
CAC 10

Perceptions of Time

Outline

- Shared concepts of time
 - Time and language
 - Time measurement
 - Standardisation
 - P-time and M-time
-

What is 'time'?

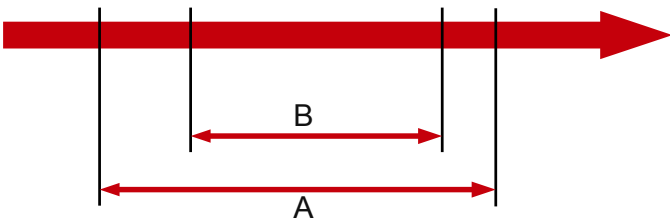
What can we say about 'time'?

Features of 'time'



SEGMENTABILITY: time can be divided (infinitely?) into smaller and smaller, or larger and larger segments.

Features of 'time'

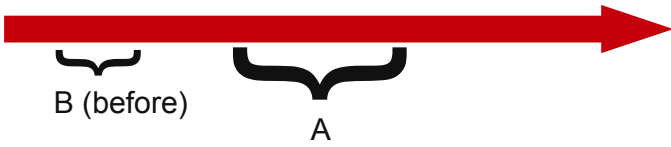


INCLUSION: spans of time can include other spans of time

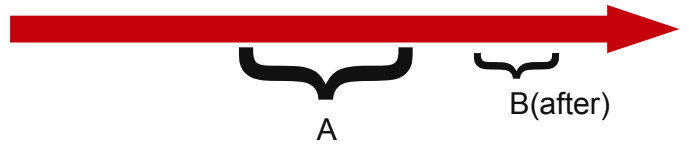
Features of 'time'



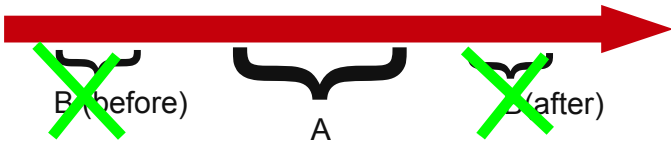
Features of 'time'



Features of 'time'

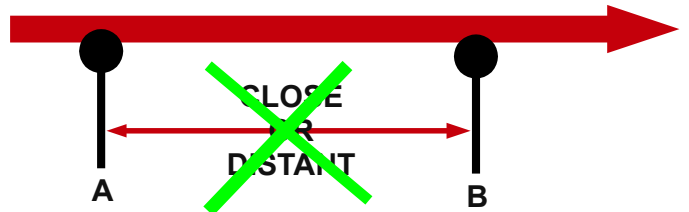


Features of 'time'



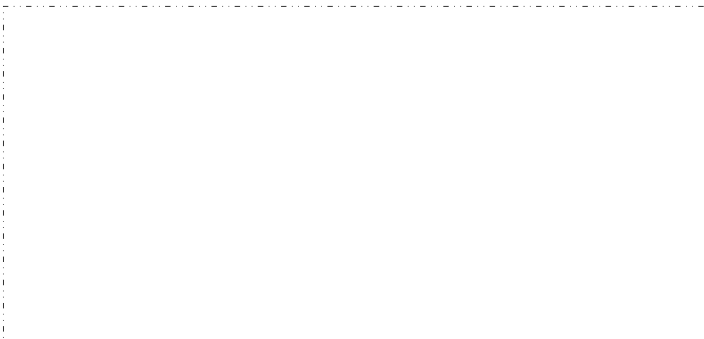
LINEARITY: times spans which don't include each other must be **BEFORE** or **AFTER** – NOT BOTH!

Features of 'time'



PROXIMITY: events (A and B) can be **CLOSE** or **DISTANT** – NOT BOTH!

Features of 'time'



Features of 'time'

LACK OF QUALITY: Time is never 'blue' or 'shiny' or 'friendly' etc

Features of 'time'



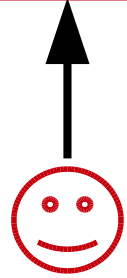
DURATION: spans of time can be different, long or short etc

Features of 'time'



ORIGO: there is a now that we live in. Things in the past are fixed, things in the future are unknown.

“Time of present experience”



Features of 'time'

- Segmentability
 - Inclusion
 - Linearity
 - Proximity
 - Lack of quality
 - Duration
 - Origo
-

Direction of time



Direction of time



Time as motion

- The passage of time is motion
 - **Moving-ego:** we travel through time, as if over a landscape
 - **Moving-events:** the passage of time is a sequence of moving objects/events



Time and Language

- **English:** front/back terms
 - “Her whole future is in front of her”
 - **Mandarin Chinese:** front/back+up/down
 - HELP!!
-

Japanese

- **上半期** **下半期**
 - First/second half of FY
 - **上旬** **中旬** **下旬**
 - First/middle/last 10 days of month
-

Aymara



2.5 million native speakers

- **nayra**
 - eye/front/sight
 - **PAST**
 - **qhipa**
 - back/behind
 - **FUTURE**
-

Tricky questions...

- What shape is time?
 - Does time have a beginning and an end?
-

Beginnings and Endings?

- Creation myths
 - Time begins when creation from nothing happens
- National or religious preferences...



Beginnings and Endings?

- **BC** (before Christ) - **AD** (Anno Domini)
 - **BCE** / **CE** (before / Christian Era)
 - **AM** Anno Mundi
 - Orthodox Church (1728)
 - World created 5509BC (1st Sept, about teatime...)
-

Take your pick...

- **Church of England**
 - Archbishop Ussher (1650): **4004BC**
- Jewish scholars suggested **3761BC**
- 紀元節 *kigensetsu* (1872-1948)
 - 建国記念日 *kenkoku kinen-bi* (1966-)
 - **Feb11 660BCE** (Emp. Jimmu regnal day)

Linear or cyclical?

- Ancient Greek mythology (linear)
 - Golden, Silver, Bronze, Heroic, Iron (Hesiod)
- Hindu mythology (cyclical)
 - Satya, Treta, Dvapara, Kali Yuga
 - Complete cycle 4.1 (or 8.2) billion years

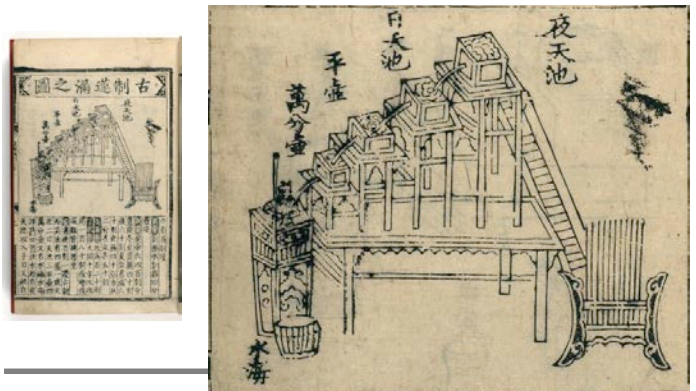
Measurement of time

- **10 June**: Time Day (時の記念日)
 - From 1920: “時間をきちんと守り、欧米並みに生活の改善・合理化を図ろう”
 - Mention of a “clepsydra” in a text dated 671
 - “漏刻を新しき台に置く。始めて候時を打つ。鐘鼓を動かす”



<http://ja.wikipedia.org/wiki/時の記念日>

Clepsydra “water clock”



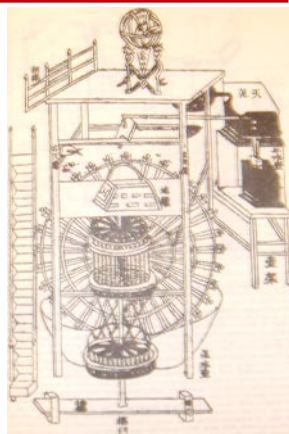
Ancient clepsydra



Karnak Clepsydra
Poss. 1600BCE

Su Song's water-clock

Apx 1090CE



Mechanical clocks

- Change from water power to 'falling weights' apx c14.
 - Early clocks often lacked hands/faces
 - Combined clock/astrolabes
- Spring driven clocks: apx c15
- Pendulum: 1650s

Decimal clock



Introduced 1794 in France

- 10 hours per day
- 100 minutes per hour
- 100 seconds per min.

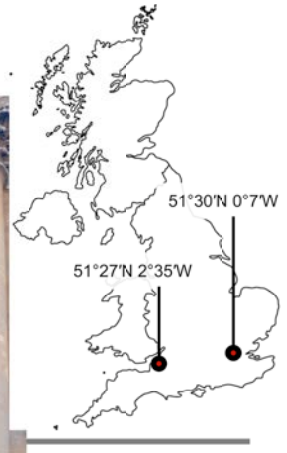
10 o' clock = midnight

5 o'clock = midday

1 deci-sec = 0.86 s

86.4 s = 1 deci-min

Standardised time



Calendar Factoids

- What date came after
明治 5 年 12 月 2 日 (2 Dec, Meiji 5) ?
- What is special (in the UK) about the period
Weds 2nd ~ Thus 14th Sept 1752 ?

World time zones



Effects of clock/calendar time

- **Abstraction**
- Separation from everyday activities
 - Primacy of monochronic attitude



Polychronic & Monochronic

- **Polychronic:** many-things-at-once, people-oriented, integrating, transaction completion, 'less tangible', scale-limited
- **Monochronic:** schedule-oriented, one-thing-at-a-time, arbitrary and imposed, alienating(?), scalable
- 'Clock' and 'Event' time (Brislin & Kim)

E.T. Hall, *The Dance of Life* 1983 (Ch. 3)

Monochrons & Polychrons

Monochrons appear to want a planned, deliberate control over their time. They like to identify time periods when certain activities will be done. It would appear that they are well-suited for workplaces which require the establishment of a well-planned schedule, such as determining repetitive programs and activities whose success is based on structured time. Their strengths may be utilized in developing schedules whose exactness and precision allows workers to function in a cooperative manner. Monochrons would be likely to excel at activities which require linking activities to specific times of day, such as the determination of work schedules, transportation schedules, sequential production runs, and so forth. Their abilities to see the big picture, and all the interrelationships among the parts, are possible key contributions to workplace harmony.

Kaufman-Scarborough and Lindquist (1999), "Time Management and Polychronicity: Comparisons, Contrasts, and Insights for the Workplace," *Journal of Managerial Psychology*, special issue on Polychronicity, Vol. 14, Numbers 3/4, 288-312.

Monochrons & Polychrons

Polychrons, on the other hand, would be expected to thrive in jobs which have uncertainty and pressure. Careers which require great juggling of tasks, such as tour directors, administrative assistants, creative developers of products and of advertising, receptionists, and emergency room personnel are just a few possible illustrations. Such jobs require that the individual constantly adjust to incoming new jobs and responsibilities, integrating them with other activities which have already been scheduled. They enjoy change as part of their job, in which they are challenged to make a better fitting schedule which meets everyone's needs."

Kaufman-Scarborough and Lindquist (1999), "Time Management and Polychronicity: Comparisons, Contrasts, and Insights for the Workplace," *Journal of Managerial Psychology*, special issue on Polychronicity, Vol. 14, Numbers 3/4, 288-312.

Example questions...

- Changes in my schedule upset me
- I more or less expect that nothing will go according to schedule
- My daily activities are organized according to a schedule
- I seldom expect people to do things exactly when they say they will
- It's more fun to take one thing at a time
- When I'm doing something, I'm often thinking of something else
- Sometimes it takes me a long time to "get started"
- Sometimes I have difficulty finishing things that I have started
- I like to plan my daily activities so I know when to do each thing
- I can generally estimate how much time I need to perform a task
- I feel that I perform best under pressure
- No matter how hard I try, I am nearly always a little late
- I am almost always on time for things

Time-management training

"Although the popular literature on time management claims that engaging in time management behaviors results in increased job performance and satisfaction and fewer job tensions, a theoretical framework and empirical examination are lacking. [...] Examination of the path coefficients in the model suggested that engaging in some time management behaviors may have beneficial effects on **tensions and job satisfaction but not on job performance. Contrary to popular claims, time management training was not found to be effective.**"

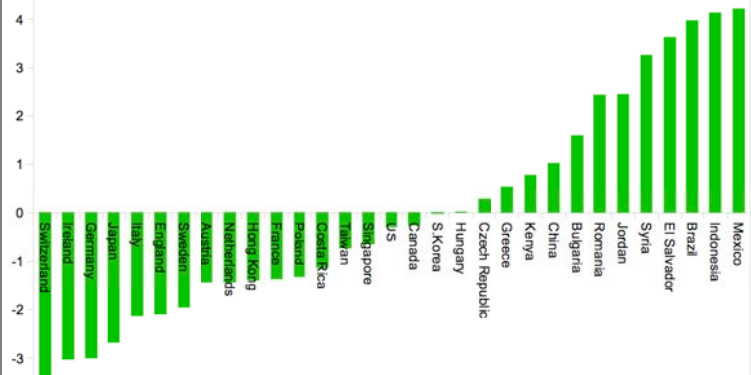
Hoff Macan, T (1994) Time Management: Test of a Process Model, *Journal of Applied Psychology*, Vol. 79, No. 3, 381-391

"Pace of Life"

Means^a and Ranks on Pace Measures by Country

Country	Overall Pace Index		Walking Speed		Postal Speed		Clock Accuracy	
	M	Rank	M	Rank	M	Rank	M	Rank
Switzerland	-3.43	1	11.80	3	16.91	2	19.29	1
Ireland	-3.02	2	11.13	1	17.49	3	51.42	11
Germany	-3.00	3	12.01	5	13.46	1	43.00	8
Japan	-2.68	4	12.11	7	18.61	4	35.00	6
Italy	-2.13	5	12.75	10	23.00	12	24.17	2
England	-2.09	6	12.00	4	20.78	9	53.72	13
Sweden	-1.96	7	12.92	13	19.10	5	40.20	7
Austria	-1.43	8	14.08	23	20.60	8	25.00	3
Netherlands	-1.43	9	11.45	2	24.42	14	82.33	25
Hong Kong	-1.39	10	13.10	14	20.10	6	54.83	14

"Pace of Life"



The Pace of Life in 31 Countries
Robert V. Levine and Ara Norenzayan, *Journal of Cross-Cultural Psychology* 1999; 30; 178

Next Week

- Space...
 - **To read:** *Uphill and downhill in Tzeltal*
BROWN LEVISONSON 1993
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