

A Beginner's Walk Through GnuCash

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- Introduction
- Double-Entry Accounting Model
- GnuCash and Double-Entry Accounting for a (Very) Small Business
- GnuCash and Quicken

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"Double entry bookkeeping is one of the most beautiful discoveries of the human spirit...It came from the same spirit which produced the systems of Galileo and Newton and the subject matter of modern physics and chemistry. By the same means, it organized perceptions into a system, and one can characterize it as the first Cosmos constructed purely on the basis of mechanistic thought...Without too much difficulty, we can recognize in double-entry bookkeeping the ideas of gravitation, or the circulation of the blood and of the conservation of matter."

J. W. von Goethe

At any rate, it's hard to conceive of the rise of capitalism and the market economy without double entry bookkeeping.

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“[Luca] Pacioli never claimed to have invented double entry bookkeeping. Thirty-six years before his monumental treatise on the subject, Benedetto Cotrugli wrote *Delia Mercatura et del Mercante Perfetto* (Of Trading and the Perfect Trader), which included a brief chapter describing many of the features of double entry. Although this work had not been published for more than a century, Pacioli was familiar with the manuscript and credited Cotrugli with originating the double entry method.”
(http://www.acaus.org/acc_his.html#6)

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“The Summa's 36 short chapters on bookkeeping, entitled "De Computis et Scripturis" ("Of Reckonings and Writings"), were added, "in order that the subjects of the most gracious Duke of Urbino may have complete instructions in the conduct of business," and to, "give the trader without delay information as to his assets and liabilities." (All quotes from the translation by J.B. Geijsbeek, "Ancient Double Entry Bookkeeping: Lucas Pacioli's Treatise," 1914).

“Perhaps the best proof that Pacioli's work was considered potentially significant, even at the time of publication, was the very fact that it was printed on November 10, 1494. Gutenberg had, just a quarter century earlier, invented metal type, and it was still an extremely expensive proposition to print a book.”

(http://www.acaus.org/acc_his.html#6)

A Beginner's Walk Through GnuCash

- The Double-Entry Accounting Model
 - Assets and Liabilities
 - Each accounting entity (HH or huge corp) has assets and liabilities.
 - Assets have to equal liabilities plus “owner's equity” (which can be thought of as a liability of the business to the owner)
 - Think of a see-saw
 - If you add to one side, add to the other to keep balance
 - Or take Johnny off and put his ID twin Jimmy on the same side

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- The Double-Entry Accounting Model
 - Assets and Liabilities (previous slide)
 - Any change has to keep the see-saw in balance
 - EA: existing assest; EL: existing liabilities; EOE: existing owner' equity
 - $EA + \$25 = EL + EOE + \text{Owner's Equity } \uparrow \25
(e.g., cash received for services rendered)
 - $EA + \$25 = EL + EL \uparrow \$25 + EOE$
(e.g., getting cash from ATM with company debit card)
 - $EA + \text{new printer} - \$125 = EL + EOE$
(e.g., buy a new printer with \$125 cash: right side of equation does not have to change since there are off-setting changes on left side)

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- The Double-Entry Accounting Model
 - Assets and Liabilities
 - Any change has to keep the see-saw in balance
 - **Hence the idea of “double entry”: you can't add something to the see-saw without either**
 - **Adding something to the other side**
 - **Removing an equivalent amount from the side you added something to.**

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- The Double-Entry Accounting Model
 - Assets and Liabilities
 - Any change has to keep the see-saw in balance
 - Recording Changes (transactions)
 - Credits don't always ↑ and debits don't always ↓
 - Journal Entries
 - Ledgers
 - Accrual

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- The Double-Entry Accounting Model (cont)
 - Recording Changes (transactions)
 - Credits don't always ↑ and debits don't always ↓
 - Each entry must have a credit component and a debit component
 - Anything that increases the owner's equity “should” be a credit—the other uses of the terms seem to follow from that.
 - So if 'credit' increases balances on the liability/owner's equity side, it must decrease balances on the asset side, etc.

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- The Double-Entry Accounting Model (cont)
 - Recording Changes (transactions)
 - Credits don't always ↑ and debits don't always ↓
 - Journal Entries 1
 - J. Q. Owner starts the company with an initial cash investment of \$10,000:
- Enter this as follows:

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<u>Date</u>	<u>Explanation</u>	<u>Debit</u>	<u>Credit</u>
6/1/04	Cash	\$10000	
	J. Q. Owner, Capital		\$10000
Initial Cash Investment			

$$EA = EL + EOE = 0; \text{ then } EA + \$10000 = EL + EOE + \$10000$$

Expl: Here JQ starts his business. He puts \$10,000 into the business (“cash” here could stand for a checking account). So the business has an asset of \$10,000 (the cash) and a “liability” (it “owes” JQ \$10,000).

“Cash” and “J. Q. Owner, Capital” are the names of two of the many accounts that will be set up for the business.

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<u>Date</u>	<u>Account/Explanation</u>	<u>Debit</u>	<u>Credit</u>
6/2/04	Equipment	\$20000	
	Car Loan		\$20000
	Buy new car on credit		
<hr/>			
6/15/04	Cash	\$300	
	Business Revenue		\$300
	Eulogy at RR funeral		

EA + \$20000 Car = EL + \$20000 debt + EOE.

EA + \$300 = EL + \$300 revenue + EOE

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<u>Date</u>	<u>Accounts/Explanation</u>	<u>Debit</u>	<u>Credit</u>
6/30/04	Business Expense	\$500	
	Cash		\$500
	Pay Rent for July		

Another transaction and a new account “Business Expense.” Note that here Cash goes down (which is “credit” for that side of the balance). Since a business expense makes the owner worse off, it is a “debit.”

$$EA - \$500 = EL - \$500 \text{ expense} + EOE$$

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<u>Date</u>	<u>Accounts/Explanation</u>	<u>Debit</u>	<u>Credit</u>
7/1/04	Office Supplies	\$500	
	Cash		\$500
	Purchase office supplies		

Another transaction and a new account “Office Supplies”

EA - \$500 cash + \$500 office supplies = EL + EOE

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<u>Date</u>	<u>Accounts/Explanation</u>	<u>Debit</u>	<u>Credit</u>
7/1/04	Business Expense	\$200	
	Car Loan	\$200	
	Cash		\$400
	Pay dealer for gasoline, service; make loan pmt to dealer.		

A compound transaction that will let us use “splits” in GnuCash. (If we write one check this should not be two journal entries.)

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 - Any change has to keep the see-saw in balance
 - Recording Changes (transactions)
 - Credits don't always ↑ and debits don't always ↓
 - Journal Entries
 - Legders: there is a ledger for each account; each transaction gets copied (manually or electronically) to the ledger for that account.
 - Accrual:
 - If I earn money but am not paid for it, I can show that as an accrual value: instead of debiting cash when I show the revenue, I debit “Accounts Receivable.” Etc.

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- Double-Entry Accounting Model
- GnuCash and Double-Entry Accounting for a (very) small business—go to GnuCash live
- GnuCash and Quicken

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- Introduction
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- GnuCash and Double-Entry Accounting
 - Comments:
 - Unlike Quicken, GnuCash allows double-entry accounting
 - But its terminology is different: perhaps to make it more “intuitive” than traditional accounting terminology?
 - Uses phrases like “decrease,” “increase,” “rebate”, “transfer” rather than “debit” and “credit.”
 - GnuCash's “general ledger” is more like accounting's “general journal.”
 - GnuCash's “register” is more like accounting's “ledger.”

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- GnuCash and Quicken
 - Quicken seems not set up for double-entry accounting.
 - It has “accounts” and “categories”
 - Accounts are things like cash, checking, credit card, etc.
 - Transactions are made in these accounts and linked to a category
 - Income
 - Taxes
 - Groceries
 - Gasoline
 - Medical
 - Etc.

A Beginner's Walk Through GnuCash

- GnuCash and Quicken
 - Quicken seems not set up for double-entry accounting.
 - It has “accounts” and “categories”
 - So if I buy groceries, I go to my credit card account and enter an expense amount, an explanation, and a category (groceries)
 - (Review: in accounting & GnuCash I would
 - Debit grocery expenses
 - Credit Visa account)
 - Since one can purportedly import Quicken files into GnuCash, there is probably some consistent mapping between these two systems.
 - But there have been things I wanted to do using Quicken (even for household accts) that I couldn't do or were very hard/counter-intuitive. (Can't remember now exactly what they were)

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- GnuCash and Quicken
 - We can look at Quicken if time allows...