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# Theory of the Double-Entry System

BY W. A. PATON

Many rules and explanations of debit and credit have been given which are fairly serviceable. Ingenious schemes of personification of accounts are used to answer the questions: When and why do we debit? When and why do we credit? But it is difficult to find a statement of the whole question which does not involve figurative language and more or less inconsistency. The theory of double-entry is not well understood. The rules-of-thumb guiding the bookkeeper (which do not get at the fundamental relations involved) are inadequate; and it is partly because of this lack of a thorough understanding of the principles of their technique that accountants tend to become lost in the maze of minutiae necessarily connected with bookkeeping which takes care of business procedure as complex as it is today. Bookkeeping and accounting are not identical—bookkeeping is largely the recording of facts, accounting involves analysis and interpretation—but sound bookkeeping practice is essential to sound accounting practice; hence the importance of a thorough understanding of the fundamental principles of bookkeeping technique.

The explanation of the theory of double-entry as it will be given in this paper lies in the very nature of the facts which bookkeeping records and can be made without the aid of figures of speech such as the personification of accounts. What are the facts that are recorded in the books? The important unit of organization with which accounting deals is the business firm. The "set of books" in which the bookkeeper records the data are the books of a single concern. Let us take an hypothetical business, the A. B. Co., at its inception, and analyze the facts which its books must show, both at the outset and after operations have begun. In this analysis of facts the theory of double-entry will be developed.

The A. B. Co. organizes. What are the facts necessary to a statement of the company's financial status? Clearly one important category of facts embraces all the property items to which

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the A. B. Co. has any title. If we are to know anything about the condition of this company, obviously we must have a complete statement of property. This property might consist not only of many different kinds of tangible goods, but also of valuable services, rights, franchises, patents, etc., and claims against other parties of various sorts. Materiality is of course no test as to what is or what is not property, either from the standpoint of the business firm or from that of the industrial community; and this fact is recognized both in business practice and in economic theory. These various kinds of property may be listed or classified very minutely, or they may be stated under a few heads. As to how far the property items shall be subdivided is purely a matter of expediency, depending upon the character of the enterprise.

Suppose the property of the A. B. Co. consists of: buildings, \$130,000; real estate, \$60,000; furniture and fixtures, \$30,000; merchandise, \$80,000; cash, \$20,000. Then the financial statement of the firm must show this list of property, and the items may be stated in any convenient way. We will list them in a column, one below another, thus:

Property	
Buildings .....	\$130,000
Real estate .....	60,000
Furniture and fixtures.....	30,000
Merchandise .....	80,000
Cash .....	20,000
	<hr/>
	\$320,000

Does this list of facts give us a satisfactory statement of the condition of the company? No, this is clearly inadequate from the standpoint of the interests of the A. B. Co., a probable purchaser of the business, the public or anyone concerned. We must know whether the A. B. Co.'s title to this property is clear. Are there any incumbrances? Where is the distribution of ownership? Or, more concisely, what are the equities in this property? The equities, like the property items, may have a variety of forms. The A. B. Co. may own all the assets clear, or the company may have only a small net interest in the property

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and the greater part of the ownership may be vested in outside claims such as bonds, mortgages, notes payable, accounts payable, etc. Suppose the claims against property in this case consist of: bonds, \$100,000; notes payable, \$20,000; and the A. B. Co.'s equity, \$200,000.\* These facts may be listed in a column, as was done in the case of the property items. The column of items representing the equities may appear in any convenient way, below the column representing property or opposite to it, as:

Property	Equities
Buildings .....\$130,000	A. B. Co. ....\$200,000
Real estate ..... 60,000	Bonds ..... 100,000
Furniture and fixtures 30,000	Notes payable ..... 20,000
Merchandise ..... 80,000	
Cash ..... 20,000	
Total.....\$320,000	Total.....\$320,000

This balance sheet form of presenting the statement of a company's financial condition is a lucid and concise way of showing the necessary facts, but is not the only method. The essential thing is to have all the facts presented and set down in the most intelligible form; and from every point of view it appears desirable to separate in some way the two distinct categories: property and equities. One writer has observed that the balance sheet is the "ground-work of accountancy."† Certainly the balance sheet represents a classification of facts which is the basis of the double-entry system.

It is apparent that these two classes of facts, property and equities, will always be numerically equal, for they are merely different aspects of the same thing. We have one class of objective things to deal with, namely, the property items. In one case we are listing the actual property; in the other case we are looking at the same property, but are noting certain ideal facts representing the legal relationships between this property and certain individuals or interests—that is, we are representing now the distribution of ownership or the claims against property or,

\*This last item is usually called proprietorship; and in the case of a corporation is represented by capital stock less the deficit if one exists or capital stock plus real surplus accounts if any such exist.

†Sprague, *The Philosophy of Accounts*, page 26.

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more exactly, the equities in property. And since we are using the same measuring unit, the dollar, in stating both classes of facts, we have numerically equal totals. It is customary to denominate one list of facts assets or resources and the other class liabilities, and no great harm need result from this nomenclature. However, it might be urged that the term liabilities has the connotation of debts or outside obligations, and this meaning clearly does not apply to the proprietor's equity.

If instead of assets and liabilities, property and equities were used, there would be less danger of misunderstanding and bad accounting practice. But there is little hope of changing usage that is so well established as are these terms; and indeed there is little necessity for the change, as the distinction just noted between outside obligations and proprietorship, while of great practical importance in certain connections, is not fundamental.

Under these two heads, then, all the data necessary for an accurate statement of the company's financial status at its inception may be listed; and the sum of the property items is always equal to the sum of the rights-in-property items, or equities. Further, this inevitable equality is the foundation of the double entry system. Here is the origin of the equality between debit balances and credit balances.

There are apparent, though only apparent, exceptions to this statement in accounting practice. In bookkeeping, addition is substituted for subtraction wherever possible. This is done by adding the amount to be subtracted in any case to the opposite side of the same or some account. This procedure secures neatness and economy of effort, and there are in many cases special reasons for maintaining original figures. For example, it is convenient to keep capital stock on the books at par. If a company is financed through the issue of securities at a discount this will mean that the nominal (par) value of the securities is greater than the value of the property received. Then if this par value is recorded as an equity, the extent to which the equity is overstated is indicated by including the amount of the discount among the property items.

Another exception is found in the case of insolvency. Here the book-value of the equities may be greater than the value of the property, and the difference (a deficit) is included in the

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property items to indicate this fact. Wherever a business is dissipating its assets through losses and still maintains the proprietorship at the old book-value there is a similar situation.

It might be urged that we are here setting up an equality that is not grounded in any logical classification of facts, but is rather artificially maintained by including among the so-called equity items highly dissimilar things. It might be insisted that proprietorship and outside equities show no relationship; that proprietorship is what the company is worth, and other liabilities are what it owes; that proprietorship is elastic and outside claims are rigid. Now it must be admitted that there are differences between the various equities in property, and for some purposes distinctions must be drawn between them. (For that matter, we are drawing distinctions when we give them different headings.) But that there is also a fundamental relationship cannot be denied. Capital stock, bonds, mortgages, notes payable and even general creditors' accounts all represent rights in the property. Undoubtedly there is a sense in which the stockholder is the owner par excellence, for stock ownership carries with it the large elements of direct control and risk; but the bondholder has contingent control and can also properly be thought of as an owner. This fact is beginning to be clearly recognized in railway and other permanent properties, where we find the specialization of securities fully developed. In recent railway receiverships and reorganizations it is evident that the stockholders, the bondholders and even the general creditors are thought of as owners. At least it is recognized that they all have rights in the property and that the differences between their various claims are differences in degree and are not fundamental distinctions. Certainly, anyone would admit that the property items form a legitimate classification—yet what sharp differences exist between notes receivable and buildings, or between patents and machinery!

The financial statistics of a business enterprise can thus be listed in two fundamentally distinct and numerically equal classes—property and equities; and, as was stated above, the essence of the double-entry system of keeping accounts consists in the separation of the members of the equation—property equals equities—and the maintaining of this equality. With this equa-

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tion as a basis a convenient and intelligible system for ordering and presenting the necessary facts is built up; and—as will appear—an important characteristic of this system is the test of arithmetical accuracy which it gives. The explanation as to how the double-entry system is built up from these basic classifications will now be undertaken.

The hypothetical A. B. Co. desires to commence operations. It will be well at this point to consider briefly what the operation of a business means—or should mean—to the accountant. An equipment of property—physical property such as land, buildings, tools, raw material, etc., and services such as ordinary labor, managerial capacity, etc.—is incorporated with the particular services of the proprietor and other equities and results in a flow of product—commodities or services—which is sold to the consuming public. Continued production of this commodity or service can be secured only at the expense of constant decay, replacement and change among the property elements involved. In other words there will always be a continual shifting among the property elements as business proceeds. Similarly in the facts of ownership a process of shifting will be taking place: the amounts and character of the equities will be changing from time to time. (The only exception would be the case of a business which paid no debts and contracted no new obligations during a given period, whose operation resulted in neither profit nor loss.)

It is evident that the accounts of a business should be so constructed as to record conveniently these changes which occur on both sides of the fundamental equation. It would be possible to follow these changes simply by altering in the proper direction the property and equity items as they appear on a tabular financial statement such as was given above; and when new kinds of property were secured or when new equities appeared, these new headings could be listed in the same way. An obvious objection to this procedure is its inconvenience—the fundamental objection is that accounting statements so constructed would throw little light on the business process, and it is an axiom of accounting that a knowledge of the historical as well as the synoptic situa-

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tion is highly important if the accounts are to meet the needs of the different interests involved.

It will be necessary, then, to extend the above financial statement of the A. B. Co. so that space will be available for the recording of the transactions which may affect the original amounts. This virtually means the opening of an account for each kind of property and for each equity, thus:

Property	Equities
Buildings	A. B. Co.
<hr/> \$130,000	<hr/> \$200,000
Real estate	Bonds
<hr/> \$60,000	<hr/> \$100,000
Furniture and fixtures	Notes payable
<hr/> \$30,000	<hr/> \$20,000
Merchandise	
<hr/> \$80,000	
Cash	
<hr/> \$20,000	

Let us analyze the transactions which may occur—first as to the effect on property accounts. Clearly property items may be affected in two ways: a property balance may be either increased or decreased; there may be additions to property or there may be subtractions or withdrawals from property. A bookkeeping practice already referred to is the substitution of addition for subtraction wherever possible to avoid the inconvenience of subtraction and to preserve original figures. Accordingly it will be desirable to have two separate columns under each property heading: one for the additions or positive items, and one for the



subtractions or negative items. Now, how shall we arrange these columns? Shall we preserve the positive items at the left and the subtractions at the right, or vice-versa? The answer to this question is not at all a matter of principle—either arrangement will serve as well as the other. In the tabular statement of property and equities given above, the property items were set at the left and the equity items at the right. This is the arrangement followed in this country. The essential thing is the separation of the two classes of facts; the arrangement after the classification is made is a matter of little importance. But if we decide to have left stand for property balances and right for equity balances, it will be necessary in the positive and negative columns under each property heading to use the left-hand column for additions and the right-hand column for subtractions, in order to preserve positive property balances at the left. This is the essential feature of any ledger account: two columns, one for additions and one for subtractions, and custom decrees that in property accounts the left shall be used for additions, the right for subtractions.

Similarly, transactions affecting the equity items may result in either increasing or decreasing an equity balance. Consequently each equity account has need of two columns, a positive column for additions and a negative column for subtractions. What shall be the arrangement of these columns? Again the answer is that the arrangement is an arbitrary matter, the only essential principle in constructing the ledger accounts being the preservation of the fundamental classes, property and equities; and since we have decided to keep positive property balances at the left and equity balances at the right, it will be necessary in the positive and negative columns under each equity heading to use the right-hand column for additions and the left-hand column for subtractions.

The scheme of the construction of the ledger accounts in their relation to the fundamental classifications can be represented thus:

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The A. B. Co.

Property		Equities	
Additions	Subtractions	Subtractions	Additions
	Buildings		A. B. Co.
\$130,000			\$200,000
	Real estate		Bonds
\$60,000			\$100,000
	Furniture and fixtures		Notes payable
\$30,000			\$20,000
	Merchandise		
\$80,000			
	Cash		
\$20,000			

Thus far it appears that we arbitrarily list all property balances on the left-hand side and all equity balances on the right-hand side, and the fact should be emphasized again that the only important consideration controlling the construction of ledger accounts is the separation of positive and negative items and the maintenance of the classification represented by the equation: property equals equities.

Now, have we here all the accounts necessary to record the transactions that may take place when the company begins operations? It was stated above that it is useful for the accountant to conceive of the business process as the combination of a more or less considerable variety of commodities and services with the peculiar service of the proprietor for the purpose of producing some other commodity or service for sale. Now it is obvious that, even in the case of a retail concern such as the A. B. Co., where the productive process is physically simple, there necessarily will be involved commodities and services other than those

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the company now has on hand. Labor power is necessary in practically all productive processes; certainly the A. B. Co. will be obliged to purchase labor from time to time if operation is to proceed. The services of insurance and advertising will doubtless be secured; it will be necessary to buy stationery, fuel and light. The number of types of such commodities and services required, of course, will depend upon the character of the business.

The question arises: How will accounts with labor, fuel, etc., fit into the scheme of ledger accounts thus far outlined? These items are examples of what are commonly called "expense" accounts, and they are frequently grouped in a special ledger. Now what is the nature of these items? As there is some confusion on this point, it will be necessary to answer these questions with considerable care.

Nearly all these expense-ledger items fall into the general category, property. (There are some pure expense accounts which will be noted later.) This is fairly obvious in the case of such tangible items as fuel, stationery, etc. Coal in the bin is just as good property as show-cases and other fixtures. Further, as was noted above, the concept of property covers material and immaterial items. This fact is too patent to need further elaboration. Hence labor power, the service of insurance, the service of capital, the service of advertising and so on are all property items. They are all wealth in the economic sense, and they are all considered property by the business man. They cannot be considered as decay or expiration or loss of property. When the business man buys labor power and pays cash he does not think of the payment as a loss. He expects to receive a value equivalent to his expenditure, as in the case of buying a machine, a building or any item of physical property. Valuable services are as truly property items as valuable commodities.

There is a simple way of proving that this is also the business man's and the accountant's way of looking at it. If one approached the owner of a business with the idea of buying him out, what would the prospective seller include in a statement of his property? Certainly coal in the bin and stationery on hand as well as merchandise, fixtures, etc., would appear in that statement. And, further, if any labor services, insurance services,

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advertising services or any valuable services or rights have been purchased but are not yet consumed or from which the benefit has not yet been received, you will find the business man including them as part of his property. And this is also the accountant's viewpoint, for, in making up a statement of property from the books and an inventory, all balances representing so-called expense items not consumed will be included among the assets—exactly the same procedure as is followed in the case of buildings, machinery or any property item. (In some kinds of business the large part of the assets consists of such balances.)

Then, if these accounts represent property, why call them expense accounts? Possibly the term expense is not a good word to apply to such accounts, but there are practical reasons for distinguishing these items from other forms of property, and it is no part of our purpose to obliterate the distinction. Distinctions may well be observed for certain purposes, similarities for others. It cannot be urged too emphatically that as far as the theory of debit and credit is concerned there is no distinction whatever between property accounts and these expense accounts. And much of the confusion concerning the principles of debit and credit comes from overlooking this point of logical classification. The difference between buildings and coal is not that the one is property and the other expense or property consumed—the only line that can be drawn is the relative permanence of the former as compared with the latter. The coal in the bin may be largely consumed in a month; the building may last twenty years. The coal is a current, transitory asset; the building is of a more permanent character. The distinction made in economic theory between circulating capital and fixed capital is practically the same distinction.

Strictly interpreted the word expense should mean actual decay, dissipation or consumption of property. The amount of coal that is consumed is an expense—an expiration of property. But so also is the extent to which the building depreciates in a certain period an expense. Expirations of property are expenses; all balances left on hand are property.

Let us suppose that the following headings comprise all the assets of this transitory character that will be used by the A. B. Co.: labor, fuel, insurance, stationery—there would be others,

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but these are sufficient for illustrative purposes. According to the above analysis, accounts would be opened for these items in exactly the same way as for any property items—the left-hand columns being used for additions, the right-hand columns for subtractions, thus:

Additions	Subtractions
	Labor
	Fuel
	Insurance
	Stationery

These transitory property accounts are sometimes considered as subdivisions of the proprietor's account on the ground that the net result of all expenses and all gross incomes is finally embodied in proprietorship. But this is not an entirely accurate conception. Additions to property are not expenses but the expirations of property (strictly speaking it is the net expiration of property that is not consumed in paying debts that forms expense or gross deduction from proprietorship). Then, if any property accounts are to be considered as subsidiary proprietorship accounts, all property accounts must be so considered, for one expiration of property is as much an expense as any other.

In case of a service that is immediately consumed as delivered it might be urged that it is more logical to conceive of the item as a pure expense or a gross deduction from proprietorship than to consider it property. But there are two reasons why it is more reasonable to consider even such an item as property. In

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the first place any valuable service is logically property as it is purchased. Further, since payment dates do not coincide with delivery dates, we are continually meeting with accrued items, i. e., we frequently find such accounts representing property balances such as wages prepaid, insurance prepaid, etc. It should be observed that occasionally for brief intervals such accounts may represent rights against property rather than property. For example, if at the end of the accounting period after the inventory is taken the labor account were to represent wages unpaid and nothing else, then the labor account would be for the moment not a property account, but a rights-in-property account. Such a situation would be theoretically possible in the case of any property account.

The A. B. Co. will doubtless have certain accounts which do represent expense and nothing else. A common example of such an account is accrued depreciation, which represents expiration of property value in the more permanent property items. An item of depreciation represents in the first place a subtraction from property. It represents further a gross deduction from proprietorship because of its destination. Then, when depreciation is entered as a subtraction from property and then as an addition to a separate account, we have an account which may be considered as a subsidiary equity account. Hence an addition to a depreciation account forms a gross subtraction from the proprietor's equity account, and since the left-hand column is always used to record subtractions from equities, we must use the left-hand column of the depreciation account for entering the items of depreciation. All accounts which represent expense and nothing else can be shown to have this same relation to the general scheme of accounts.\*

The opposite of the expense account, which represents gross subtractions from proprietorship, is the revenue account, which represents gross additions to proprietorship. The original proprietorship account could be used to record all items of expense as subtractions and all items of income as additions.† But in

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\*Cf. Hatfield, *Modern Accounting*.

†Strictly speaking, expense and revenue items are gross deductions from and gross additions to the equities in general. It is illogical to include distributions of net revenue to outside equities among the expenses. Proprietorship is used here as representative of all the equities because of its importance in this connection.—W. A. PATON.

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practice this is not done because such a procedure would not throw the business process sufficiently into the limelight. Consequently expense accounts and revenue accounts are kept and after being combined in the expense and revenue sheet the net result is carried to the proprietorship accounts. We will suppose that the revenue accounts of the A. B. Co. are merchandise profit from the sale of goods and rent from a portion of its buildings.

Theoretically any property or any equity account may have a subsidiary account. Whenever we desire to take special cases of subtractions from either a property account or an equity account and set up such subtractions in a separate account we have an account which simply represents part of the main account or is, in other words, subsidiary to the main account. Such accounts are usually called "off-set" or "valuation" accounts. There is nothing about any such accounts that invalidates the explanation of the double-entry system thus far outlined. Each valuation account is so constructed as to preserve the balance of the main account, be it a property or an equity account, in the proper column. Such accounts are further illustration of the bookkeeping practice of adding instead of subtracting. The need in particular cases for preserving original figures is the legitimate excuse for such a procedure. Common examples of such accounts are reserve for bad debts, an offset to the accounts receivable, and deficit, an offset to the proprietor's equity.

Let us summarize the discussion thus far by representing the completed scheme of accounts in its relation to the fundamental classification:

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The A. B. Co.'s ledger accounts

Property		Equities	
Additions	Subtractions	Subtractions	Additions
Buildings		A. B. Co.	
\$130,000			\$200,000
Real estate		A. B. Co. (current)	
\$60,000		Accrued depreciation	Merchandise profit
Furniture and fixtures			
\$30,000		Other expenses	Rent
Merchandise			
\$80,000			
Cash		Bonds	
\$20,000			\$100,000
Accounts receivable		Notes payable	
	Reserve for bad debts		\$20,000
Labor			
Fuel			
Insurance			
Stationery			

\*No attempt is made to make this list of accounts complete. Enough accounts are shown to illustrate the various cases that may occur.



To complete the above analysis let us suppose a few typical transactions.

1. Three hundred dollars in cash is paid for fuel. This illustrates a common type of transaction. One kind of property is consumed and an equal value of another kind of property is received in exchange: there is a subtraction from one asset and an equal addition to another. Proceeding in the way that has been outlined, an entry of \$300 must be made in the right-hand column of the cash account and an equal entry in the left-hand column of the fuel account. Thus we have two equal entries in opposite columns, and the original equality between property balances and equity balances is undisturbed. If the A. B. Co. found that it had too large an investment in fixtures and sold for cash \$1,000 of such equipment at cost price we would have another illustration of this type of transaction. It would be recorded by a right-hand entry of \$1,000 in the furniture and fixtures account and an equal left-hand entry in the cash account. Such transactions obviously affect only one of the fundamental classes—property. They are all recorded in this way.

2. The A. B. Co. is planning some purchases and borrows \$5,000 from the bank on a sixty-day note. Here property is increased and at the same time an equity, notes payable, is increased: an addition to the cash and an equal addition to notes payable. We would then have a left-hand entry of \$5,000 in the cash account and an equal right-hand entry in the notes payable account. Again we have two equal entries in opposite columns, and the equation—property equals equities—is maintained. The opposite of this transaction would be: the A. B. Co. pays a note due with cash \$1,000. Here we have a decrease in property, cash, and an equal reduction in an equity, notes payable. Hence we would have a right-hand entry in the cash account and an equal left-hand entry in the notes payable account. All transactions of the type which involve an addition to property and an equal addition to equities or a subtraction from property and an equal subtraction from equities are recorded in this way.\*

\*Whenever property is consumed in business operation a left-hand entry is made in an expense account (subtraction from equities) and a right-hand entry in the property account (subtraction from property). All such transactions accordingly come in this group. In practice it is not feasible to make such entries as they occur, but only at certain periods (e. g., it would hardly be possible to record the daily consumption of coal or the daily depreciation of buildings). In the case of extraordinary expenses such subtractions might be regarded as net deductions from equities—W. A. PATON.

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3. A transaction may involve a transfer from one kind of equity to another. For example, the A. B. Co. issues new bonds to the extent of \$5,000 in exchange for \$5,000 of outstanding notes payable. Here we have a subtraction from one kind of equity and an equal addition to another equity. The transaction would be recorded by a right-hand entry of \$5,000 in the bonds account and an equal left-hand entry in the notes payable account—again two equal entries in opposite columns.

4. A transaction may involve some combination of the above types. For example, merchandise which cost \$8,000 is sold on account to various parties for \$10,000. One kind of property, merchandise, is reduced to the extent of \$8,000, and another kind of property, accounts receivable, is increased \$10,000. The difference, \$2,000, represents merchandise profit, a gross addition to the A. B. Co.'s equity. There would be a right-hand entry of \$8,000 in the merchandise account and a right-hand entry of \$2,000 in the merchandise profit account and a left-hand entry of \$10,000 in the accounts receivable account. (In practice merchandise and merchandise profit are combined and we have what is called a mixed account. The two are separated here to facilitate the explanation.) Again we have equal entries in opposite columns.

Although there may be a great variety of combinations of the above cases, these illustrations cover the fundamental types of transactions possible. It will appear from the foregoing that every transaction is two-sided, i. e., there is always an equal right-hand entry for every left-hand entry and vice-versa; hence the original equality between the sum of the left-hand (property) balances and the sum of the right-hand (equity) balances is continually maintained. This constant equality furnishes an important test of numerical accuracy.

In practice the left-hand side of all ledger accounts is called the debit side and the right-hand is called the credit side. Is there any inherent reason for this nomenclature? Is there reason for listing property balances on the debit side and equity balances on the credit side? In nearly all explanations of double-entry bookkeeping an attempt is made to attach the significance of the words debtor and creditor to the terms debit and credit as used in modern accounts, and much confusion has

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undoubtedly resulted. As used in personal accounts these meanings can with reason be applied; for example:

John Jones	
(in account with the A. B. Co.)	
Dr.	Cr.
\$500	\$100

Here the debit and credit headings in the opposite columns may be thought of as having real meanings. Jones is debtor to the A. B. Co. for the amounts listed in the debit side and creditor of the A. B. Co. for the sums listed in the credit side. But the terms debit and credit are applied to the left and right columns respectively of all accounts in the double-entry system, and the moment we try to attach any such meaning to debit and credit elsewhere than in personal accounts we are in difficulty, no matter how ingeniously we employ figurative language and continually shift our viewpoint.

It has often been urged that the proper standpoint from which to look at the accounts of a business is that of the proprietor or proprietorship; and this is in many ways a helpful conception. Undoubtedly one of the purposes of accounting is to show proprietorship and the process whereby changes in proprietorship are brought about. But if we look at the accounts from this standpoint there is no possibility of attaching uniform significance to the terms debit and credit. For in property and outside equity accounts, debit (meaning additions to property and subtractions from equities) represents facts favorable to the proprietor and credit (meaning deductions from property or additions to outside equities) represents facts unfavorable to the proprietor; while in the accounts which represent the proprietor's equity in any of the subsidiary proprietorship accounts debit (indicating subtractions) represents facts unfavorable to the proprietor and credit (indicating additions) represents facts favorable to the proprietor. This is an illustration of the impossibility of attaching the significance of debtor and creditor to the terms debit and credit as used in modern accounting.

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The only view that can logically be taken must be of the facts with which the books deal. We have two fundamental classifications — property and equities. We desire to record the flow of facts and still maintain the separation of these two classes. The accounts are built up to meet this need. Debit and credit are conventional terms used to designate left and right columns on the ledger page.\* Nothing is to be gained but confusion in attempting to attach any special meanings such as debtor and creditor to these terms.

### SUMMARY

The double-entry system of keeping accounts is founded logically in the nature of the facts with which accounting deals. These data consist fundamentally of the two classes, property and equities (rights in property). These two classes are always numerically equal, for one class consists of the objective items of property, the other class represents the situs of the ownership of this property and the same measuring unit is used in both cases. The essence of the double-entry system is the separation of the members of the equation—property equals equities—and the maintenance of this equation. Thus the double-entry method is more than the mere recording of facts. The first step in the interpretation of data is made in the forming of the two fundamental classes.

Business operation means a constant process of shifting in both property and equity items. Property expires, is replaced, is exchanged. Any property item may be increased or reduced. Similarly the process of change will mean increases and decreases in specific equity items. Accounts with the various items of property and equities are built up to record these changes. The important characteristic of any ledger account is two columns, one for additions, the other for subtractions.

Arbitrarily we decide to maintain property balances in the left-hand column and equity balances in the right-hand column. Therefore, in property accounts the left-hand column is used for additions, the right-hand column for subtractions; and in equity accounts the reverse is true. The only principle controlling the arrangement is the maintenance of the original equation.

\*Cf. Hatfield, *Modern Accounting*.

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A complete system of accounts will usually embrace property items of a relatively permanent character, such as buildings, and numerous kinds of property of a transitory character, such as coal. Further, in order to keep the business process clearly in view, subsidiary equity accounts will be needed: (1) those accounts representing pure expense or gross deductions from equities, and (2) those accounts representing income (which embody the sale of the services of owners) or gross additions to equities. Finally, almost any account may have a subsidiary valuation account when for any reason subtractions or offsets are entered in a special account rather than in the proper column of the main account.

All possible transactions can be classified under four heads: (1) one property is exchanged for an equal value of another property; (2) an increase or decrease of property takes place through an equal increase or decrease of equities; (3) an equity is exchanged for an equal value in another equity; (4) a transaction may involve some combination of the above. In any of these cases equal entries in opposite columns are made for every transaction. Consequently the original equality existing between left-hand balances and right-hand balances is maintained. An important advantage of the double-entry system is the test of numerical accuracy afforded by this constant equality.

The left-hand side of any account is called the debit side; the right-hand is called the credit side. The simplest rule for debit and credit is based directly upon the fundamental equation: debit additions to property and subtractions from equities and credit additions to equities and subtractions from property. The terms debit and credit as used in modern accounts have no other important significance.