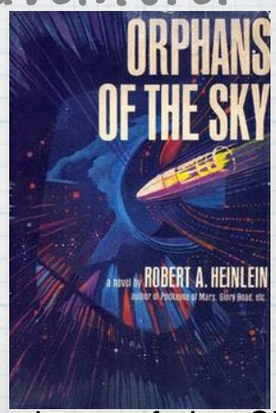
http://www.mistakenorders.com

How many days until Christmas? Santa says 7 sleeps!

It is also desirable to prepare 'events' to gain my motivation by myself.
How to prepare and notify each 'present' in my future?
Finally I will forget the 'Santa' is me.

As a researcher of biometrics, I would like to inspect the progression of my dementia and/or senile decay. How to make me analyze my data in future?

This will be an amazing adventure!



cf. https://en.wikipedia.org/wiki/Orphans_of_the_Sky

Why we start from the antique-looking mailing list archive?

cf. 極地建築としての昭和基地

* Because I already have a prototype of knowledge home.

  It might also be reasonable for you to start from your blog or twitter archive.

* We can't figure out which format/protocol will survive through the next 20 years.

* Even if we find a proper format, the system based on it must also include legacy protocols such as emails, phone anyway.

* To start 'self-sufficient development' of the system.

* The most important thing we have to discuss is independent from any particular medium.

Self-sufficiency

ARで“超能力”を身につける未来--「HoloLensの父」A・キップマン氏に聞く - (page 4)

Scott Stein Ian Sherr （CNET News） 翻訳校正： 石橋啓一郎 2019年03月15日 07時30分

WEARABLE TECH

Why AR is going to give you 'superpowers' in the future

HoloLens inventor Alex Kipman talks to CNET about the future of augmented and mixed reality, and what happens next.

BY SCOTT STEIN, IAN SHERR | FEBRUARY 28, 2019 4:00 AM PST

<< 1 2 3 4

“We actually designed HoloLens on HoloLens.”

--今、1日にどのくらいの時間HoloLensを使っていますか？

一言で言えば、1日数時間ですね。実際われわれは、HoloLensを使ってHoloLensを設計しています。HoloLensを装着して3Dモデルを見ると、空間や空間上にある物を直感的に理解することができるからです。しかしご覧のとおり、わたしは人と会うときにはHoloLensを着けません。また、オフィスでは、キーボードとマウスとPCモニターを使って作業をしていることも多いです。しかし、確かに1日に数時間はHoloLensを着けますし、これはチームのほとんどのメンバーも同じです。

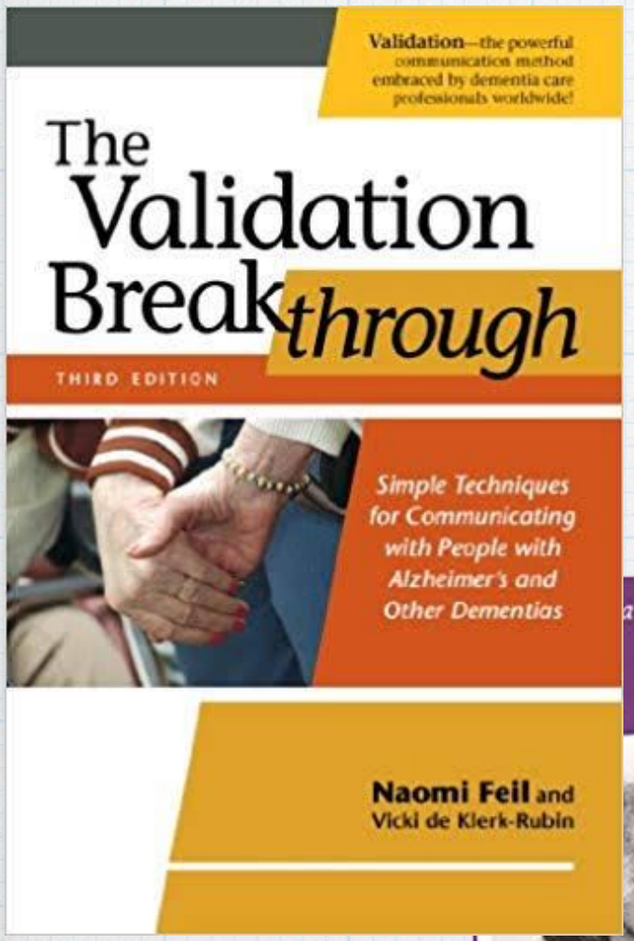
https://www.cnet.com/news/the-future-of-ar-according-to-microsoft/
https://japan.cnet.com/article/35133985/4/

Multi-modality

The most important thing we have to discuss is independent from any particular medium.

* Anyway you need a framework for playing a multi-modal mixed-reality 'game', then you will be able to figure out how to play with it even if you are a patient, doctor,...
* You will need to play with it without MR glass or even if you loose your sight.
* You will need to play with it even if you loose ...

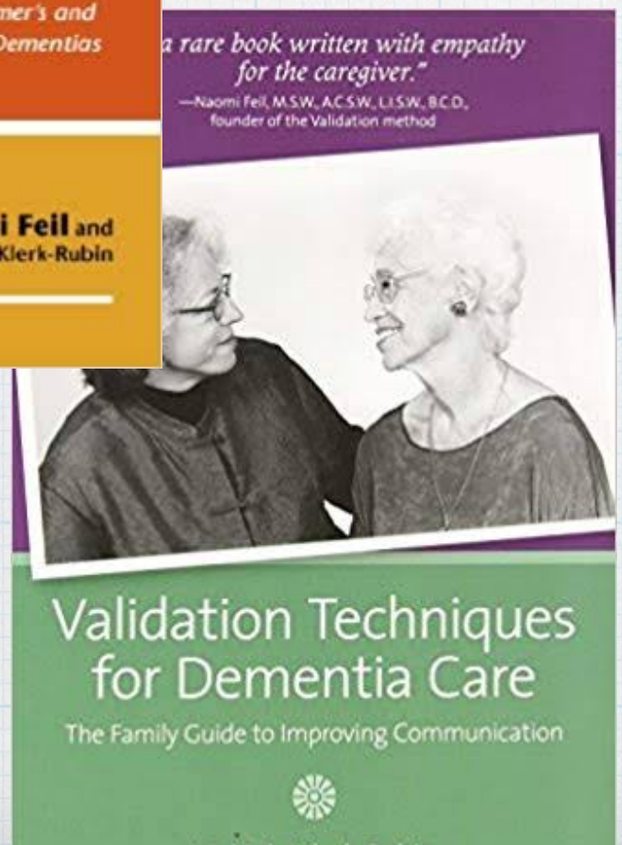
Validation therapy, Knowledge home, and Mixed reality



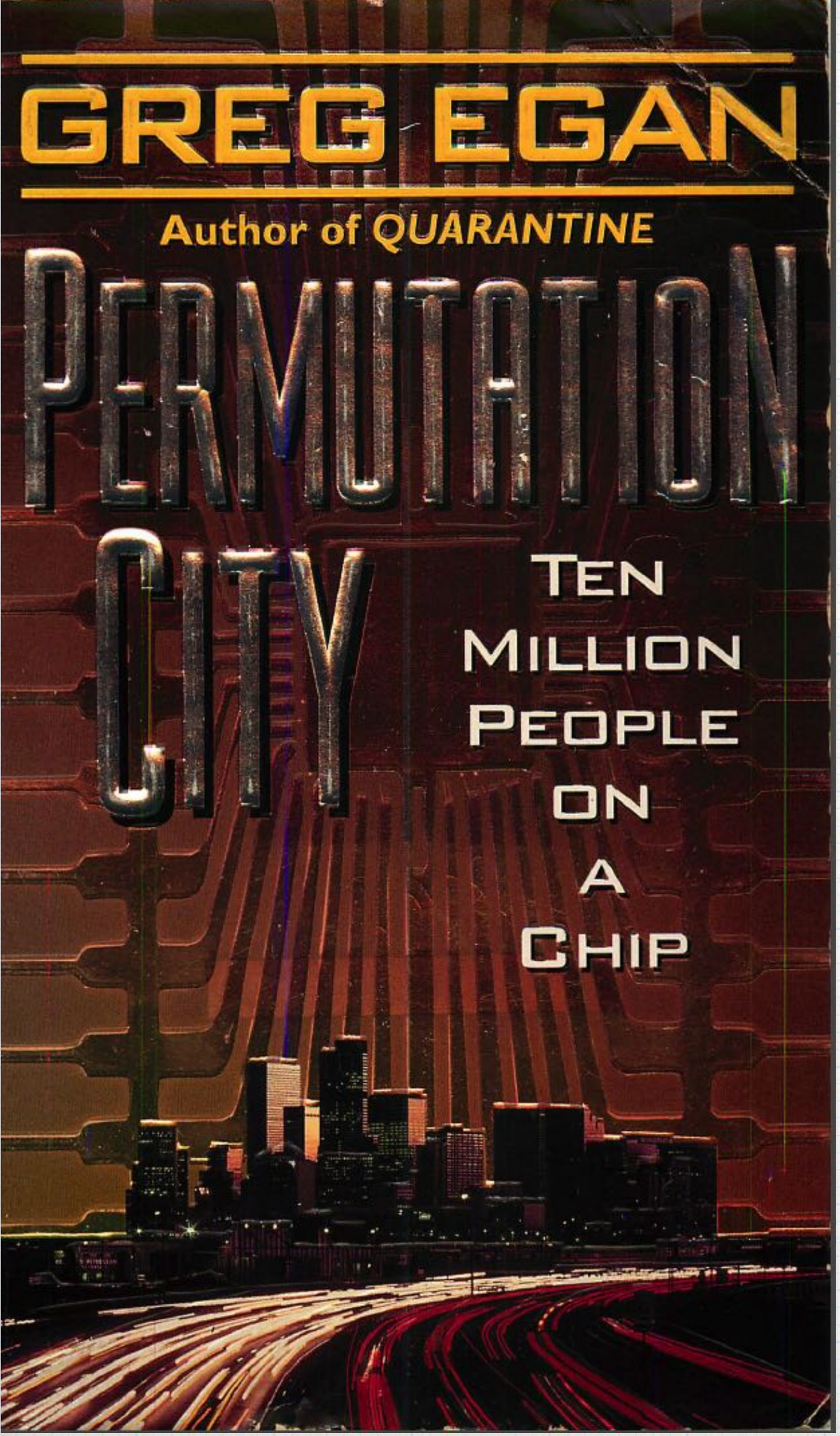
Naomi Feil

"Particular life tasks are associated with each stage of life. Failure to complete a task at the appropriate stage of life may lead to psychological problems."

https://www.aplaceformom.com/blog/2-18-16-validation-therapy-for-dementia/



『昔のことを思い出したり、役に立つと感じた時代や場所に逃げ込んだり、年をとって役立たずになったつらさを和らげようとしたり、やり残している問題を解決しようとしている時には、心の目を通して起こっていることと今現在はうまくかみ合わなくなります。まわりの環境とお年寄り個人の現実世界が不協和音を奏でます。』



A game of life, well-being, patchwork, reality, stress-test, escape, and survival...

https://en.wikipedia.org/wiki/Permutation_City

http://saio.world.coocan.jp/KonoMeth-Critiq.pdf

32th JSCPT/Hamamatsu, JPN/2011/12/03 3-O-03

Kono method

A CONSIDERATION ON THE COMBINATION DRUG THERAPY
"KONO METHOD FOR DEMENTIA"
- FROM THE VIEW POINT OF CLINICAL PHARMACOLOGY-

TAKEO SAIO (FUJI TORANOMON HEALTH PROMOTION CENTER)
CHIEKO KURIHARA(NIRS)

IRON RULES

Iron Rules insisted in the Kono method

1. Medical imaging has lesser importance in diagnosing de-mentias than history taking and intelligence tests.
2. Drug therapy should be started even if no diagnostic ima-ging has obtained to treat ***core symptoms***.
3. Clinical diagnosis is mere hypothesis which can be refuted and corrected by the patients' clinical course.
4. = rule No. 1.
5. = rule No. 3.

Iron Rule No.2 is inconsistent with another part of description of the pdf file on Kono Method placed by Dr. Kono himself on the Net. (ie: *First treat BPSD*, then treat core symptoms to relieve the bur-den of family of the patient.)

KONO METHOD-METHODOLODY(1)

"Character classification" of patients' symptom

- regardless of subtypes of dementia
  - **Positive symptom dominant type**(disobedient to carerers)
  - **Negative symptom dominant type**(patients himself are agonized by the symptoms of dementia)

First, suppress positive symptoms!

- give: tiapride, Yokkansan(Kanpo medicine to be used to calm aggression), chlorpromazine

then, treat core symptoms

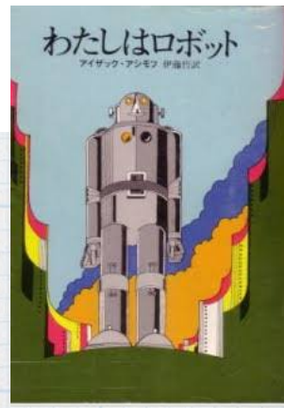
- Alzheimer, Lewy body disease→ galantamine
- vascular dementia→ nicergoline
- "Pick disease"→supplements(combination granule of ferulic acid with garden angelica)
  - Dr. Kono hates the classification of FTLD for its clinical worthlessness

Ah, very straightforward!
Just a 'cybernetics'!

KONO METHOD- PHILOSOPHY

The "philosophy" of prescription in the Kono Method

1. The carer of the dementia patient can change the dosage of psychotropic medications according to the circumstance and symptoms of the patient ("family-balance method").
2. If the carers utterly exhausted and annoyed by BPSD, put the patient under sedation ASAP.("protectionism to carers")



コウノメソッド (Kono method)とは認知症を治療する対症療法のこと。河野和彦(医学博士、認知症専門医、不正行為により精神保健指定医を取り消され、医業停止処分を受けた)によって提唱された認知症の診断と治療体系で、認知症のBPSD(Behavioral and Psychological Symptoms of Dementia)を、陽性症状、陰性症状、および中間症に分類し、それぞれに最も適した薬剤を極力少ない副作用で処方する治療プロトコルである[1]。

コウノメソッドは、陽性症状の強い認知症でも家庭介護が続けられるように処方することを最優先として一般公開された薬物療法マニュアルに集約されており、そのコンセプトは以下のとおりである。

1. （家庭天秤法）薬の副作用を出さないために介護者が薬を加減すること
2. （介護者保護主義）患者と介護者の一方しか救えないときは介護者を救うこと
3. （サプリメントの活用）薬剤と同等、あるいはそれ以上に効果がある(と河野が主張する)サプリメントも併用する

https://ja.wikipedia.org/wiki/コウノメソッド

"A person-centered care for dementia patients on their initiative" is important not only for the patients but also for the caregivers.

ノーバート＝ウィーナー

サイバネティックス 第2版

動物と機械における制御と通信

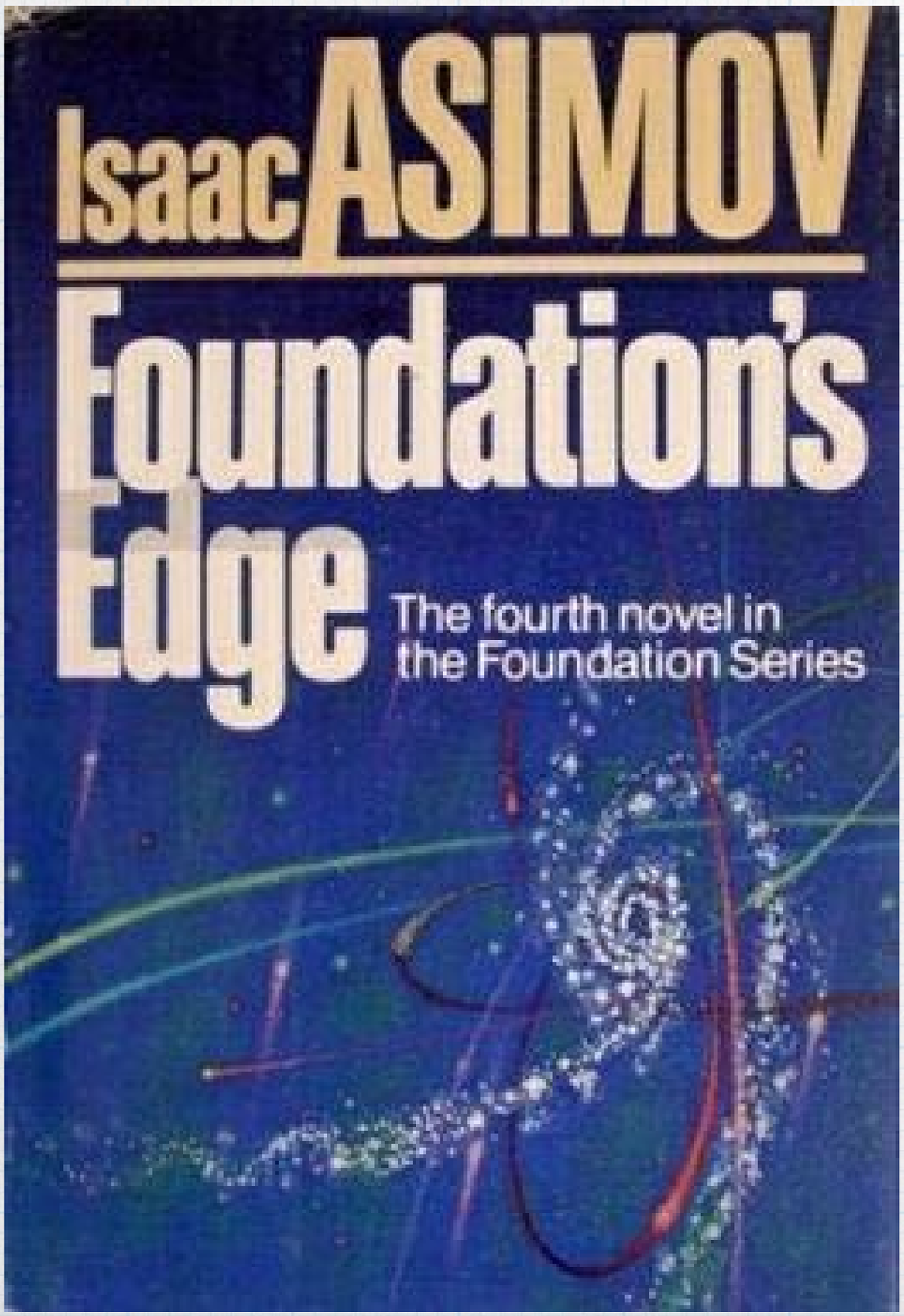
池原止戈夫・彌永昌吉
室賀三郎・戸田　巌 共訳

岩波書店

Now I got it!
Dementia care is the main problem of Cybernetics!

Norbert Wiener, Cybernetics: Or the Control and Communication in the Animal and the Machine. (1948)

Solaria v.s. Gaia



Which future do you choose?

I want their mixture!

https://en.wikipedia.org/wiki/Foundation%27s_Edge

How to survive the chaos?

https://ameblo.jp/29yoi65/entry-12288879226.html

CONCLUSION

http://saio.world.coocan.jp/KonoMeth-Critiq.pdf

Kono Method for Dementia is unique therapy invented one excellent Japanese doctor and used widely by Japanese physicians

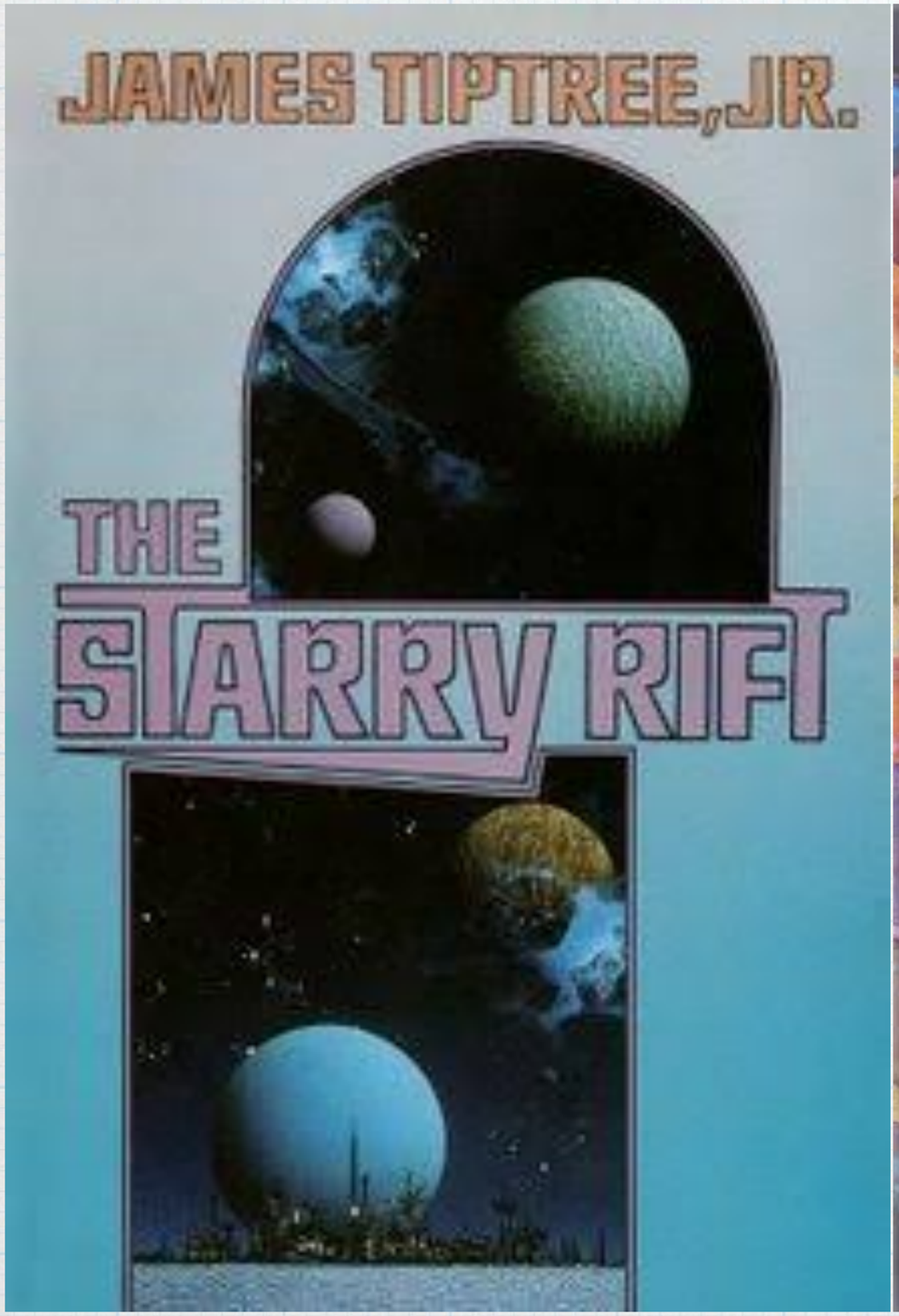
- Japanese dementia care is still in chaos.
- Specialist doctor certified by Japanese Society of Dementia Research(JSDR) is barely over 500 at the time of 2010.

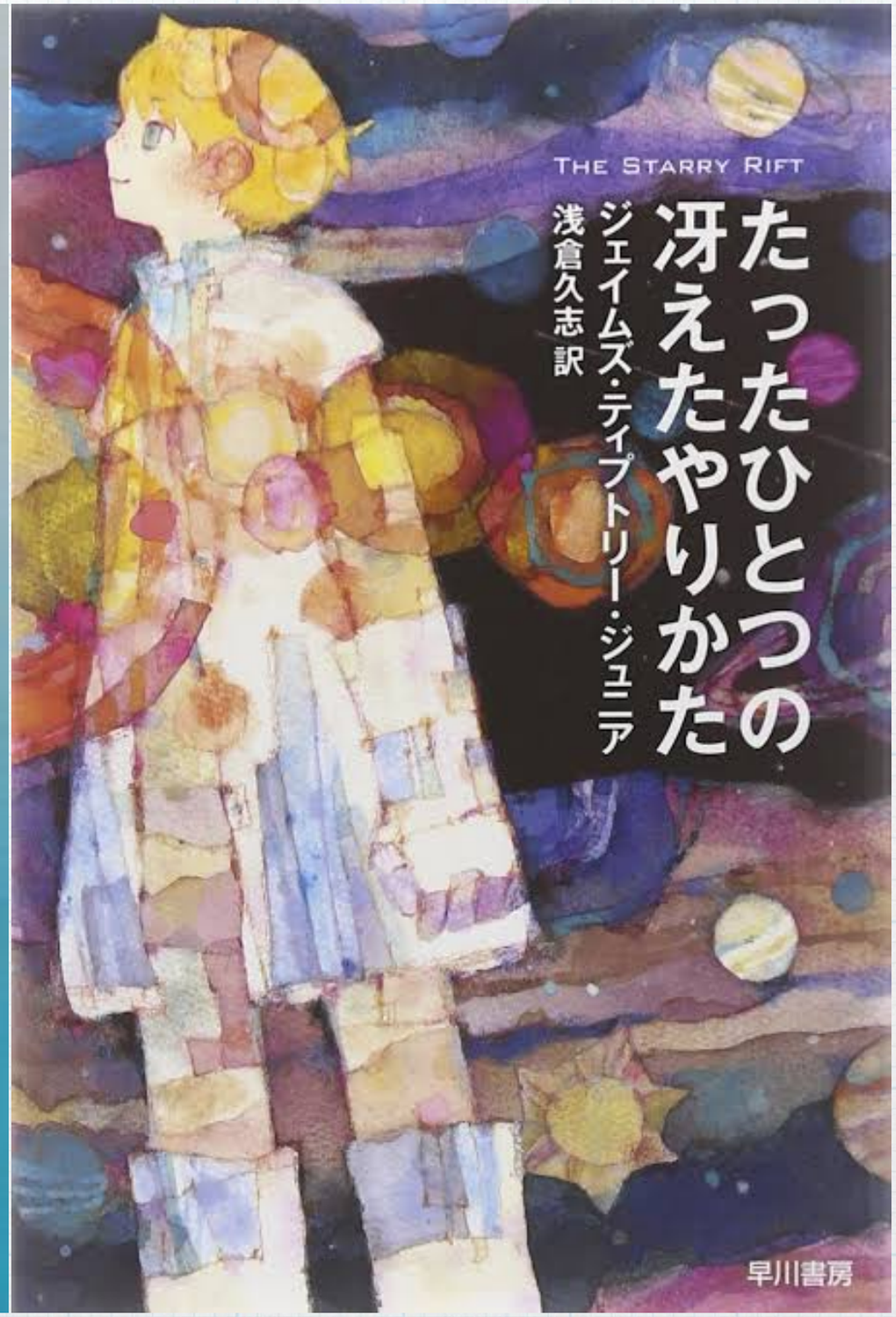
Kono Method has not enough clinical evidence yet.

- But has good reputation from patients and care-givers as well a clinicians.

Dementia care inherently includes a contradiction to the words "How to survive?" But I want to inform 'me' the fact that "I would like to try to survive as possible as I can!" anyway...

The only neat thing to do





https://en.wikipedia.org/wiki/The_Starry_Rift_(Tiptree_book)