



# Information work

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**Thursday**

**Feb 26**

**2009**

**9:30-5**

**Paul Duguid**

**203a South Hall**

**510 643 3894**



# Information work

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**Quinta-feira**

**Thursday**

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Thursday, *n.* and *adv.*



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Thursday, *n.* and *adv.*

[Originally cognate with or formed similarly to Old Frisian *thunresdei*, Middle Dutch *donresdach*, *donderdach* (Dutch *donderdag*), Old High German *donarestag* (Middle High German *donerstac*, *donrestac*, German *Donnerstag*) < the genitive of the Germanic base of [THUNDER](#) *n.* (used as the name of a god: see note) + the Germanic base of [DAY](#) *n.*, originally after post-classical Latin *dies Iovis* day of (the planet) Jupiter (2nd or 3rd cent.; frequently from





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"For the weavers, 'tis common .. to be drunk on Monday, have their headache on Tuesday, and their tools out of order on Wednesday ...[and] perhaps with students."



in the news



# Lehman Brothers Holdings Inc. (OTC:LEHMQ)

[Income Statement](#) | [Balance Sheet](#) | [Cash Flow](#)

In Millions of USD (except for per share items)	As of 2008-05-31	As of 2008-02-29	As of 2007-11-30
Cash & Equivalents	19,544.00	24,133.00	20,029.00
Short Term Investments	-	-	-
Cash and Short Term Investments	19,544.00	24,133.00	20,029.00
Accounts Receivable - Trade, Net	37,485.00	41,213.00	40,627.00
Receivables - Other	-	-	-
Total Receivables, Net	41,721.00	52,399.00	43,277.00
Total Inventory	-	-	-
Prepaid Expenses	-	-	-
Other Current Assets, Total	-	-	-
<b>Total Current Assets</b>	-	-	-
Property/Plant/Equipment, Total - Gross	6,975.00	6,756.00	6,299.00
Goodwill, Net	-	-	3,137.00
Intangibles, Net	4,101.00	4,112.00	990.00
Long Term Investments	563,935.00	695,339.00	614,363.00
Other Long Term Assets, Total	-	-	-
<b>Total Assets</b>	<b>639,432.00</b>	<b>786,035.00</b>	<b>691,063.00</b>
Accounts Payable	61,086.00	84,552.00	64,307.00
Accrued Expenses	9,802.00	11,596.00	16,039.00
Notes Payable/Short Term Debt	22,655.00	24,752.00	18,024.00
Current Port. of LT Debt/Capital Leases	20,991.00	18,510.00	16,801.00
Other Current liabilities, Total	-	-	-
<b>Total Current Liabilities</b>	-	-	-
Long Term Debt	128,182.00	128,285.00	123,150.00
Capital Lease Obligations	-	-	-
<b>Total Long Term Debt</b>	<b>128,182.00</b>	<b>128,285.00</b>	<b>123,150.00</b>
<b>Total Debt</b>	<b>171,828.00</b>	<b>171,547.00</b>	<b>157,975.00</b>
Deferred Income Tax	-	-	-
Minority Interest	-	-	-
Other Liabilities, Total	370,440.00	493,508.00	430,252.00
<b>Total Liabilities</b>	<b>613,156.00</b>	<b>761,203.00</b>	<b>668,573.00</b>
Redeemable Preferred Stock, Total	-	-	-
Preferred Stock - Non Redeemable, Net	6,993.00	2,993.00	1,095.00
Common Stock, Total	61.00	61.00	61.00
Additional Paid-In Capital	11,268.00	11,129.00	9,733.00
Retained Earnings (Accumulated Deficit)	16,901.00	19,880.00	19,698.00
Treasury Stock - Common	-4,922.00	-5,149.00	-5,524.00
Other Equity, Total	-4,025.00	-4,082.00	-2,573.00
<b>Total Equity</b>	<b>26,276.00</b>	<b>24,832.00</b>	<b>22,490.00</b>
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in the news



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in the news

the business cycle  
or time's arrow?





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in the news

the business cycle or time's arrow?





# information economy

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## **Solow Paradox**

"We see computers everywhere but  
in the productivity statistics"  
--Robert Solow, c. 1988



# Solow solved?

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## **determinism with lag time?**

David, Paul. 1990. 'The Dynamo and the Computer: An Historical Perspective on the Modern Productivity Paradox,' *American Economic Review*, 80(2): 355-361.

"techno-economic regimes formed around general purpose engines"

"regime transition"

"diffusion lags"



# alternatively

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**towards an information society?**

a long-term, sedimentary process

**process of abstraction**

time, time keeping

money, balancing

**towards the information worker?**





# time is money

---

## **the Protestant ethic?**

Remember that TIME is Money. He that can earn Ten Shillings a Day by his Labour, and goes abroad, or sits idle one half of that Day, tho' he spends but Sixpence during his Diversion or Idleness, ought not to reckon That the only Expence; he has really spent or rather thrown away Five Shillings besides.



# time is money

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Five Shillings besides.

Benjamin Franklin, *Advice to A Young  
Tradesman Written by An Old One.* 1748



# the cost of sin: time off for good behavior



Pope Clement V  
1260-1314

**1309:** An indulgence to pardon a year's worth of sin costs one penny. Clement V.





# accounting for time

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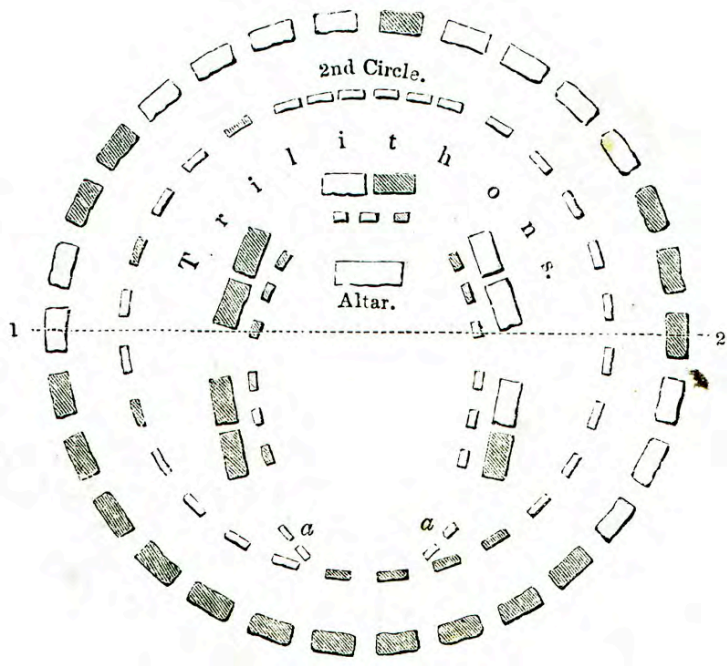
"Fear it Macbeth, 'tis a bell  
That summons thee to Heaven or to Hell."

"The bell would also remind men of their  
passing, and of resurrection and judgement."

--Thompson

the final reckoning, the day of account  
how we spend, save, waste time

"in the name of God and profit"



# the long then

---

**c 3100 bce**

"Most of what has been written about Stonehenge is nonsense"







# dividing the year

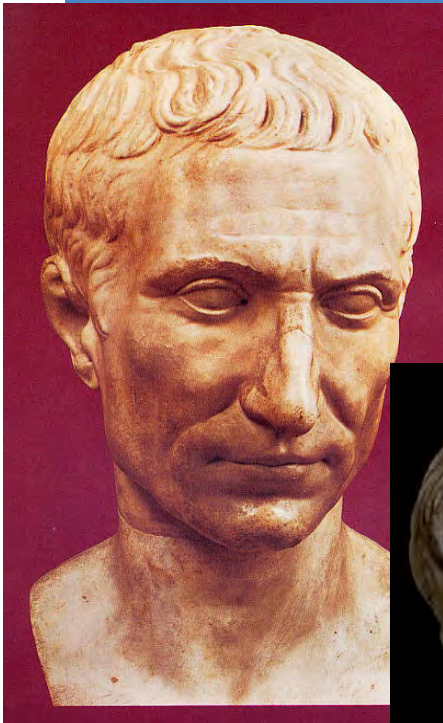
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**Julius Caesar** (100 - 44 bce)  
Julian Calendar

**troublesome equinox**  
**46 bce:** 445 days

**45 bce:** 365-1/4

**Augustus** (63 bce - 14 ce)  
**8 bce:** a further course correction



*Ut Severus receptam Britanniae partem vallo  
à ceteris distinxerit.*

Ð A þær ýmb hund teontig  
þintpa 7 nigan 7 hund eah-  
tatis þintpa þam drihtnes  
menniscnyrre þ̅ Severus Care-  
pe se þær \* Effrica cýnner of  
þære býrig ðe Lepti hætte se  
þær reofontteogea þam Ag-  
rto þ̅ he rice onfeng. 7 þ̅ hæfde  
reofontýne gear þer Carepe

Anno ab incarnatione Domini  
Anicentefimo octogefimo no-  
no, Severus genere Apher tripo-  
litanus ab oppido Lepci, deci-  
mus septimus ab Augusto impe-  
riam adeptus, decem & septem  
annis tenuit. [ Hic naturā fer-  
vus, multis semper bellis lacessi-  
tus, & fortissimè militans, cum  
publicam, sed laboriosissimè re-  
xit. Victor ergò civilium bellis  
F 3

# marking the years

**AD/BC:** Dionysius Exiguus (c470-c544)  
marking from the foundation of Rome

**populariser:** Bede, "On the reckoning of time"  
*Historia Ecclesiastica Gentis Anglorum*, 731

## not quite certain

"The 1118st year AD, the 21st year of Pope Alexander III, the 27th regnal year of King Henry II of the English, the 11th regnal year of King Henry the son of the king, the 18th year that time has passed since the translation of Bishop Gilbert Foliot from Hereford to London, when this inquest was made by Ralf de Diceto, dean of London, in the first year of his deanship."



Venerable Bede  
673?-735

*Ut Severus receptam Britanniae partem vallo  
à ceteris distinxerit.*

Ð A þær ýmb hund teontig  
þintpa 7 nigan 7 hund eah-  
tatis þintpa þam bpihtner  
menniscnyrre þ Severus Care-  
pe se þær \* Effrica cýnner of  
þære býrig ðe Lepti hatte se  
þær reofonteoðeþa þam Agu-  
sto þ he rice onfeng. 7 þ hæfde  
reofontýne gear þer Carepe

Anno ab incarnatione Domini  
Anicentefimo octogesimo nono.

no, Severus gentis cupit imperi-  
titanus ab oppido Lepi, deci-  
mus septimus ab Augusto impe-  
riam adeptus, decem & septem  
annis tenuit. [ Hic naturā fe-  
vus, multis semper bellis lacessi-

publicam, sed laboriosissimē re-  
xit. Victor ergo civilium bellis

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Venerable Bede  
673?–735



# beginning again: computus



Luigi Lilio  
d 1576



Gregory XII  
1502–1585

## **New Year**

January 1 or March 25 (ab incarnatione)?

## **the struggle for Easter**

## **1582: Gregory XIII**

recalibrating: leap years & centurial years

cutting time:

Thursday October 4 to Friday October 15



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## **Lilian or Gregorian Calendar**



Learn to determine the next month in Java

Get an instance of the Calendar class.

# beginning again: computus

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Calendar cal = GregorianCalendar.getInstance();
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Ah, got some light:

if I change

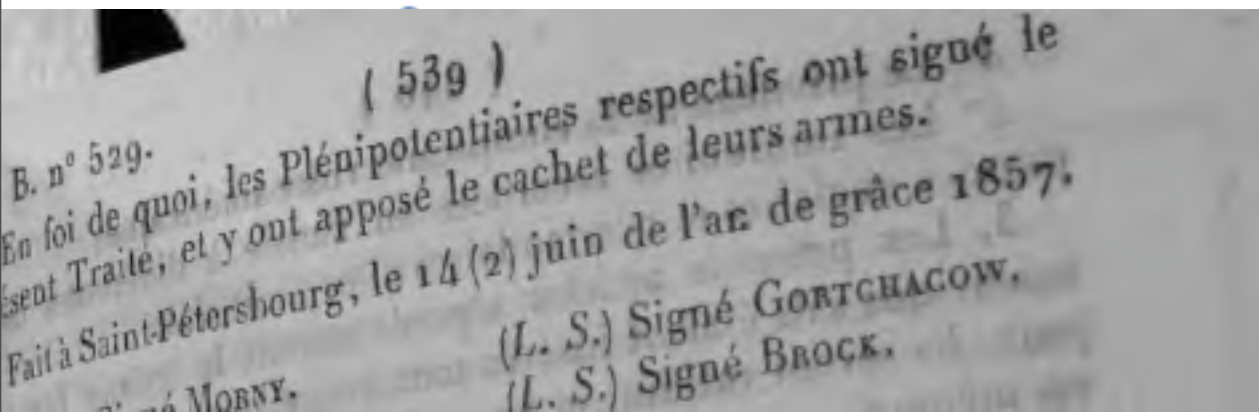
```
Calendar cal = GregorianCalendar.getInstance();
```

to

```
Calendar cal = new GregorianCalendar(  
    TimeZone.getTimeZone("CEST"), new Locale("DE"));
```

I get better results:

**Lilian or Gregorian Calendar**



# fighting back

## **Orthodox & Protestants unchanged**

Feb 1/12; Feb 1 [OS]

1694/5

## **1752: Anglo-American course correction**

"give us back our eleven days"

## **revolution**

year 1 again [1792]

Vendémiaire, Brumaire, Frimiaire, Nivôse, Pluviôse,  
Ventose, Germinal, Floréal, Prairial, Messidor,  
Thermidor, Fructidor



# dividing the day

## the holy hours

"seven times  
a day I praise Thee"  
Psalms 119: 64

## Benedictine rule

matins, prime, tierce, sext  
none, vespers, compline







# dividing the day

---

## **accordian hours**

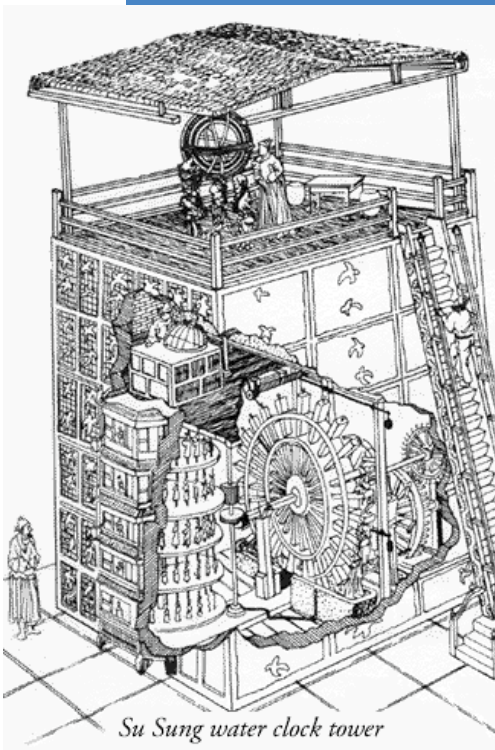
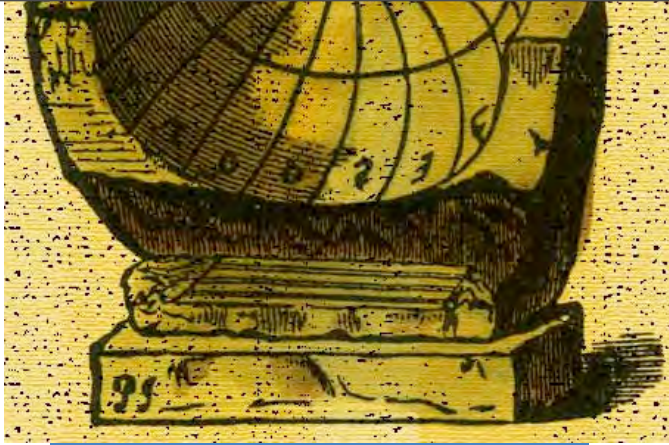
"are there not twelve  
hours in the day?"  
John 6.6.

## **equal hours**

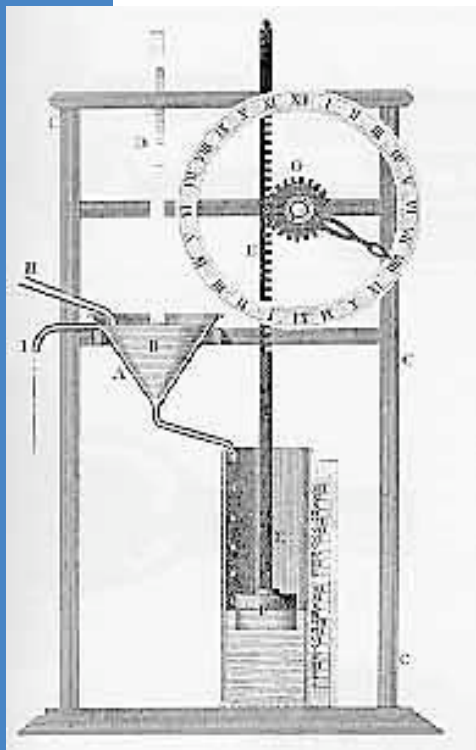
1330 (Germany)

1370 (England)

# and the technology: automata



Su Sung water clock tower

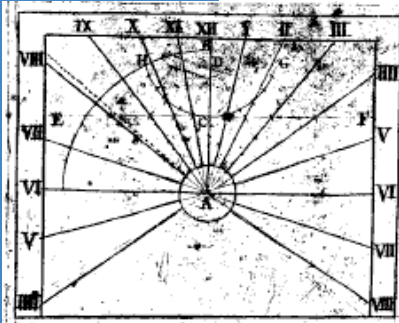


**3500 bce:** sundials

**400 bce:** Egyptian water clocks

**700 ce:** hourglasses

**1086:** Su Sung's water tower



**1668:** Joseph Moxon, *Mechanick Dyalling*





*modum dentata, quæ unâ motione coacta, versando faciunt effectus, varietatesque motionum : in quibus moventur Sigilla, vertuntur Metæ, calculi aut Tona projiciuntur,*

*Chap. VI. of Clock-work:*  
Clocks, and some other *Automata*, might have their beginning there; or that Clock-work (which had long been buried in oblivion) might be revived there. But

Derham, *The Artificial Clock Maker*, 1696

## automata



Richard of Wallingford  
1292-1336

**1300:** mechanical clocks

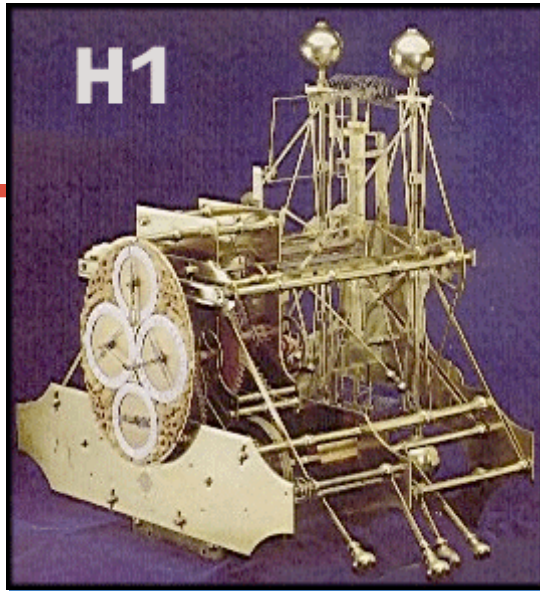
Richard of Wallingford  
celestial instruments & St Albans' clock

**1656:** Huygens pendulum clock

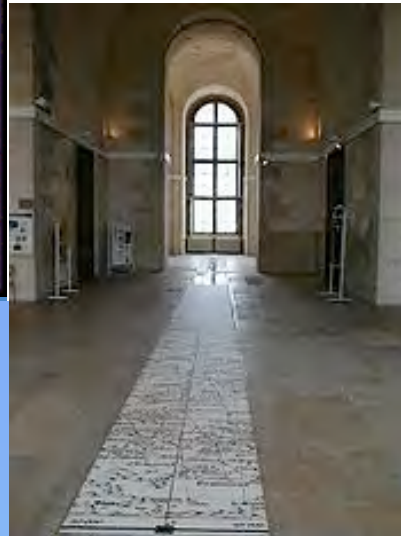
"Mr Hugen does expressly say, He was the inventor, and that if *Galilæo* ever thought of any such thing, he never brought it to perfection," Derham

**1660:** Hooke & the spring watch

"The first *Inventer* herof was that ingenious and learned member of our *Royal-Society*, Dr. *Hook*, who contrived various ways of regulation," Derham



# global technology



**1761:** Harrison's nautical clock

**c1850:** telegraph time

**1852:** Greenwich mean time

**1883:** US standard time

**1884:** Meridian Conference, DC

**1911:** France: Cassini Meridian

**1967:** US govt preempts "civil time"





"standard time was not adopted primarily to bring order to the chaos of railroad timetables. Indeed, the railroads did not need standard time for their operations" --Bartky, "The Adoption of Standard Time"

## train time

ABOUT NEW YORK

### A Watch Shop Offers a Look Back in Time

By JIM DWYER

Published February 24, 2005

The clocks are tolling. They chime and ring. It is near the end of a work day at Falt Watch Service and Repair, a little nook of a place on the third floor of [Grand Central Terminal](#), a space it has occupied for most of the last century.

In the arc of that history, we find Tom Carroll, the owner, packing boxes: The business is closing at the end of the week. From a drawer, Mr. Carroll pulls out a handful of blue cards. On them, you glimpse the story of time, handwritten in ink.

"All the railroad watches had to be inspected regularly and certified," Mr. Carroll, 44, says.

Time — and the keeping of time — were the merciless godheads of the railroads, both as a business concern and as a matter of life and death. The major railroad companies were the driving force for standardized time in the 19th century. Once a month, railroad employees had to present their watches for testing. In New York, they could come to a business owned by Raymond C. Falt, certified inspector.

Here, for instance, is a card dated June 6, 1965, that describes a watch owned by C. E. Sunnekalb, a brakeman with the Harlem Division of the New York Central Railroad. The requirements: "A reliable railroad grade watch is one of 16 size, 1 jewels or better, lever set and adjusted to five positions, which will run within a gain or loss of 30 seconds per week in use

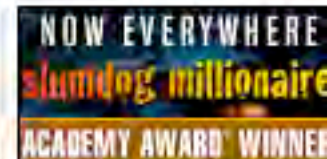
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## times

---

by 1800,  
"recorded time  
(one suspects)  
belonged in the  
mid-[18th]  
century still  
to the gentry,  
the masters,  
the farmers,  
and the  
tradesmen"

Thompson

### **absolute time**

"Absolute, true, and mathematical time,  
of itself, and from its own nature, flows  
equably without relation to anything  
external."

Isaac Newton, *Principia Mathematica*, 1687

### **mundane time**

"looking upon her Watch, I accidentally  
discovered the Figure of a Coronet on the  
back Part of it."

--Addison, *Spectator* 8, March 1711



# time control

---

## **bell tolling**

1335, Amiens start of work, lunch, end  
of the day controlled by bell rung by  
the city  
--decree of Phillip VI

1664 "that as many as might live  
within the sound might be thereby  
induced to a timely going to rest in  
the evening, and early arising in the  
morning to the labours and duties of  
their several callings"



Laurence Sterne, 1713–1768

---

## time stamp

*Pray dear, quoth my mother, have you not forgot to  
wind up the clock? --- Good G--! cried my  
father ...Did ever woman, since the creation of the  
world, interrupt a man with such a silly question?  
--Laurence Sterne, *Tristram Shandy*, 1759*

*"No modest lady dares to mention a word about  
winding up a clock ...Nay, the common expression of  
street-walkers is, "Sir, will you have your clock  
wound up"  
--*The Clockmaker's Outcry against the Author* ...  
1760*



# fields to factories

---

"England's was the first industrial revolution, and there were not Cadillacs, steel mills, or television sets to serve as demonstrations as to the object of the operation"

Thompson

## **task orienting to time orienting**

"the industrial revolution demanded a greater synchronization of labour"

"a vigorous and licensed popular culture had evolved, which the propagandists of discipline regarded with dismay"

Wedgwood ... "the first recorded system of clocking-in"

schools "a spectacle of order and regularity"... "they are become more tractable"

"fight, not against time, but about it"



# controul



William Wordsworth  
1770-1850

The Guide, the Wardens of our faculties  
And Stewards of our labour, watchful men  
And skilful in the usury of time,  
Sages, who in their prescience would controul  
All accidents, and to the very road  
Which they have fashion'd would confine us down  
Like engines.





# accounting for time

## work and leisure



Geoffrey Chaucer  
1340–1400

"January 1st  
[1668]. Up, and  
all morning in my  
chamber making up  
some accounts  
against this  
beginning of the  
new year."

Pepys

How longe tyme wol ye rekene and caste  
Youre somme, and your bookes, and your thynges?  
The devel have part on all swich rekenynge

Geoffrey Chaucer, *The Shipman's Tale*

"What can there great and noble be  
expected from him whose attention is ever  
fixed upon balancing his books,  
and watching over his expenses?"

Joseph Addison, *Spectator*



"If modern economic rationalism is like a clock someone must be there to wind it up."

## determinism again?

---

[is it true that]  
"Scientific  
bookkeeping was  
causal, or at  
least a  
predisposing  
factor in the  
emergence and  
development of  
capitalism?"

Basil Yamey, 1949

### **Max Weber (1864-1920)**

"a rationalistic capitalistic  
establishment ... one with capital  
accounting, that is, an establishment  
which determines its income yielding  
power by calculation according to the  
methods of modern bookkeeping and the  
striking of a balance"

### **Werner Sombart (1863-1941)**

"abstraction of profit [leads to]  
economic calculation ... systemic  
organization ... **depersonalization.**"



# from accounts to accounting

---

## THREE STAGES:

### Record keeping

"if a man has given on deposit without elders or contract ...[if] they contest it, there shall be no claim" --Hammurabi

### Bookkeeping

### Accounting

Edwards

## Sumerian tablets

## Roman

adversaria, codex accepti et dispensi, liber rationum

## monastic cartularies

"providing a legal history of the transactions"

## 12th century pipe rolls

## merchant accounts, double entry

money lending; discount; interest

## the bottom line



# the Italian method



**1211:** proto double entry, Florence

**c 1340:** double entry in Genoa

**1366:** The Merchant of Prato  
(Francesco di Marco Datini)  
"Arabic" numerals

**1494:** Luca Pacioli *Summa de Arithmetica*





## time's echo?

---

### **accounting as a means of control?**

"In Great Britain during the fourteenth, fifteenth, and sixteenth centuries the estates of the nobility were producing such large incomes that experts were required to prevent theft and the withholding of funds from the landlord."

--Edwards

### **or accounting for profit?**

"to give the trader without delay information as to his assets and liabilities"

--Peragallo, *Origin of Double Entry*





# entry

---

**"On this day, we have (or I have) bought from Filippo de Ruffoni of Brescia, twenty pieces of white Bresciani cloth. They are stored in Stefano Tagliapietra's vault and are of so many arm lengths apiece, as agreed upon. They cost twelve ducats each and are marked with a certain number. Mention if the cloth is made of triple warpcord, four to five arm lengths square, wide or narrow, fine or medium, whether Bergamene, Vicenzan, Veronese, Paudan, Florentine, or Manuan. State whether the transaction was made entirely for cash, or part only for cash and part on time. State when the balance is due "**



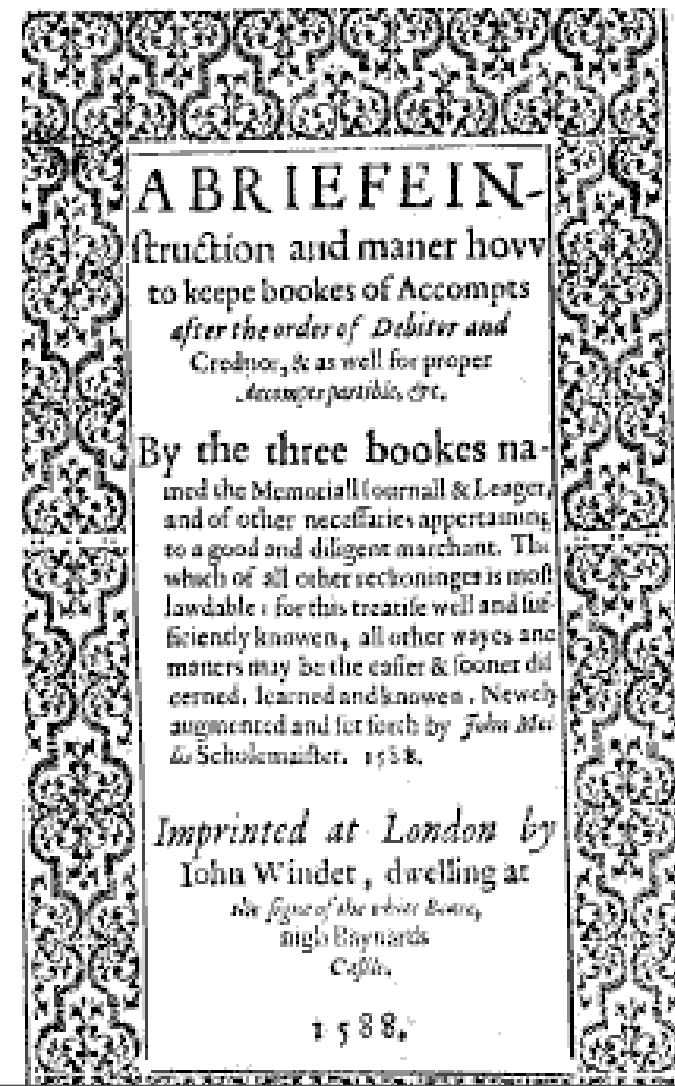
# entry

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5/23/06	WITHD	Good Earth Groceries	27.36	Deposit	1,669.04
		Groceries	4456 PURCHASE	Open Split	
5/23/06	EFT	Sun State Credit Cards [Sun State]	250.00		1,419.04
5/24/06	1209	Water Company Utilities:Water	32.15		1,386.89
5/27/06	EFT	Phone Company Utilities:Telephone	47.62		1,339.27



# abstraction





# the books

---

"after the form of Venice"

## **"the three principall bookes"**

memorial  
journal  
ledger



# memorial

---

"in which a merchant writes all his daily  
business"

19

October 9th, bought two pipes of wine @ £30  
each from Joseph Smith, paid  
£20 cash with balance to be paid January 1.

27

October 30, sent two pipes of wine to England for  
sale there; cost £10.

30

November 1, sold two pipes of wine to B&H @  
£50 ea.



# journal

"This Journal ought to bee signed and marked with the same marks or letter as the memorial. And also the leaves numbered."

Chest of money is Debitor (or  
oweth) to Locke belonging to mee  
M. N. and is for pounds, shillings,  
and pence, so many, &c. or buckets  
so many, &c. expressing the name,  
number and value as appeareth in  
such a leafe, or folio of your Inven-  
tory, &c. amounting to the summe  
of 1.00. 00 s. 00 d.

li. s. d.

Kings and Jewels, set and vn-  
set, waying or, graines, &c. oweth  
to stock, and specifying every thing  
by it selfe, &c. as appeareth in such a  
leafe or folio of the Inventory a-  
mounting to the summe of li. s. d.

li. s. d.



# Journal

---

October 9

19. **Wine** owes cash £20 for deposit on two pipes of wine bought of **Joseph Smith**

19. Wine owes Joseph Smith £40 for balance of two pipes of wine bought October 9.

October 30th, wine owes transport £10 for carriage of two pipes of wine to England.

November 20, B&H owes wine £100 for two pipes of wine sold them.





# ledger

---

"every one parcell that is sette  
in your Journall ought to bee made  
two parcels in your ledger."

## wine account

39	to cash	20	19	from B&H	100
11	to Joseph Smith	40			
27	to transport	10			
		70			100
	To profit & loss	30			



# ledger

"every one parcell that is sette  
in your Journall ought to bee made  
two parcels in your ledger."

## wine account

39	to cash	20	19	from B&H	100
11	to Joseph Smith	40			
27	to transport	10			
		70			100
	To profit & loss	30			



# ledger

"every one parcell that is sette  
in your Journall ought to bee made  
two parcels in your ledger."

## wine account

39	to cash	20	19	from B&H	100
11	to Joseph Smith	40			
27	to transport	10			
		70			100
	To profit & loss	30			



# double entry

---

## Joseph Smith

			19	for 2 pipes of wine	60
39	from cash	40			
	from wine	60			60



# accounting for accounting

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## **interlinked accounts**

a debit in one set is a credit in another  
linking money and merchandize

## **proto hypertext?**

## **balancing the books**



# spreading the numbers

"In the past seven centuries bookkeeping has done more to shape the perceptions of more bright minds than any single innovation in philosophy or science. While a few people pondered the words of René Descartes and Immanuel Kant, millions of others of yeasty and industrious inclination wrote entries in neat books and then rationalized teh world to fit their books."

Alfred Crosby, *The Measure of Reality*





# information workers

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**telling times and counting coins**  
rise of numeracy

**bottom up?**

**Graunt:** shopkeeper's arithmetic



**Pepys**

"Up by five o'clock... Comes Mr. Cooper,  
mate of the Royal Charles, of whom I  
intend to learn mathematiques... Up by  
four o'clock and at my multiplication-  
table hard"

July 4 & 9, 1662



# balancing nations

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## **Treaty of Utrecht, 1713**

War of the Spanish Succession

### **the commercial treaty**

free trade with France

### **the balance of trade**

mercantilism and national interest



# science, statistics & the public sphere

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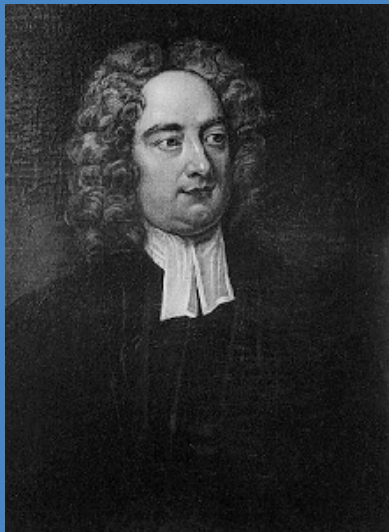


## **rousing the wool interest**

*Mercator* (Daniel Defoe)

VS

*British Merchant* (Paul Methuen)



Paul Methuen

1672–1757





## balancing acts

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David Hume  
1711-1776

"apprehension of the wrong balance of trade, appears of such a nature, that it discovers itself wherever one is out of humour with the ministry, or is in low spirits."

David Hume,  
"Of the Balance of Trade," 1752



# out of spirits?

## Total Trade (Goods)

Rank	Country	Exports (Year-to-Date)	Imports (Year-to-Date)	Total Trade (Year-to-Date)	Percent of Total Trade
---	<b>Total, All Countries</b>	<b>1,300.5</b>	<b>2,100.4</b>	<b>3,400.9</b>	<b>100.0%</b>
---	<b>Total, Top 15 Countries</b>	<b>891.5</b>	<b>1,524.4</b>	<b>2,415.8</b>	<b>71.0%</b>
1	Canada	261.4	335.6	596.9	17.6%
2	China	71.5	337.8	409.2	12.0%
3	Mexico	151.5	215.9	367.5	10.8%
4	Japan	66.6	139.2	205.8	6.1%
5	Federal Republic of Germany	54.7	97.6	152.3	4.5%
6	United Kingdom	53.8	58.6	112.4	3.3%
7	Korea, South	34.8	48.1	82.9	2.4%
8	France	29.2	44.0	73.2	2.2%
9	Saudi Arabia	12.5	54.8	67.3	2.0%
10	Venezuela	12.6	51.4	64.0	1.9%
11	Brazil	32.9	30.5	63.4	1.9%
12	Taiwan	25.3	36.3	61.6	1.8%
13	Netherlands	40.2	21.1	61.4	1.8%
14	Italy	15.5	36.1	51.6	1.5%
15	Belgium	29.0	17.4	46.4	1.4%



## Obama: NAFTA not so bad after all

The Democratic nominee, in an interview with Fortune, says he wants free trade "to work for all people."

HOME / HOT DOCUMENT : PRIMARY SOURCES EXPOSED AND EXPLAINED

By Nina Easton, Washington editor  
LAST UPDATED: JUNE 18, 2008: 3:00 PM EDT

## Canada's Obama NAFTA Memo

HOT DOCUMENT:  
ENTRIES

1 2 3

By Bonnie Goldstein

Posted Tuesday, March 4, 2008, at 5:36 PM ET

### Renegotiating NAFTA on hold, Obama s

Michael D. Shear, Washington Post  
Friday, February 20, 2009

PRINT E-MAIL SHARE COMMENTS (7)

(02-20) 04:00 PST Ottawa - --

President Obama on Thursday warned against a "stagnant global economic recession and said his election-year NAFTA Agreement on behalf of unions and environmentalists

On Feb. 9 Austan Goolsbee, the senior economic adviser to Barack Obama's presidential campaign, had a meeting with Georges Rioux, consul general for the Canadian government. The two men met in Chicago, where Rioux maintains an office for the states of Illinois, Missouri, and Wisconsin and where Goolsbee teaches economics at the University of Chicago. (Slate readers may also remember Goolsbee as a onetime "Dismal Science" columnist.) Afterward, Joseph DeMora, a consulate staff member, wrote an enthusiastic summary (see below and the following two pages) for Canadian Michael Wilson. In the memo, DeMora praised Goolsbee's "intellectual prowess ... approachability, curiosity and enthusiasm" and alerted Wilson that the Obama brain-truster "appeared genuinely ... impressed by the magnitude of the economic relationship between the United States and Canada (see below).





in sum

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**time is money**

technological developments

social agreements

standards and interdependencies