REPORT OF A CONFERENCE ON THE PROPOSALS FOR REVISION OF THE UNITED NATIONS SYSTEM OF NATIONAL ACCOUNTS, HELD BY THE CONFERENCE ON RESEARCH IN INCOME AND WEALTH

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This report summarizes the proceedings of a series of meetings called by the Conference on Research in Income and Wealth of the National Bureau of Economic Research in June of 1966. The major conclusions of the conference, as transmitted to the Statistical Office of the United Nations, were as follows: (1) The aim of integrating the various parts of the system of national accounts, including input-output and financial transactions, is to be welcomed. (2) The more recently developed parts of the system need considerably more work to reach the same level of clarity and usefulness which the national income and product accounts have acquired. (3) Some simplification of the proposed basic system should be considered, involving the identification of a minimum of information that should and could be provided by all countries. (4) In line with the conference's overriding interest in national accounts as an instrument for economic analysis and a means of more informed policy formation, the proposed system needs considerable strengthening in the field of income distribution.

At a meeting in October 1965, the Executive Committee of the Conference on Research in Income and Wealth of the National Bureau of Economic Research appointed a subcommittee composed of Raymond W. Goldsmith (chairman), Edward F. Denison, and Milton Moss to arrange a program of sessions to review the revisions which the United Nations is proposing of its standard system of national accounts. The purpose of the conference was to develop views of members of the Income and Wealth Conference and invited guests that could be transmitted to the United Nations in time for consideration by the U.N. Statistical Commission.

The conference was held on June 9 and 10, 1966. It was set up as a series of panel sessions, each devoted to some aspect of the accounts and tables. In most of these panel sessions the basic issues were first outlined by a discussion leader; invited dicussants then took up specific issues, and general discussion from the floor concluded the session. A list of conference sessions is appended.

The basic document used for the discussions was "A System of National

1. EDITOR'S NOTE: The author served as rapporteur for the conference reported herein. Although the report necessarily reflects her interpretation of the proceedings, all participants were given an opportunity to correct the transcript and to review the points of view attributed to them. The introductory paragraphs and general summary are taken from the memorandum prepared by the Organizing Committee of the conference for the Statistical Office of the United Nations.

Accounts (Proposals for the Revision of SNA, 1952)", E/CN.3/320. Two later documents (ST/STAT/10 and ST/STAT/11) had also been made available to participants shortly before the conference.

General summary

The following summary attempts to give the essence of the comments and recommendations made. It provides mainly the sense of the meeting on general issues.

1. The aim of integrating the various parts of the system of national accounts—the income and product account, the financial transactions account, the input-output table, and the balance sheets—is to be welcomed. This aspect of the proposals should be preserved and extended. As a more immediate operation goal, however, it was felt that integration might be more easily achieved without balance sheets because of the many unsolved conceptual and statistical problems of asset valuations.

2. In providing an integrated structure the more recently developed parts of the system—as well as the deflated (constant price) version of the accounts—will require the same level of clarity and usefulness which the national income and product accounts have reached as a result of experience in many countries over a period of two to three decades.

3. Some simplification of the proposed basic system should be considered, involving the identification of a minimum of information that should and could be provided by all countries. In addition, particular consideration should be given to the needs of the less developed countries in order to avoid an overemphasis on structural and conceptual refinements at the expense of encouraging the compilation of a basic core of reliable data—a development that might do a disservice to many of the developing countries.

4. In line with the conference's overriding interest in national accounts as an instrument for economic analysis and a means of more informed policy formation, the proposed system needs considerable strengthening in the field of income distribution, both as regards functional distribution and size distribution.

The report which follows first outlines the background of the proposals for revision of the SNA and the major differences between the old SNA and the new proposals. It then summarizes briefly the discussions which took place in each of the panel sessions.

A Brief History of the SNA and of the Proposals for its Revision

The present United Nations *System of National Accounts and Supporting Tables* (Studies in Method, Series F No. 2) came into being in 1953, when it replaced a 1947 document entitled *Measurement of National Income and the Construction of Social Accounts*. In the preface to the first edition of the SNA its authors stated:

> The purpose of this report . . . is to set out a standard national accounting system in order to provide a framework for reporting national income and product statistics which is of general applicability.

Comparing the SNA with its predecessor, the authors asserted:

> . . . the principles underlying the two reports are similar, a large amount of experience in the field of national accounting has been obtained in the last five years and the present report incorporates the fruits of this experience.

Although the report mentioned the development of other fields of national economic accounting, it recognized that a comprehensive system of accounts was not feasible at the time. The authors did point out, however, that one of the major changes in national accounting in recent years had been the fact "that the national income and product totals, which at one time formed the whole centre of interest, have now been fitted into a closed network of economic transactions". The analytical needs imposed by the policy questions of the day required information about the working of the economic system as a whole and about the way in which its parts were related.

The United Nations Statistical Commission requested that countries comment upon their experience in using the SNA. Reviewing the comments received by April 1956, the Commission decided that, while no major changes were urgent, some minor adjustments were necessary for clarification and for improving comparability with other international standards. A revision incorporating these changes but retaining the bulk of the previous text was issued in 1959. In the preface to this second edition it was stated that, "It is envisaged that, at some future date, the United Nations System of National Accounts will be extended to include flow of funds and input-output tables, in the first instance, and national balance sheets as a longer-term objective." The preface further mentioned that many statistical offices were in fact moving in such directions, and that such an extension of international recommendations would involve important revisions in the SNA. The third edition of this document appeared in January 1964. The preface to this second revision was quite brief; the changes were limited to those which improved consistency with IMF recommendations and which up-dated references to other international publications.

In December 1964 an Expert Group was convened to "make proposals for the extension and revision of the SNA so as to provide a full and detailed treatment of flows and stocks in an economy." In February 1965 the Group issued its report, *A System of National Accounts (Proposals for the Revision of SNA, 1952)*, (E/CN.3/320). This document was intended to provide a basis for the development and co-ordination of a wide range of economic statistics. Not only was a generalized accounting framework set up; but the industrial classification, commodity classification of personal consumption expenditure, and the purpose classification of government expenditures were reviewed and modified; and a classification of transactions in financial claims was introduced—all as an integral part of the proposed new SNA.

Almost immediately the proposals began the rounds of international discussion and review. The classifications, concepts, and definitions, as well as the details of their presentation, were revised in accordance with the suggestions made at these meetings. Two other documents appeared: *Concepts and Proposed Definitions of the Revised SNA* (ST/STAT/10) of 23 March 1966, and *The*

Classifications and Standard Accounts and Tables of the Revised SNA (ST/STAT/11) of 11 May 1966. A fourth document, *Proposals for Revising the SNA, 1952* (E/CN.3/345), was being drafted by the Statistical Office at the time of the conference; it became available in July of 1966.

The revision of the SNA is still underway. A new document on the proposals for revising and extending the SNA is being prepared, which will include modifications in the proposals of E/CN.3/345 in the light of the comments of the second session of the Expert Group and the fourteenth session of the Statistical Commission. The new document should be completed by July 1967. It will be circulated to national statistical authorities for comment, and will be discussed at regional meetings and the third session of the Expert Group, which is planned for November 1967. The fifteenth session of the Statistical Commission, which is expected to meet during spring 1968, will consider the proposals for revising the SNA in the light of the results of the consultations on the new document. It is hoped that this session of the Commission will adopt a new System of National Accounts.

Comparison of the Old SNA and the Proposed Revision

The major points of difference between the old SNA and the new are quite effectively summarized by the following quotation from the last revision of the old manual:

> In the present situation one of the major practical choices appears to be the relative emphasis given to flows within the productive system and flows within the rest of the system. The former, which involves the construction of an input-output table, is of particular relevance in the study of detailed production possibilities. The latter, which leads to the construction of national accounts as developed in this report, is sufficient for the allocation of resources among types of end use, and is relevant to problems of effective demand and its finance.
>
> In most actual situations, some combination of these two approaches will be effective.[2]

The old SNA focused on the flows outside of the productive system, being concerned with showing the distribution of income and its use in final expenditures. The new system tries to redress the balance of emphasis, as well as to extend the accounts to include flow of funds and balance sheets. As the old version added a system of interlocking accounts to the former focus on aggregates, so the new supplements the old's focus on incomes flowing from production and effective demand with a more detailed picture of the production process.

An underlying concept of the new system is expressed in the following quotations from E/CN.3/320:

> When we come to subdivide the main categories distinguished in the national accounts and balance sheets, we must recognize that the economically interesting classifications vary from one part of the system to another.[3]

2. Pp. 2, 3.
3. P. 19.

> Not only do the categories used in classifying expenditures on goods and services change as we pass from production to consumption, but so does the grouping of the active agents involved.[4]
>
> Accordingly, this report is based on a fundamental dichotomy running throughout the current and capital accounts, which for want of a better phrase may be called the real-financial dichotomy. In the real accounts (the production accounts and the capital expenditure accounts) the main classifications relate to branches of production and the commodities they make. In the financial accounts (the income and outlay accounts and the capital finance accounts) the main classifications relate to institutional sectors, various kinds of income transfer and various kinds of claims they acquire as assets and liabilities. This dichotomy, which in fact does little more than express a fairly commonly accepted practice, is mainly designed to present relevant information as clearly and simply as possible and to avoid the confounding and superimposition of classifications which are alike the enemies of statistical development.[5]

This approach was the cause of major criticism made of the new system at the conference.

The Accounts

The old SNA distinguished three broad groups of transactors: enterprises, governments, and households and the nonprofit institutions serving them. Each of these sectors was conceptually provided with four accounts:

1. *A Production Account* showing the revenues and expenses connected with its productive activity. The net value added, or factor income generated in the sector, is transferred to its
2. *Appropriation Account* showing, in addition to the gain from productive activity, income from investments and current transfers received. The amount of such revenues not paid out in income, consumption or transfer payments represents the saving of the sector which is transferred to its
3. *Capital Reconciliation Account* showing, in addition to saving, provisions for the consumption of fixed capital transferred from the production account, and capital transfers and borrowing from other sectors.
4. The *External Account* contains all other entries which have not been counter-entered elsewhere in the system.

In presenting the aggregation of these accounts for the nation, certain modifications and rearrangements were made with the object of relating each of the six accounts "to one of the familiar and important aggregates". Thus the system contained a consolidated production account summing to gross domestic product; a consolidated appropriation account summing to national income; the capital reconciliation account of enterprises, showing gross domestic capital formation; the appropriation and capital reconciliation accounts of households and nonprofit institutions; these same accounts for general government; and a consolidated external, or rest of the world, account.

The new system in the STAT/11 version contains four consolidated accounts

4. P. 21.
5. P. 22.

for the nation. The first is the domestic product and expenditure account, showing expenditure on GDP at market prices and gross value added in production. The second is the account for national disposable income and its appropriation; this aggregate (= net domestic product at market prices + net factor income and current transfers from abroad) is matched by public and private consumption and saving. The third account deals with capital transactions; the sum of gross domestic capital formation and net lending to the rest of the world is shown as financed by saving, capital consumption allowances, and net capital transfers from the rest of the world. Additional information is shown on the net acquisition of foreign financial assets and foreign financial liabilities. The system is closed with the fourth account which presents external transactions; the current portion shows exports, imports, factor incomes, current transfers, and the current account surplus, while the capital portion matches the net acquisition of foreign financial assets with the current account surplus, net capital transfers from abroad, and the net incurrence of foreign financial liabilities.

In addition, the new system provides accounts which disaggregate the four consolidated accounts for the nation. The domestic product and expenditure account is deconsolidated into a set of production accounts for commodities and for branches of production and other kinds of economic activity. The consolidated income and outlay and capital finance accounts are disaggregated into similar accounts for the four institutional sectors of the system—corporate and quasi-corporate non-financial institutions; financial institutions; general government; and households, including most private unincorporated non-financial enterprises and private non-profit institutions service households.

Thus, in addition to a greater degree of deconsolidation, the major modifications in the structure of the basic accounts consisted of the introduction of the commodity as a unit of observation and classification in the case of the production accounts and of more, and new, institutional sectoring in the case of the other accounts. Also, the focus of attention in the consolidated income and outlay account for the nation is national disposable income in the case of the new system, instead of national income.

Additional detail was provided in the old SNA by a set of eleven supporting tables. In the new version, the accounts are supported by an enlarged set of supporting tables.

Before dealing further with the accounts, it is well to look at the kind of information which the new system is designed to handle in comparison with that provided by the old, for not only are there changes in the overall design, but in the informational content as well.

The Detail of the System

The Supporting Tables of the Old SNA

The brief listing given below is intended to suggest the scope of information of a more detailed nature than the accounting aggregates which the old system provided.

1. Expenditure on Gross National Product: Account 1 plus net factor income from abroad and GNP.

2. Industrial Origin of Gross Domestic Product at Factor Cost: A subdivision of this aggregate by industry.

3. National Income by Type of Organization: National income classified by legal type of organization with some further subdivision by industry and type of income.

4. Distribution of the National Income: National income by type of income.

5. The Finance of Gross Domestic Capital Formation: A consolidation of the domestic capital formation account and the capital reconciliation accounts of all sectors.

6. Composition of Gross Domestic Capital Formation: Fixed capital formation and inventory change classified by type of good, by industrial use, and by type of purchaser. No cross classifications.

7. Receipts and Expenditures of Households and Private Nonprofit Institutions: The accounts of this sector.

8. Composition of Private Consumption Expenditure: Classification by type of good or service.

9. General Government Revenue and Expenditure: An elaboration of the accounts of this sector.

10. Composition of General Government Consumption Expenditure: Classifications by type of expenditure, by purpose, and by type of authority. No cross classification.

11. External Transactions: An elaboration of the external accounts.

Prior to the revision there was considerable dissatisfaction with both the amount of supplementary information and the classification schemes provided. The proposals for the revision of the SNA attacked both of these problems.

The Classifications and Sectoring of the New SNA

Major changes were made in the industrial classification and in the classifications of consumer goods and services and of government expenditures. The institutional sectors (enterprises, households, and governments) were subdivided and redefined. Financial claims were classified, since the accounts include such information for the first time. Little was changed in the treatment of categories of gross capital formation; some modification was made in the classification of imports and exports of goods and nonfactor services.

Kind of Economic Activity: This is the industrial classification of the new system; since commodities are classified in terms of "products typical of branch '*n*' ", it also serves as the commodity classification. A comparison of the most summary levels of the two versions is shown in Table I; the final form and the level of detail await a comprehensive review and revision of the present International Standard Industrial Classification. The major changes are the following: (1) Own-account construction has been removed from the sector undertaking it and placed in the construction sector. (2) Ownership of dwellings is no longer shown separately, and is now part of the real estate sector. (3) There

TABLE I

CLASSIFICATION BY KIND OF ECONOMIC ACTIVITY

A. Old SNA—most summary level of detail
1. Agriculture, forestry, hunting and fishing
2. Mining and quarrying
3. Manfacturing
4. Construction
5. Electricity, gas, water, and sanitary services
6. Transport, storage and communications
7. Wholesale and retail trade
8. Banking, insurance, and real estate
9. Ownership of dwellings
10. Public administration and defence
11. Services

B. New SNA—most summary level of detail
1. Agriculture, forestry and hunting (1a* + 1b* + 1c)
2. Fishing (1d)
3. Mining and quarrying (2 less own account construction)
4. Manufacture of food, beverages and tobacco (3a + 3b + 3c + 3l*)
5. Manufacture of textiles, wearing apparel, and leather (3d + 3e + 3j)
6. Manufacture of wood and wood products (1a* + 3f + 3g* + 3h)
7. Manufacture of rubber, chemicals, petroleum, and coal (3k + 3l* + 3m + 3o)
8. Manufacture of non-metallic mineral products (3n + 3m*)
9. Basic metal industries (3o*)
10. Manufacture of metal products, machinery and equipment (3p + 3q + 3r + 3s* + 3t* + 3g*)
11. Other manufacturing industries (3t* + 3i + 11c*)
12. Electricity, gas, steam, and water supply (5a + 5b + 5c*)
13. Construction (4 + 2* + own account construction)
14. Wholesale and retail trade, restaurants and hotels, and storage (7 + 11e + 6a* + 6b* + 6c* + 3s*)
15. Transport and communication (6a* + 6b* + 6d + 6c*)
16. Personal services (11f)
17. Banking and insurance (8a + 8b)
18. Real estate and other business services (9 + 8c* + 11g* + 11f*)
19. Sanitary and similar community services (5c* + 11f* + 1a*)
20. Public administration and defence (10)
21. Social, recreational and related community services (11a + 11g* + 11b + 8c* + 11f*)

*Indicates part of the category in question.

has been considerable rearrangement within the service and manufacturing sectors and more detail is shown. (4) The detail for the transport sector is considerably reduced.

2. *Consumer Goods and Services*: The basic criterion for establishing the categories is the object or purpose to be served by the expenditure; distinctions have been made between services, durables, and non-durable goods. The classification has three levels of detail; only the most summary level is shown

in Table II. The major changes made are in the grouping and the types of goods listed. There is much more detail on services, particularly those provided by nonprofit institutions; and the category of welfare services is a new feature. The new classification has room for all the detail of the old with the exception of expenditures on communications.

TABLE II

CLASSIFICATION OF CONSUMERS' GOODS AND SERVICES

A. Old SNA—most summary level of detail
   1. Food
   2. Beverages
   3. Tobacco
   4. Clothing and other personal effects
   5. Rent, rates, and water charges
   6. Fuel and light
   7. Furniture, furnishings, and household equipment
   8. Household operation
   9. Personal care and health expenses
   10. Transport and communication
   11. Recreation and entertainment
   12. Miscellaneous services

B. New SNA—most summary level of detail
   1. Food, beverages, and tobacco (ND) (1 + 2 + 3)
   2. Clothing, footwear, and accessories (SD) (4)
   3. Gross rent, fuel, and light (S, ND) (5 + 6)
   4. Furniture, furnishings, household equipment, and household operation (D, SD, ND, S) (7a + 7b* + 8)
   5. Medical care and health expenses (S, ND) (9b)
   6. Transport and communication (D, ND, S) (10)
   7. Recreation, entertainment, and cultural services (D, S, ND) (7b* + 11a + 11d + 11c)
   8. Education and research (S) (12b)
   9. Other goods and services (S, SD) (9a + 11b + 12a + 12c + welfare services)

D = durable goods.
SD = semidurable goods.
ND = nondurable goods.
S = services.

3. *Government Purposes*: This classification is adapted from the functional classification of government transactions included in U.N. recommendations on budgetary classifications and management. This classification attempts to distinguish among government activities which serve the community as a whole, those which promote and regulate economic activity, and those which provide services to households on an individual basis. The last category is classified in a manner facilitating the combination of such data with that on consumer goods and services. The old and new systems are shown in Table III; there is no detailed comparison possible.

TABLE III

CLASSIFICATION OF GOVERNMENT PURPOSES

A. The Old SNA—most detailed level of classification
1. General administration
2. Defence
3. Justice and police
4. Education and research
5. Health services
6. Special welfare services
7. Transport and communication facilities
8. Other services

B. The New SNA—most summary level of classification*
1. General government services
2. Defence
3. Education
4. Health
5. Social security and welfare services
6. Housing and community amenities
7. Other community and social services
8. Economic services
9. Unallocable.

*Most of these groups have a sub-category showing administrative and research expenses.

The three classification schemes discussed so far are designed for the "real" accounts of the system; an effort was made to make them as complementary as possible. It was also hoped that they would provide a bridge between the SNA and the material product system accounts, and many of the categories were set up with this purpose in mind. The industrial classification has been set up with the goal of homogeneity; the unit to be classified is the establishment. The classification is thus well adapted for input-output analysis. However, the philosophy of the system calls for the separation of the real and financial accounts, and for different classifications of economic agents. Thus the establishments must be regrouped; indeed for the financial accounts, the establishment is no longer the unit to be classified. The institutional sectors are defined in terms of enterprises or companies.

4. *Institutional Sectors*: As in the old SNA there are three major sectors: enterprises, households and the nonprofit institutions serving them, and government. However, in the new system the content of these groups has been changed somewhat, and there are subsectors identified which were not distinguished in the old system. The sectoring proposed is shown in Table IV. The enterprise sector includes private corporations, private unincorporated enterprises which keep separate records for business and household purposes and/or are financial institutions; nonprofit institutions serving business; the own-account activities of household and nonprofit institutions; public corporations; and government

enterprises. The household and nonprofit institution sector includes nonprofit institutions serving households, noncorporate businesses not included in the enterprise sector, and other households. The general government sector includes government agencies, government trust funds, nonprofit institutions serving government, and nonprofit institutions serving enterprises and households which are mainly financed or controlled by government.

TABLE IV

INSTITUTIONAL SECTORS

A. The Old SNA—most detailed level of classification
   1. Private enterprises
      a. Unincorporated enterprises
      b. Incorporated enterprises
   2. Public corporations
   3. Government enterprises
   4. Households and private non-profit institutions
   5. General government

B. The New SNA—most detailed level of classification
   1. Nonfinancial enterprises, corporate and quasi-corporate
      a. Private
      b. Public
   2. Financial enterprises, corporate and quasi-corporate
      a. Monetary authorities
      b. Other monetary institutions
         (1) Private
         (2) Public
      c. Other financial institutions
         (1) Private
         (2) Public
   3. Households, including selected nonfinancial unincorporated enterprises, and private non-profit institutions serving households
      a. Households of owners of unincorporated enterprises
      b. Households of persons in other status
      c. Nonprofit institutions serving households
   4. General government
      a. Central
      b. Local
      c. Social security funds

The major departures from the old SNA are the following: (1) the treatment of unincorporated enterprises; (2) the separation of financial and nonfinancial enterprises; (3) the inclusion of social security funds as a subsector of the government sector; (4) the subsectoring of the household and nonprofit sector (this was not provided in E/CN.3/320); (5) the inclusion in the general government sector of nonprofit institutions serving government and nonprofit institutions serving enterprises and households which are primarily financed or controlled

by government; and (6) the separation of the monetary authorities from the rest of the government sector.

Although there are sub-categories of the financial enterprises, none were originally provided for the nonfinancial enterprises in E/CN.3/320 whose position is stated as follows:

> Although a few countries use a classification in which industrial names make their appearance, there does not appear to be any basis for such a classification which is generally acceptable. Certainly, an industrial classification, such as is used in grouping establishments into branches of production, would not be suitable because, in many countries, large enterprises, in which a considerable amount of total income originates, span a wide range of industrial categories.[6]

As a result of the discussions of E/CN.3/320, however, this position has been changed. STAT/11 mentions that there is "urgent need" for such a classification for the table which it has added showing financial transactions of nonfinancial enterprises. The details of the classification are still open.

5. *Financial Claims*: This is a new classification, since financial data were not included in the old system. Domestic claims are separated from foreign claims, and are classified according to the character and liquidity of the claim. It is suggested that, if possible, similar detail be shown for foreign financial claims. The classification scheme is shown in Table V.

TABLE V

CLASSIFICATION OF FINANCIAL CLAIMS

A. The Old SNA—no classification provided

B. The New SNA—most summary level of detail

Foreign claims

1. Gold and foreign exchange (Assets)
   Currency, deposits, and central government bills (Liabilities)
2. Other Claims

Domestic claims

1. Currency and transferable deposits
2. Other deposits
3. Central government obligations
4. Counterpart of the transfer of central government's currency issue function
5. Counterpart of the transfer of central government's gold and foreign exchange holdings
6. Local government obligations
7. Corporate debt and equity
8. Consumer credit
9. Other loans and advances
10. Net equity of households in life insurance actuarial reserves and in pension funds
11. Proprietors' net investment in quasi-corporate enterprises { private / public
12. Other domestic claims

6. P. 64.

6. *Gross Domestic Capital Formation*: As can be seen in Table VI, the appearance of the new classification is not much changed from that of the old SNA. Although the definitions and categories are substantially the same in the two versions, the following changes have been made: (1) changes in private gold holdings are no longer a component of inventory change, since they are now included in foreign financial assets; (2) work in progress on construction is to be included in inventory change rather than in fixed capital formation; and (3) categories have been added to show outlays for agricultural equipment and outlays for the development and extension of farms, plantations, etc. ("other fixed capital formation").

TABLE VI

GROSS CAPITAL FORMATION BY TYPE

A. The Old SNA—most detailed level of classification
   1. Fixed capital formation
      a. Land
      b. Dwellings
      c. Nonresidential buildings
      d. Other construction and works
      e. Transport equipment
      f. Machinery and other equipment
   2. Increase in inventories
      a. Materials and supplies
      b. Work in progress
      c. Finished goods

B. The New SNA—most detailed level of classification
   1. Fixed capital formation
      a. Dwellings
      b. Nonresidential buildings
      c. Land improvement
      d. Other construction
      e. Transport equipment
      f. Machinery and other equipment
         (1) Agricultural
         (2) Other
      g. Other fixed capital formation
   2. Increases in inventory
      a. Materials and supplies
      b. Work in progress
      c. Finished goods

7. *Exports and Imports of Goods and Nonfactor Services*: This classification corresponds to the most summary level of information in the *Balance of Payments Manual*. Both that document and the old SNA recommend that these real flows be recorded as taking place at the moment when ownership is transferred. Although E/CN.3/320 recommended that imports be recorded as of the moment when the goods crossed into the domestic territory, subsequent discus-

sion led to the recommendation that the old treatment be retained. The proposals are consistent with the recommendations of the International Monetary Fund except in the case of private gold holdings discussed above and in the case of the treatment of life insurance service charges which is like that in the old SNA. Exports are to be recorded f.o.b. the customs frontier of the country and will thus include export duties; imports are to be recorded c.i.f. the customs frontier, and will thus exclude import duties. The comparison of the two classifications is shown in Table VII.

TABLE VII

CLASSIFICATION OF EXPORTS AND IMPORTS OF GOODS AND NONFACTOR SERVICES

A. Old SNA—most detailed level of classification
   1. Exports (Imports), freight and insurance
   2. Transportation, n.e.s.
   3. Passenger fares
   4. Travel
   5. Other nonfactor services

B. New SNA—most detailed level of classification
   1. Exports and imports of merchandise
   2. Transport and communications
      a. Freight on international shipments
      b. Passenger fares
      c. Other transport and communications
   3. Insurance service charges
      a. Insurance on international shipments
      b. Other insurance
   4. Direct purchases by households
   5. Direct purchases by extraterritorial organizations or general government
   6. Other goods and nonfactor services

8. *Balance Sheets*: This is another new feature of the system, and precise recommendations had not been worked out in E/CN.3/320. Table VIII shows the list of items mentioned as likely candidates for inclusion. All assets and liabilities are to be recorded at the market value current on the date of the balance sheet; adjustments for capital gains and losses are to be distinguished from net acquisitions of assets and liabilities and shown in a separate revaluation account. Again the details of this account had not been worked out.

The classification schemes discussed so far give some indication of the amount of detail which the system is prepared to provide on economic agents (kind of economic activity, institutional sectors), the goods and services which they exchange (consumer goods and services, government purposes, gross capital formation, exports and imports), the financial instruments which facilitate this exchange (financial claims), and their financial positions at points in time (balance sheets). There remain several other categories of transactions which are not the subject of detailed classification schemes, but which need to have

TABLE VIII

CLASSIFICATION OF BALANCE SHEET ITEMS

A. The Old SNA—none provided

B. The New SNA—suggested categories
   1. Assets
      a. Fixed assets net of capital consumption allowances
      b. Inventories
      c. Financial assets including liquid reserves
      d. Intangibles (goodwill, royalties, patents, etc.)
   2. Liabilities
      a. Contributed capital
      b. Capital gifts and bequests
      c. Accumulated savings
      d. Liabilities to third parties

their dimensions indicated in order to facilitate the understanding of the new system.

Other Categories of Transactions in the New SNA

These groups of transactions either form the link between the real and financial accounts (value added and business capital formation and land) or reallocate income or saving among the institutional sectors (income transfers and capital transfers).

1. *Value Added*: This flow is defined gross in the new system; it is the difference between gross output valued at market prices and intermediate inputs valued at market prices. Four components are given. (1) Compensation of employees is defined in much the same manner as in the old SNA, including wages and salaries, supplements to them in cash and in kind, and employers' social security contributions. (2) Indirect taxes (net of subsidies) are defined as in the old SNA, though with some amplification and clarification. (3) Capital consumption allowances are defined as in the old SNA, though with more stress laid on the desirability of straight-line replacement cost depreciation allowances. (4) The operating surplus is defined residually as value added less the sum of the other three components.

2. *Income Transfers*: There are five categories of such transfers distinguished in the system; with the exception of the treatment of rent, the flows are defined in much the same manner as in the old S.N.A. (1) Income from property and entrepreneurship includes the entrepreneurial income from unincorporated business, interest, dividends, rent on agricultural and other land, and royalties and the like. Net rents on buildings and other durables are treated as payments for non-factor services, and they thus appear in the operating surplus of the owner of the asset. (2) Insurance transactions include claims and premiums for casualty and for life insurance companies shown separately. (3) Direct

taxes include income taxes. (4) Social security taxes and benefits are shown separately. (5) Other current transfers n.e.c. contains all other transfers not shown in the other categories.

3. *Business Capital Formation and Land*: The financial accounts include net purchases of land in gross investment; the real accounts consider only gross domestic capital formation. Hence these two flows are distinguished.

4. *Capital Transfers*: The definition of this flow in the present SNA is virtually unchanged; the criterion stated for distinguishing between current and capital transfers is that a transfer is to be considered a capital transfer if either party so regards it. No further detail is specified in the system.

Other Differences in Definition and Content

Some of the changes in definition have already been discussed. There are, in addition, some modifications in the domestic and national concepts, in the scope and valuation of production, in the boundaries between public and private consumption and between consumption and capital formation, and in the sectoral allocation of saving. One major change involves the inclusion of constant price data as a part of the system for the first time.

1. *Domestic and National Concepts*: The domestic concept is used in the real accounts, and thus the aggregate product concept is gross domestic product at market prices. All units engaged in production on the domestic territory of a country, including extraterritorial establishments of the government, are considered resident and domestic producers, as in the present SNA. The concept of a resident employee has been widened, however, to include all employees living in a country even on a temporary basis, with the exception of migratory seasonal workers. Furthermore, capital formation in the form of buildings and other structures on extraterritorial areas is considered part of the capital formation of the country in question, not that of the country within whose physical boundaries the structure lies. Thus domestic capital formation occurs only on domestic territory. Only that portion of the income of a subsidiary of a foreign concern which is in fact transferred to the parent concern is to appear in the rest of the world account, a further departure from the old system.

The national concept is used for the financial accounts; here the major aggregates are national disposable income and net national product, both at market prices. Gross national product does not appear in the system, but the broadened concept of resident makes the domestic and national concepts somewhat closer than in the old SNA.

2. *Scope and Valuation of Production*: Provisions for the inclusion of nonmarket activity are somewhat broader than in the old system. All own-account construction is to be included; and all own-account production of products of the enterprise sector, primary or not, is to be included so long as some is produced for sale. Mention has already been made of the treatment of nonagricultural rent; in addition, E/CN.3/320 called for the abandonment of imputed rent on owner-occupied buildings belonging to the government and to nonprofit institutions, a move which met with resistence, but on which no concensus had been

reached in the later documents. E/CN.3/320 also wished to drop the banking imputation; the negative operating surplus which would result was unacceptable to many of those whose opinion was sought, however; STAT/10 therefore retained the treatment in the old SNA.

A similar treatment was accorded E/CN.3/320's recommendations with respect to consumer interest. The first document had recommended that all such payments be treated as a service charge rather than that an interest component be imputed as recommended by the old SNA. Many of those asked favored retaining the old treatment, however; the interest element will appear in the income and outlay account as a form of property income, the service charge in the production account. The documents also define the service charges connected with insurance transactions. For casualty insurance, the service charge is equal to premiums received less claims paid; claims paid is taken as a measure of the risk premium. For life insurance the service charge is equal to premiums received less the sum of claims paid and additions to actuarial reserves; again claims paid represents payment for risk and the additions to reserves constitute a savings element. The service charge of pension funds is equal to their administrative expenses.

In the new system gross margins are taken as the measure of the gross output of trade, transport, and the sale of second-hand goods and scrap; the latter is not treated as a by-product of manufacturing activity. This treatment is of course desirable from the point of view of input-output analysis.

3. *Boundary Problems*: Although there was much discussion in the documents of alternative treatments, the old SNA's criterion for allocating consumption expenditures between households and government on the basis of the sector making the expenditure was retained. All expenditures of nonprofit institutions on durables are considered capital formation in the new system, while only construction outlays were so considered in the old. Although there was considerable discussion of the advisability of according the same treatment to consumer durables, no change was made in the old SNA's treatment of such expenditures as current.

4. *Sectoral Allocation of Saving*: The savings of life insurance companies are no longer to be transferred to households; the addition to the reserves of such companies is matched by an increase in their liabilities to households. The net income of pension funds and of unincorporated enterprises is transferred to households, however; therefore the saving appearing in the income and outlay accounts of enterprises refers to corporate saving only.

5. *Constant Price Data*: Such data were not included in the old SNA, and thus, like the input-output table, the financial claims data, and the balance sheets, they represent an addition rather than a modification. Since the documents do not recommend the deflation of non-commodity flows, such estimates are limited to gross final product and gross value added, the latter to be accomplished using the double deflation method. Some recommendations are also made for the construction of the necessary index numbers. There is some discussion of deflating capital consumption allowances, however, in case net real product is desired.

The Structure of the New System

The Matrix

With the exception of a brief discussion of the consolidated accounts proposed, so far our discussion of the new SNA has focused on the details of the information which the system attempts to structure as compared with the content of the old SNA. The overview of the system is given by the synoptic matrix reproduced from page 78 of document E/CN.3/320. The capital letters refer to sub-matrices of transactions whose meaning can be found in the key reproduced from page 24 of the same document. As an accounting presentation this matrix has the property that the sum of the elements in a given row is equal to the sum of the elements in the corresponding column. These identities lead to some of the more common accounting relationships and definitions.

A	Assets.
B	Investment abroad (net).
C	Consumption expenditures.
D	Provisions for the consumption of fixed capital (depreciation).
E	Exports at market prices.
F	Net changes in financial claims held as assets.
G	Current transfers other than direct taxes on income.
H	Direct taxes on income.
I	Imports.
J	Dividends, interest, disbursements of government enterprises, direct taxes on income and other current transfers. $J = Z + H + G$.
K	Capital transfers (net).
L	Liabilities.
M	Commodity outputs.
N	Net changes in financial claims held as liabilities.
O	Net purchases of land.
P	Gross value added at market prices. $P = W + Y + D + T$.
Q	Net value added at market prices. $Q = P - D = W + Y + T$.
R	Revaluations.
S	Saving.
T	Indirect taxes (net).
U	Use of commodities for domestic purposes.
V	Gross domestic capital formation at market prices and net purchases of land.
W	Compensation of employees.
X	Commodity taxes (net).
Y	Operating surplus.
Z	Dividends, interest and disbursements of government enterprises.

The major blocks of the system relate to opening and closing balance sheets, the rest of the world account, a revaluation account necessary for relating the closing and opening balance sheets, and finally two sets of current and capital accounts. The "real accounts" are the production and capital expenditure accounts; the transactor unit is the establishment, and the grouping of transactors is on the basis of the industrial classification, i.e., "kind of economic activity". The financial accounts are the income and outlay and capital finance accounts; here the transactor unit is the firm, the household, or the government, and the grouping of transactors is done in terms of institutional sectors previously defined. Thus each row and column is further subdivided by one of the

MATRIX ACCOUNTS AND BALANCE SHEETS: THE SUBDIVISION OF THE CURRENT AND CAPITAL ACCOUNTS

			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Opening balance sheet		1																	A_0			
Production Accounts	Commodities	2				U	U	U				U	U	U	U					U		
	Taxes on commodities	3				X	X	X					X	X	X					X		
	Branches of production	4		M	X																	
	Consumers' goods and services	5									C									E		
	Government purposes	6									C											
Income and Outlay Accounts	Value added	7		T		P	P	P											−D			
	Income transfers	8									J								J			
	Institutional sectors	9							Q	J										W		
Capital Expenditure Accounts	Branches of production (Δ stocks)	10														U						
	Branches of production (fixed c.f.)	11														V						
	Consumers' goods and services	12																	V			
	Government purposes	13																	V			
Capital Finance Accounts	Business cap[1] form[n] and land	14																	V	O		
	Financial claims	15																	F	F		
	Capital transfers (net,	16																				
	Institutional sectors	17	L_0								S						N	K			R	L_1
Rest of the world account		18			I		I	I	W	J							N	K				
Revaluations		19																	R			
Closing balance sheet		20																	A_1			

classification or grouping schemes previously discussed. The dimensions of these rows and columns are indicated in the discussion of the matrix which follows:

1. *Opening Balance Sheet (Balance Sheet)*: This account simply states the equality of initial assets and liabilities for each institutional sector.

2. *Commodities (Kind of Economic Activity)*: This account equates the use and supply of commodities valued at producers' prices for outputs and market prices for inputs. The U's reflect the use of commodities as inputs by branches of production, for private consumption, for public consumption, for inventory accumulation, for gross fixed capital formation by enterprises, for household capital formation, for public capital formation, and for export. The elements of the column refer to domestic production of commodities by the branches of production, M; imports of commodities, I (valued c.i.f.); and the customs duties on them, T.

3. *Taxes on Commodities (Kind of Economic Activity)*: The X's refer to commodity taxes other than customs duties. Summing the elements of U and X and of M and X converts the producers' price values of row and column 2 to market values.

4. *Branches of Production (Kind of Economic Activity)*: The M and X entries of this row have already been defined; their sum is the market value of the output of the branches of production. This is in turn equal to inputs of intermediate products at market prices, U + X, plus P, gross value added at market prices.

5. *Consumer Goods and Services (Consumer Goods and Services)*: The C entry in the row refers to a column vector of expenditures on goods and services, the E entry represents consumption expenditures of foreign visitors, and their sum is equal to total private consumption expenditure in the domestic market valued at market prices. The entries in the column equate this sum to consumption of commodities at market prices, U + X, value added in the household sector, P, and expenditures made by residents in the rest of the world, I.

6. *Government Purposes (Government Purposes)*: Again the C entry in the row refers to public consumption expenditure, a column vector whose elements are sums of expenditure categories. This is matched by column entries showing commodities consumed valued at market prices, U + X, value added in the public sector, P, and direct purchases made abroad, I.

7. *Value Added (Components of Value Added)*: Both row and column sum to net domestic product at market prices. In the row, import duties paid, T, value added in the branches of production, in households, and in government, the P's, less depreciation charges, D, are shown to be equivalent to net value added paid to domestic institution sectors, Q, and to wage earners resident abroad, W, the column entries.

8. *Income Transfers (Types of Income Transfers)*: This account states that the sum of transfers received from domestic institutional sectors and from the rest of the world is equal to the sum of transfers paid to domestic sectors and to the rest of the world.

9. *Institutional Sectors (Institutional Sectors)*: The sum of net value added at market prices, Q, transfers received, J, and wage income received from the rest of the world, W, is equal to the sum of public and private consumption, C's, transfers paid, J, and saving, S.

10. *Branches of Production (change in stocks) (Kind of Economic Activity)*: Commodities used for inventory increase, U, are transferred to the business capital formation and land account at producers' prices.

11. *Branches of Production (fixed capital formation) (Kind of Economic Activity)*: Commodities used for fixed capital formation, U, plus the commodity taxes on them, X, are transferred from the Branches of Production to the Business Capital Formation and Land account at market prices, V.

12. *Consumer Goods and Services (Consumer Goods and Services)*: Commodities used for purposes of capital formation in the household and nonprofit sector are transferred at market prices to institutional sectors.

13. *Government Purposes (Government Purposes)*: Again commodities used for capital formation in the various government purposes are summed and transferred at market prices to the account of the appropriate institutional sector.

14. *Business Capital Formation and Land (Business Capital Formation and Land)*: This is a dummy account which serves to convert the two capital expenditure matrices into two vectors of marginal totals and to introduce transactions in land. Since the sum of net acquisitions of land is zero, the column is empty of land transactions though the sector detail appears in the row, including purchases of land by the rest of the world.

15. *Financial Claims (Financial Claims)*: The row entries show net acquisitions of financial claims, F, both domestic and foreign. Their sum is equal to the net incurrence of financial liabilities, N, both domestic and foreign.

16. *Capital Transfers (net) (Capital Transfers)*: Since these entries are net receipts, the row is by definition empty since the sum is zero. The column shows net receipts of these payments by institutional sectors and by the rest of the world.

17. *Institutional Sectors (Institutional Sectors)*: These entries show the changes in assets and liabilities and the revaluations which connect the balance sheets for each sector. The row shows opening liabilities, L_0; the saving at the disposal of the sector, both its own, S, and capital transfers received, K; the revaluation of its liabilities, R; and its closing liabilities, L_1. The column shows its initial assets, A_0, its net capital formation and acquisition of land, V-D, its acquisition of financial assets, F, the revaluation of its assets, R, and the closing value of its asset holdings, A_1.

18. *Rest of the World Account*: The row elements represent payments to the rest of the world arising from imports, I, from current transfers, J, from compensation of employees resident abroad, W, from net capital transfers made to the rest of the world, K, and from the acquisition of claims on the rest of the world including direct investment, N. The column represents receipts from the rest of the world arising from the sale of goods and nonfactor services, $U + X + E$, from income transfers received from the rest of the world, J, from compensation of employees received from abroad, W, from the net acquisition by the rest of the world of financial claims on the country, F, and from net purchases of land by the rest of the world, O.

19. *Revaluations*: These adjustments arise because assets and liabilities are valued at the market prices current at the time to which the balance sheet refers. They represent capital gains and losses, the portion of $(A_1 - A_0)$ and $(L_1 - L_0)$ not accounted for by net acquisitions of tangibles, financial assets, or financial liabilities.

20. *Closing Balance Sheet (Balance Sheet)*: Again closing assets equal closing liabilities.

It is obvious that this matrix is not suited to the actual presentation of the accounting data; this is done in the additional accounts and supporting tables. It is useful, however, to use the matrix as an aid in seeing what kinds of information are built into the system and what kinds are not easily derivable from this structure. It is also interesting to observe the extent to which the information theoretically present in the accounting design is actually used in the accounts and supporting tables to be discussed below.

The Real Accounts

For four broad industrial categories there are given two production accounts (one for commodities and one for industries) and a capital expenditure account.

General government and households and nonprofit institutions have a noncommodity production account and a capital expenditure account.

The commodity accounts show total supply of commodities (= primary products of the industry + the same products produced by other industries + competitive and complementary imports of such commodities) and total use of commodities (= intermediate consumption + private consumption + government consumption + fixed capital formation + net change in inventories + exports).

The production accounts show gross input (= intermediate consumption + components of value added) and gross output (= primary products of the industry + secondary products of the industry). For government, gross value of outlay includes direct purchases from abroad; and gross value of activities equals government consumption expenditure plus sales to households and nonprofit institutions and to enterprises. The household, etc., account has similar external transactions; the credit side is simply private consumption expenditure.

The capital expenditure accounts for the individual sectors show gross domestic capital formation as the sum of fixed investment and changes in inventories on the one hand, and as the sum of capital consumption allowances and net domestic capital formation on the other.

The Financial Accounts

Four sectors are distinguished here: nonfinancial enterprises, corporate and quasi-corporate; financial enterprises, corporate or quasi-corporate; general government; and households, including selected unincorporated nonfinancial enterprises and private nonprofit institutions serving households. These sectors have income and outlay accounts and capital finance accounts.

The income and outlay account for nonfinancial enterprises shows disbursements (= entrepreneurial income of quasi-corporate enterprises + property income payable + net casualty insurance premiums payable + direct taxes on income + current transfers n.e.c. made (net) + saving of incorporated enterprises) and receipts (= operating surplus + income from property received + casualty insurance claims received). The account for financial enterprises includes additional disbursement items of casualty insurance claims payable and life insurance claims payable; receipts are similarly supplemented by casualty insurance claims receivable and net life insurance premiums receivable. The income and outlay account of general government shows as disbursements consumption expenditures, interest on the public debt, subsidies paid, net casualty insurance premiums paid, social security benefits paid, other social assistance payments, current transfers n.e.c. paid to other domestic sectors and to the rest of the world, and saving. The receipts of this sector include income from entrepreneurship, income from property, indirect taxes (import duties + indirect taxes received from enterprises and from households), social security taxes, other direct taxes on income, casualty insurance claims received, and current transfers n.e.c. received from other domestic sectors and the rest of the world. The account for the household and nonprofit sector shows as disbursements consumption expenditure, property income payable, net casualty and life insurance premiums payable,

social security and other direct taxes on income, current transfers, n.e.c. made, and saving. Receipts include operating surplus, compensation of employees, income from entrepreneurship, income from property, casualty and life insurance claims received, social security benefits and other social assistance payments, and current transfers received, n.e.c.

The capital finance accounts are more easily generalized. Gross investment (= fixed capital + change in inventory + net purchases of land + net lending) is shown in each instance as financed by saving + capital consumption allowances + net capital transfers received. Additional detail is given on the net acquisition of financial assets (with detail by type of claim) and net lending plus the net incurrence of financial liabilities (again with detail by type of financial claim).

The Supplementary Tables

The remainder of the information to be extracted from the system and shown as a formal national accounting presentation is found in the supporting tables. Twenty-one such tables were included in STAT/11; several of these did not appear in the E/CN.3/320 document, and they are marked with a * in the list which follows:

PRODUCTION AND CAPITAL EXPENDITURE ACCOUNTS: CURRENT PRICES

1. *Gross Domestic Product and Factor Incomes by Kind of Economic Activity*: A more detailed version of the noncommodity production account.
2. *Use and Supply of Commodities*: A more detailed version of the commodity account.
3. *Gross Outputs and Inputs of Industries*: Row and column 4 of the matrix.
4. *Composition of Private Consumption Expenditure*:
   a. By Type of Expenditure: Amplification of production account for households.
   b. Private Consumption Expenditure in the Domestic Market by Object: Classification of this flow by Consumer Goods and Services list.
   * c. Consumption Expenditure by Private Nonprofit Institutions by Type and Object: The production account classified by relevant portions of the Consumer Goods and Services list.
5. *General Government Consumption Expenditure by Type and Purpose*: The production account cross-classified by the Government Purposes list.
6. *Gross Capital Formation*:
   a. By Type of Good: The gross capital formation classification.
   b. By Kind of Economic Activity: A detailed version of the capital expenditure account.

PRODUCTION AND CAPITAL EXPENDITURE ACCOUNTS: CONSTANT PRICES

7. *Value in Constant Prices and Correlative Price Indexes—Gross Domestic Product by Type of Expenditure*: A constant price version of the consolidated production account with implicit deflators.
8. *Gross Domestic Product at Constant Prices by Kind of Economic Activity*: Industrial distribution of GDP at market prices and at factor cost and of NDP at factor cost.
9. *Employment by Kind of Economic Activity.*
10. *Composition of Private Consumption Expenditure in the Domestic Market at Constant Prices*: A constant price version of 4a and 4b above.

11. *Composition of Gross Domestic Capital Formation at Constant Prices*: A constant price version of Table 6.

INCOME AND OUTLAY AND CAPITAL FINANCE ACCOUNTS

12. *National Income and Its Distribution*:

a. National Income at Market Prices: A slight amplification of the consolidated national income account less transfers from abroad.

b. Distribution of Income: Public and private division of the items in national disposable income.

13. *Income and Outlay of the Subsectors of General Government*: Income and outlay accounts for the three subsectors.

*14. *Selected Outlays of General Government, Consolidated, by Purpose*: Government consumption, public debt interest, capital formation, and current transfers classified by Government Purpose list.

*15. *Income and Outlay of the Subsectors of Households Including Some Noncorporate Nonfinancial Enterprises, and Nonprofit Institutions Serving Households*: The income and outlay account for each of the three subsectors.

16. *Capital Transactions of the Detailed Subsectors*: The capital finance accounts for all subsectors.

17. *Capital Transactions of Private and Public Sectors*: The above, but with the subsectors grouped into these two categories.

18. *Capital Transactions of the Monetary Sector, Consolidated*: The above for the monetary authorities and other monetary institutions.

*19. *Financial Transactions of Nonfinancial Enterprises*: The income and outlay and capital finance accounts for subsectors of nonfinancial enterprises. The classification is not specified. (Note: it is given, but it is clearly a space-filler.)

*20. *External Current Transactions*: Elaboration of the current portion of the consolidated external account.

*21. *External Capital Transactions*: Elaboration of the capital portion of the consolidated external account.

This completes our brief review of the documents discussed by the conference and their relationship to the old System of National Accounts. With this background we can turn to the proceedings of the conference.

The Conference and its Critique of the New System

Summary of Major Issues Raised

As envisaged by its organizers, the purpose of the conference was to inform the United Nations of the opinion of national accountants and economists from the United States and Canada. The conference was to ask whether this was the best that could be done; and one of the session organizers explicitly urged an aggressive attitude on the part of both critics and defenders, since the system set forth in the documents may well set the pattern for work and discussion for many years. Since both the producers and consumers of national accounting estimates were in attendance, the range of issues raised and of view-points presented was quite wide. There was considerable interaction between these two groups in matters relating to the purposes to be served by national accounts, an interaction which had as its focus the proposals for the revision of the SNA. The conference consisted of seven sessions, each on a rather specific topic; these

sessions are summarized individually in the remainder of this section. It becomes apparent upon reading these summaries, however, that there were certain recurring themes which were at times explicitly stated and at other times implicit in the discussions of other topics.

First of all there was the question of the purpose to be served by a set of social accounts. Second, there was the question of the structure of the proposed system as a vehicle for accomplishing those purposes. Third, there was the critique of the concepts and definitions proposed. And fourth, there were more detailed issues of classification and measurement, the technical matters involved in implementing the system to which the documents gave little attention, the conference somewhat more.

The Purpose of the Social Accounts

A clear consensus was expressed that a more explicit statement was needed on the purposes of this international system of accounts. There seemed to be confusion as to whether the aim here was to design a system which each nation would be expected to adopt for its own internal purposes, in the near or distant future, or to formulate a basic set of tables for reporting to international organizations to facilitate pertinent international comparisons.

Reaching agreement on the former purpose would require a very detailed review of all basic elements of the accounts; while for the latter, countries could reach agreement with less attention to detail.

There was considerable sentiment that not only did lack of a clear statement of purpose give rise to much of the sense of confusion about the report, but even more important, lack of a clear approach in the report itself to the problem of purpose resulted in an uneven and sometimes inconsistent presentation.

The Structure of the System

One of the major forces leading to the revision of the old SNA was the development in the postwar period of accounting systems other than the income and product accounts which were its basis. The new system attempts to integrate income and product accounts, flow of funds accounts, input-output tables, and national and sector balance sheets into a single framework. The SNA has always been linked through its external accounts with the International Monetary Fund standard form of balance of payments statistics, insofar as it was feasible to do so; this is retained in the new system, though there are more departures from IMF standards. Links to the material product system statistics of the planned economies are made through the classification schemes of the real accounts.

The conference discussed two issues related to this integration of accounts: the timing of this move and the form taken by the integration in the new system. The question of the desirability of integration as an ultimate goal of national accounting was not debated. All seemed agreed that the income and product accounts alone do not provide information on a sufficiently wide range of

economic transactions to prove adequate for most analytical purposes for which the national accounts are intended, and all seemed to regard attempts to link the separate accounting schemes with favor.

It was by no means generally agreed, however, that this was the proper time for a positive move in the direction of an integrated international system of accounts. Some felt that a better course for the international system at this point would have been an overhauling of the existing income and product accounts, with considerable attention paid to setting national statistical houses in order and to improving the quality of existing estimates. The proponents of this position were not unwilling to see the inclusion of input-output and flow of funds information as supplementary tables for those countries equipped to fill them out, however. The view was also expressed that experience was still too limited in some forms of national accounting to permit international codification of accounting design and concepts at present.

There were others, however, who were clearly of the opinion that the advantages of thinking within the framework of an integrated accounting design decidedly outweighed any disadvantages inherent in such a move in the immediate future. They pointed out the desirability of bringing these various sets of data into confrontation with one another and of thinking of requirements for all aspects of the system when setting up concepts and definitions. This was particularly emphasized in the discussion of whether to capitalize expenditures on consumer durables as well as in the discussion of the measurement of capital consumption allowances, the link with the balance sheet requirements being obvious here. Even the most ardent integrationists, however, felt that the new system, as presented in the documents under discussion, suffered considerably from the unevenness of the treatment given to the various accounting systems being brought together. The less charitable suggested that the present integration was more a matter of form than of substance.

The most obvious feature of the new system is its elaboration of the production account. Considerable emphasis is given to both commodity and industrial detail of output in both constant and current prices. Some of the participants liked this expansion, because they were primarily interested either in the input-output analysis of production, or in types of analysis facilitated by the commodity emphasis of the system, such as analysis of the structure of consumption, some forms of public sector analysis, analysis of real product, etc. Others were not satisfied, however. Some felt that input-output had been stressed out of all proportion to its value, since the entire expansion of the production account had been in this form. They questioned the ability of the establishment-based statistics which the system required to yield a usable and workable industrial classification of economic activity. More specifically they felt that this "solution" to the company-establishment problem threw away entirely too much information which is of interest in the analysis of real-world economic phenomena, particularly financial phenomena.

There was strong and general dissatisfaction with the omission of information on income by type in E/CN.3/320. It was urged that the minimum detail

required was a table giving national income by type, cross-classified with legal form of organization. Information on income shares by industry was also felt to be valuable even though this could not be supplied by all countries.

It was generally felt that for economic analysis, information on income by type was one of the most important items of information to be derived from national accounts. It is required for studies of economic growth based on the production function approach. It enters into analyses of inflation and deflation and of questions concerning the distribution of benefits from economic progress. It was pointed out that changes in the distribution of activity among corporations, noncorporate enterprises, government, and other types of institution so affected the income share distribution that it could not be properly interpreted without a cross-classification.

With regard to the financial transactions account, it was noted that the treatment in E/CN.3/320 was quite elementary and broad. While this might be consistent with the aim of providing only very general guides to the many countries with only little practical experience with these accounts, it was still agreed that an effort needed to be made to bring the proposals in this field up to the level already reached with respect to other sections of the system.

Since the details of the balance sheets were not specified, little was said about the proposals for this set of accounts. Some concern was expressed, however, about the suggestion that all assets and all liabilities be revalued at current market prices; this needlessly destroys a basic source of information, the enterprise balance sheet, since the figures can be shown on both book and market value bases, and also throws away potentially interesting information on differences in valuation between debtor and creditor. Mention was also made of the pitfalls of using highly aggregative data to derive gross stock estimates under the one-horse shay assumption of retirements, a procedure apparently recommended by the documents.

To the dismay of most of the participants, the matrix rather than the three sets of accounts seems to provide the organizing framework of the new system. It is also the matrix into which the supporting tables seem to feed more naturally than into the accounts. Some felt that this fact, that they did not provide the organizing device for the proposal, was the cause of the rather confusing nature of the accounts. In any event, some doubt was expressed that the three sets of formal accounts served well either as an analytic tool or as a broad summary of the system and its inter-relationships.

There was considerable feeling that the proposed matrix might constrain analysis or make necessary a proliferation of special tables not related to the basic system. The distinction drawn between commodity and other flows, particularly the emphasis on commodity flows—confining establishment based data for the domestic economy to commodity flows and company based data for the nation to other flows—was regarded as more useful for fitting into the matrix than for flexible analysis.

It was noted that the tendency of the new system to go further than the old in providing for supporting tables which are independent of the standard accounts is likely to lead to confusion.

It was felt that, for the purpose of maintaining considerable flexibility, the relation between the accounts and the general information system ought to be given increasing recognition, in good part because the computer has facilitated a wide range of alternative linkages of data.

The Concepts and Definitions

The participants welcomed the shift in focus from the market to a somewhat broader concept of economic activity, which the new system provides with its expansion of the amount of own-account production included in output. It was felt that this did much to remove some of the bias in the accounts arising from differences among countries in the degree of commercialization. Some doubts were expressed, however, about the ease with which the estimates could be made.

Although there was disagreement among the discussants on whether outlays on consumer durables should be capitalized, those wishing to do so felt that enough detail was provided for some rearrangement to take place in this boundary between current and capital outlays. Participants also felt that the classification of government expenditure permitted the analyst to redefine the boundary between intermediate and final expenditure, even though the system considers all government expenditure final; most seemed to feel that more detail should be given for government capital outlays, however. It was generally agreed that there was not sufficient information provided for the redrawing of boundaries between intermediate and final expenditures of enterprises.

There seemed to be considerable satisfaction with the detail provided on consumption. Although the system does not give a completely uniform classification of consumption no matter how financed, it is enough of an improvement over its predecessor to have been complimented by most discussants. This happy state of affairs did not obtain in the case of capital formation. The categories to be distinguished are few and broad. Speakers pointed out that it is difficult to derive a plant and equipment total, and that roads and streets, which behave quite differently from the rest of gross investment, are included in "other construction" along with a number of other items. It was suggested that the system be extended to provide a capital-flow table to complement the input-output table as one means of introducing more detail; and the danger of attempting to estimate the stocks necessary for balance sheet purposes on the basis of such aggregated data without at least worksheet detail was also mentioned. The lack of equality between gross investment less depreciation and the change in real wealth was also pointed out.

The sharpest criticism of the detail provided by the new system came, of course, from those interested in income analysis. One participant cited the U.S. table on national income by legal form and by type of income as a minimum amount of information; not only does the new system not provide this, it does not even provide as much as did the old SNA.

Sectoring also received attention. The treatment of unincorporated enterprises in the "financial accounts" was applauded by no one; most seemed to favor the creation of a separate sector for such businesses, though failing that,

they would prefer to see all of them combined with other enterprises. There was some sentiment in favor of creating a separate nonprofit institution sector, since these institutions are quite important and quite varied in purpose. Most of those who discussed the subject seemed to feel that additional subsectoring was needed for general government beyond the three provided.

The industrial sectoring received little attention in any context but that of the "real" accounts. Curiously, despite considerable discussion of the cavalier dismissal of the company in the system's insistence on a pure establishment-based industrial classification, no one mentioned Table 19 in STAT/11 and its note to the effect that "a classification is urgently needed. . .".

On the subject of transfers, those who expressed an opinion seemed to favor treating all transfers as current, but they felt that if there was to be a category of capital transfers, it should only contain those transfers which were so regarded by both parties, not just by one party. Although most seemed to favor the treatment of interest and dividends as transfers, they did not feel that this excused the absence of detail on the individual items. A certain bewilderment was often expressed at the treatment of insurance transactions and their prominence in the system.

At least in its final form, the new system recommends the usual imputations. Some doubt was expressed about the feasibility of estimating some of the own-account production items, but there was general sympathy for the attempt. The conference also seemed to approve of the return of the banking imputation. It was suggested that if one goes so far as to impute an income from the ownership of consumer durables and government assets, the results of the estimation procedure should be clearly labeled and segregated.

Throughout much of the discussion of definitional matters it was pointed out that the definitions were too monolithic with no room provided for alternatives. There was also present the suspicion that this was the case, partially at least, because each entry is an element in the matrix; both parties are then forced, by accounting convention, to view the transaction alike, whether or not this has relevance to the real world or to the analytic usefulness of the accounts.

Technical Matters

The classification schemes generally met with approval; exceptions to this statement have been noted elsewhere. The discussion on the implications of an establishment-based allocation of industrial activity has already been mentioned. There was in addition some dissatisfaction with the disappearance of the category "ownership of dwellings" from the list and with the retention of "public administration and defence" as a sort of "government activities, n.e.c.", in the industrial classification. Someone wondered why the new system retained the inclusion of repair services with the production of the good in question.

Few questions were raised about the classification of consumer goods and services except for the criteria used to set up the categories. Similarly the government purposes classification led to little comment other than the expression of the desire that it be somewhat more closely linked with both the personal consumption categories and with the U.N.'s work on the classification of government

transactions. Suggestions for change in the classification of financial claims were confined to suggestions that some categories be given additional detail sufficient to permit a liquidity ranking and a to-whom-from-whom classification; it was also suggested that an external account be set up to show financial transactions with the rest of the world by type of claim.

The company-establishment problem has been mentioned several times. The treatment proposed provides only compensation of employees and operating surplus by industry originating. It was suggested that the U.N. give some consideration to the possibility of developing some linkages between companies and establishments, either through the use of some intermediate reporting unit such as the division or through the U.S. procedure of linking Census reporting units to Internal Revenue Service reporting units.

In addition to the issues presented so far, which relate in the main to current price estimates, there is another set of problems arising from the inclusion of constant price estimates in the system. Their appearance was greeted with satisfaction, though some wondered whether there was enough constant price information, either on some absolute standard or by contrast with the elaboration of the current price information. It was suggested that it might be desirable to have physical volume estimates of inputs other than labor as well as the employment data which are included. It was strongly recommended that the details of the procedures to be used in deriving the constant price estimates be specified, since the generality of the instructions included in the documents before the conference could easily lead to estimates which varied too much both in quality and in concept for true comparability. One participant questioned the wisdom of the system's insistence on the use of the double deflation method, since he felt that one is asking an equally interesting question by deflating a net item in many cases. There was also some discussion of the current U.S. and Canadian research in matters of measuring public sector productivity, developing industry price statistics particularly for nonstandard items, and the optimal rebasing procedures for price indexes.

The issue of the revaluation accounts was raised in several forms. Since both the flow accounts and the wealth and balance sheet statements which will ultimately be included specify that all assets and liabilities be valued at current market prices, there will be essentially two valuations available for any given asset: that carried on the books of the owner of a tangible asset (or of the creditor and debtor in the case of an intangible asset), and that provided by the current market. Furthermore, in the case of balance sheets, there are three possible valuations of the firm: the book value of its tangibles, the market value of its tangibles, and the market value of its equities. Since one must separate capital gains and losses from net acquisitions of such assets and liabilities, revaluations are necessary for flows as well as balance sheets. The new SNA requires that everything be valued at market; yet several participants indicated that they found these differences in valuation to be quite interesting bits of information which therefore should be preserved in some form or other. Others mentioned that the revaluation of current depreciation charges to market value will also involve a redefinition of current operating surplus and thus of factor

shares, a topic which the documents left unexplored, and on which there was some feeling that the proper treatment from the point of view of production is not necessarily what one would desire for the income side of the accounts.

Finally, there were certain doubts expressed about the ability of the data base and the state of the national accountant's art to provide meaningful estimates of some of the items. Such doubts were expressed for some of the operating surpluses by kind of economic activity, for the depreciation estimates for government structures, the own-account production of some processed primary products, and for annual input-output tables.

The Integration of Social Accounts

The first session on the topic of the proposed integration scheme began with remarks by Mr. Sigel, the session organizer, on the purposes of an international system of accounts, the nature of the pressures for the revision of the existing system, and the general structure of the accounts which the documents proposed. With respect to purpose, he pointed out that past discussions had indicated that an international system might serve a variety of purposes, and that there does not seem to be a clear consensus on the weight to be given to these various possible purposes in designing such a system. For example, it might be envisaged as a standard that all countries would adopt for their own internal purposes; or it might be intended solely as a system for international reporting and comparison. If the primary purpose is comparison, it may be for comparative measurement of broad aggregates, for structural comparison, or for comparative macro-analysis. The system may be thought of as primarily a guide for the future, or it may be envisaged that the system should be implemented statistically in the immediate future. It may be intended for all countries, for all developed countries, or for some other grouping of countries. Although the structure and details of an international system might be quite different depending on the weight given to the various purposes, such issues were not clearly stated, adequately discussed, or resolved in the documents at hand; this has made evaluation of the proposed system quite difficult.

Turning to the related question of the reasons for the revision of the SNA, Sigel discussed the kinds of pressures that had built up for revision in the accounts and raised the question of how the present proposals reflected and satisfied the various analytic needs that had produced these pressures. Some of the expressions of need for change in the SNA had been in terms of concern with the relevance of the existing SNA to the analytic, institutional, structural, policy, and statistical problems facing countries. This raised questions about the ability to get an international system that would provide meaningful comparisons among countries of varying institutional arrangements, a subject to which the documents pay little attention. These and similar issues suggested to Sigel that, rather than to have attempted a single detailed standard system that would pretend to fit all countries, it might have been a more productive approach, capitalizing on work underway and needs already expressed, to have encouraged the development of a family of standard systems each geared to the operational

needs and possibilities of certain groups of countries, and to have created as a capstone a simplified over-all international system into which the others could easily be collapsed for those relatively simplified kinds of comparisons that can validly and significantly be made between countries in widely different circumstances and stages of development.

With respect to the proposals themselves, Sigel found that, taken at the broadest level, the proposed system embodies some welcome advances over the existing SNA—the attempt to integrate income and product, input-output, and flow-of-funds; the attempt to face the issues of commodity vs. industry, etc. However, in actual execution, the specific structure of accounts presented seemed to him to be unduly awkward and cumbersome. It does not fulfill one of the primary purposes of the structure of accounts—that of presenting the social accounting system in such a way as to facilitate dealing with the complex interrelations within the system and viewing individual concepts, accounts, and transactions in the perspective of the whole. Many of the weaknesses and lapses in treatment and in terminology in the account structure are perhaps attributable to an apparently almost exclusive focus on the matrix and on the kind of commodity-industry transformations easily visualized there, and an apparent lack of any real interest in the integrity of the account structure or in the logical account presentation of the entire system. The emphasis on the commodity aspect throws the presentation of the structure of accounts out of focus and out of balance. For example, the structure of accounts, as presented, is unduly complicated by the use of an overlapping unarticulated double deconsolidation of the national capital transactions account. Actually one of the "deconsolidations" is not a deconsolidation at all but simply plays the role, in a misleading and complicated fashion, of a supporting table showing a breakdown by industry of fixed capital expenditures, inventory change, and capital consumption.

With respect to the incorporation of financial flows, Sigel found that there seems to have been an overly mechanical take-over of the formal conclusions of the Conference of European Statisticians groups working in this area, without sufficient attention to the doubts, hesitations, and problems of substance, specification, and institutional difference that were raised in the discussions of these groups.

The second discussant, Mr. Copeland, called attention to the fact that the tables carried annually in the Yearbook of National Accounts Statistics include the interlocking system of sector accounts of the old S.N.A. (gross domestic product account, capital formation account, government account, household etc. account, and rest of the world account). He thought this evidenced the usefulness of such information, and urged that an interlocking system of this sort should be continued and the financial detail it provides expanded. He also proposed that there be new tables incorporated into the Yearbook as soon as possible showing cumulative net fixed capital formation in current market prices and the cumulative net change in stocks on both a current and a constant price basis. He further suggested that net material product should be easily identifiable both by object of expenditure and by industrial origin in whatever new tabular format is adopted.

Mr. Goldberg, the third discussant, reiterated the need for a lucid presentation and clearly articulated statement of purpose. He also pointed out that in discussing comparability one should distinguish between the conceptual, definitional, and classificational aspects of the system and those features related to presentation and accounting design. Although the needs for comparability require uniform adoption of concepts, institutional and other differences between countries probably necessitate differences in design and presentation. The major contribution of E/CN.3/320, he felt, lies in the comprehensiveness of its treatment and the integration of the various systems of accounts; it is not too different from the old SNA in most of its basic concepts. Thus by striving for comparability in component detail and maintaining enough detail in the national accounts, countries could report in the international form without having to do too much violence to national analytic presentations and needs. The attempt at synthesis of standard commodity and industrial classifications with national accounts classifications is also a major step forward.

Mr. Goldberg did, however, point out some deficiencies in the Expert Group report. The most novel aspect of the system, the distinction between the "real" accounts based on a domestic product concept and the establishment as reporting unit, and the "financial" accounts with a national production concept and the company as reporting unit, is one he endorsed; among other advantages it facilitates the bridging of gaps between the SNA and MPS systems. However, the rather cavalier disposal of the company-establishment problem does pose problems; the link between them is made only at the most aggregative level. The absence of factor share information by industry is a major deficiency. Furthermore, the treatment of concepts and definitions is monolithic across the entire system, with no room for alternative concepts which might be more practical or useful for different purposes. Little guidance is provided for the construction of regional accounts, and more thought needs to be given to the requirements for price data and their integration with the appropriate items in the accounting system.

The most critical of the discussants was Mr. Jaszi, a member of the Expert Group which drafted the proposal. Since he had not had time to study the two supplementary documents, his comments were limited to E/CN.3/320. He listed the major shortcomings of the old SNA as four in number: (1) deficiencies in accounting structure, (2) deficiencies in the presentation of information, (3) lack of provision for new branches of social accounting, and (4) lack of provision for the interests of underdeveloped countries. Mr. Jaszi felt that on all four counts E/CN.3/320 is not only no improvement, it is even a retrogression.

The old SNA pictured an economy composed of transactors each equipped with a production account, an appropriation account, a capital reconciliation account and an external account. The new system has a proliferation of accounts which do not appear to refer to transactors and which, therefore, do not lend themselves to a description of the economic process in terms of transactors. The manner in which the company-establishment problem is disposed of makes it impossible to study saving and investment by industry, or to examine industrial differences in the distribution of property income. The consolidation procedures

seem peculiar, if not sloppy; and the tables feed into the accounts even more poorly than before. The matrix is a straitjacket on information rather than the flexible storage system which its creators intended.

In Mr. Jaszi's view the old system burdened the accounts with information which would more appropriately have been shown in the supporting tables; not only is this even more true of the new system, but the informational priorities are strange. International transactions in land and some technical details of input-output accounting are prominent, while a table of national income by type of institution has been omitted. The adequacy and clarity of the definitions is difficult to evaluate, since they are not contained in the report. The old system, though fairly realistic in its informational requirements so far as developed countries were concerned, did ask for information that was in practice unobtainable; the new system is even less realistic.

Mr. Jaszi was also of the opinion that the integration achieved is more in form than in substance, though the scope of the report is so broad that little of real use can be said. The underdeveloped countries have an even less satisfactory document than they had before.

The last panelist, Mr. Leontief, spoke from the point of view of the user of national accounting data, rather than from that of a producer. He felt that the structure of the accounts is interesting, but not crucial so long as sufficient detail is given to permit the user to rearrange the data for his own purposes. He welcomed the elaboration of the production account, while admitting that others might want different detail and that detail makes the system cumbersome. He also found the producers guilty of implicit theorizing and the consequent distortion of the original data in the making of imputations which are not observations of fact. He urged the presentation of more detail rather than forcing comparability via aggregations; he would also prefer to see more physical data even if items cannot be summed, since one of the features of economic development is the change which occurs in what is being monetized. He would prefer to observe this process directly rather than through imputations.

In the general discussion which followed the remarks of the panelists, several points were pursued. Mr. Kendrick emphasized that integration was a good thing, and that the accounting system should show how the parts are related; he also felt that this step should have been taken in this document. Mr. Jaszi felt that this was too ambitious an undertaking, and that the income and product accounts should first have been got thoroughly under control. Mr. Copeland suggested that the revision of these accounts should focus on the tables to appear in the Yearbook. Mr. Barger questioned the desirability of being too far ahead of the standard statistical practice of even the developed countries, and asked whether anyone had ever been able to fill in the old system completely.

Another topic which was discussed was the general subject of what to prune—some of the new elaboration, or some of the statistical dead wood. Mr. Leontief suggested that in order to ascertain what portions of the accounts need more work and which portions can be neglected, some effort be made to find out what users do with national accounts data, what additional detail they would like, and what supplementary information they used in conjunction with

the accounts. Mr. Goldberg, while agreeing with this, pointed out that supply tends to create its own demand in such matters; and that since it takes quite a while to produce a reliable set of estimates, the producer has to be willing to gamble on anticipating the market to some extent. Mr. Taylor felt that the redesign should be dictated by what people want, and Mr. Fabricant suggested that perhaps between successive revisions of the UN system of accounts there should be a study and document on the uses made of the data, the problems encountered in using them, and the relative importance of the doubtful items, and what difference it would make if a change were made in the system of accounts. Mr. Grove, on the other hand, felt that the users have too much say in what is done; producers are the only ones who know what the data are worth and what is involved.

Mr. Denison requested that national as well as domestic product be given in supporting tables, and he also pointed out the costs of changes in classification and concept in terms of time series analysis, since it is difficult to carry revisions back in time. Mr. Leontief maintained that one should not be a slave to comparability in time or in space; since the economic system changes so much, comparison is not really meaningful. Mr. Denison remarked that during his years of service on classification committees, he had observed that classifications change not because the economy changes but because the personnel of classification committees change. Mrs. Carter requested information on international prices, as a necessity in international comparisons. Mr. Sigel agreed with her on the importance of the question, but felt that because of the complexity and magnitude of the index number problems involved, it was too much to expect that the national accounting systems as such, and at the level we are discussing here, could give much help in a simple form on such questions.

The relationship of the national accounts to the information system was also discussed. Mr. Ruggles observed that the accounts seemed to be reproducing the system, rather than using it to generate and define certain useful constructs. He also felt that it was necessary not only to specify clearly the relationship of the accounts to the information system, but also to do much more work on what should be in the information system. Mr. Fromm seemed to feel that the proposed accounting system was being offered as a model of the data system, whereas one should first ask what the basic analytical purposes to be served by the data system are, and how the system can be constructed to serve these purposes. There was some discussion of the form in which the national accounts should be published—as a big book or as a reel of magnetic tape—with the advantages and disadvantages of each method. (Intermediate techniques of distribution seem to have occurred to no one.)

Mr. Aidenoff, the participant in the meeting from the Statistical Office of the United Nations, replied to some of the comments. The major purpose of the revision of the SNA was to formulate a system which would provide a framework for developing national accounting and co-ordinated economic statistics during the next 10 to 15 years. The revised and extended system is designed to furnish guidance in respect of national accounting and the collection of economic statistics nationally, and the reporting of comparable data internationally. In

formulating the system, attention is being devoted to the requirements of economic and social analysis and the needs for a body of integrated basic statistics co-ordinated with the national accounts. In particular, the emphasis on disaggregation of the accounts of the system as exhibited in the matrices and on consistent definition and classification of a wide range of statistics should be of considerable assistance to the developing, as well as other, countries, in gradually developing useful and reliable data in the light of their priorities and statistical circumstances. In providing a detailed "worksheet approach" to an integrated system so that the relationships between the components would be clear, the complete matrix of the system may appear to be too complex. This impression would be dissipated when the matrix is examined part-by-part. It is not intended that all the accounts and tables be compiled nationally or reported internationally. Each country should make a selection and adaptation of the accounts and tables in the light of its own circumstances. A selection would also be made for purposes of international reporting, taking account of analytical requirements internationally and the availability of data nationally. The later descriptions of the system would deal with the uses, problems of compilation, and frequency of preparation of the various accounts and tables in order to furnish guidance in these respects.

As a result of the round of discussions of E/CN.3/320, a much more flexible approach is to be adopted in respect of the real-financial dichotomy. For example, a table on the industrial classification of the income and outlay and capital finance accounts of corporate and quasi-corporate non-financial enterprises has been introduced in ST/STAT/12. The enterprise, in addition to the establishment, is to be utilized as the transactor unit in the production accounts in the case of the adaptation of the system to the requirements of the developing countries. The terms "real" and "financial" will not be utilized to describe the basic differences between the production accounts, on the one hand, and the income and outlay and capital finance accounts, on the other.

Personal Consumption

The second session of the conference considered the topic of personal consumption. Mr. Friend, the session organizer, opened the meeting by pointing out that few concrete recommendations for changes in treatment were made in this flow. On the subject of the composition of consumption, he mentioned that the documents are not clear on whether consumer durables are a current or a capital expense. E/CN.3/320 seems to be saying that they are not a current expense, but it does not go so far as to recommend the cumulation of stocks and the charging of depreciation. Mr. Friend pointed out that in addition to the arguments cited for considering them as capital, there is also the fact that the consumption function is more stable without them than with them. E/CN.3/320 also mentions the notion that educational expenses are a form of capital formation, but it does little beyond citing the difficulties associated with implementing this approach. Little attention seems to be paid to the problems associated with consumption-related items treated as intermediate product, ranging from improved conditions of work to company-subsidized meals and liquor, entertainment, country clubs, foreign travel, and even African safaris.

Mr. Friend was unhappy with some of the allocations of expenditure between sectors. For example, the reports recommended that the expense of acquiring and operating an automobile for both business and household purposes should be assigned to one or the other; Mr. Friend felt that the practical difficulties cited as the reason for this recommendation are not sufficient to outweigh the theoretical desirability of making an allocation. No proposals are made for a separate nonprofit institution sector, though the reports suggest that more study be made of how their activities can most appropriately be allocated among households, business, and the government sector. The recommendation that consumption items provided by government be considered the expenditure of the sector actually making the purchase (with nominal fees considered a transfer) Mr. Friend found congenial, as he did the supplementary table combining both private and government consumption outlays by class of goods and services.

The subject of imputations next received Mr. Friend's attention. He pointed out that on the topic of the banking imputation, the documents differed. E/CN.3/320 recommended that it be dropped on the grounds of statistical difficulties and analytical limitations; the others seem to suggest making it and allocating it between consumption and intermediate purchases by some unexplained procedure. He suggested that as a possible criterion to be used in the matter of financial intermediaries, one might examine the stability of the consumption function with and without such imputation. On the subject of other imputations, the documents have little to say except that the gross ouput of products of the enterprise sector by households for use in the household of the owner and supplements in kind to wages and salaries should be covered in consumption.

Mr. Friend would prefer to see a separate unincorporated business sector which engaged in both production and consumption, rather than the recommendation made in the report of splitting out from the household sector those firms with separable books and their inclusion in the renamed corporate sector.

Consumer interest is another item on which the documents seem to disagree. E/CN.3/320 seems to recommend the dropping of the isolation of the interest element in consumer credit charges on the same grounds that it recommends dropping the banking imputation. STAT/10 seems to reverse this ruling, and STAT/11 seems to classify all property income payable by households as a transfer item. The problems connected with the measurement of real consumption are not touched on to any great extent, and Mr. Friend would have liked to see some mention of the criteria used in setting up the consumer expenditure categories.

The second discussant, Mr. Juster, limited himself to the general topic of the treatment of consumer durables. He began by stating that some definition of consumption and investment is necessary; to him consumption refers to goods and services used up during the accounting period, investment to those goods still around after the accounting period. Neither the old nor the new SNA adequately classify transactions in this regard, since they treat capital formation as the purchase by business firms of reproducible assets expected to yield a flow of money returns in excess of costs. This definition is not followed, of course, in

the case of owner-occupied housing because to do so would yield results which are nonsense. Mr. Juster then asked what difference there is between this and other owner-used durables producing a flow of consumption services? Recognizing consumer durables as a form of capital formation does not mean that one must impute an income to the owner, though this should probably be done either by assuming some rate of return or by looking at the rental market. He also pointed out that by not recognizing household capital formation one cannot observe the substitution which has taken place between household and business investment.

Mr. Juster admitted some of the practical difficulties with this idea, however. If capital formation in consumer durables is defined too broadly, the double counting of consumption and capital formation always involved in gross product estimates will be greatly magnified. In addition, the treatment of consumer interest should be consistent with that of consumer durables. If durables are treated as consumption, interest should be treated as a transfer payment; if durables are treated as investment, interest should be treated as a productive activity, since otherwise the estimate of income accruing from ownership of capital assets will depend on whether one buys the asset for cash or for credit.

Mr. Juster also pointed out that educational expenditures pose similar problems, though the method of separating out the investment and consumption components is far more difficult.

The third discussant, Mr. Easterlin, discussed the SNA proposal from the point of view of making international comparisons of the level and structure of consumption. In such endeavours, biases arise because of differences in the institutional structure of economic activity and in the degree of commercialization. The proposed changes do move in the direction of removing these biases, though they could do more, in his opinion.

In a three-sector economy composed of government, business, and households, there will be shifts in the sectoral composition of expenditure which can be significant over time or across countries at any one time. There needs to be a recognition that not all government or personal consumption expenditure is final and not all current business expenses are intermediate. The proposed classification of government consumption expenditure by purpose is a significant improvement. Even though these are treated as final, there is, in Easterlin's opinion, enough detail for the analyst to employ different concepts. The category of expenditures which provide services on an individual basis is to be subdivided in a form which meshes with the classification of personal consumption expenditures; this is a quite desirable change in his opinion.

Mr. Easterlin also liked the intermediate-goods treatment of certain specific business costs, though the proposal to limit this to contractual obligations of purchases providing no direct consumer utility reduces its applicability. Business supplements to wages and salaries, though recorded as intermediate by the firm, are of benefit to employees as consumers and may be reclassified as final. Mr. Easterlin would like to have estimates, at least, of the other fringe benefits which are excluded from this treatment in the SNA on the grounds that

much of the benefit accrues to the employer. One would really like a combination of final consumption expenditures regardless of how they are financed; to some extent the report recognizes the desirability of a unified classification of total consumption cutting across sector lines.

The existing SNA centers on market transactions, introducing imputations for some nonmarket production, such as primary products produced for own consumption. The revision would include own-account construction and the output of all commodities produced for own consumption so long as some is produced for sale, though this restriction is only a nominal step to the inclusion of such activities for many developing nations.

Mr. Sigel pointed out that the consumer durables question points up the desirability of having an integrated system sketched out broadly in all its parts before settling on specific treatments in any one part of the overall system. Thus, if consumer durables are to be included as assets in the balance sheet of households when we come, in the future, to set up the balance sheet part of the national accounts, this is an argument for making the corresponding treatment now in the capital transactions account. Mr. Adler stated that he did not feel that these goods were capital formation; the consumer does not consider his purchases to be capital goods, and he cannot use them as earning assets except in the case of houses and perhaps automobiles. If one is trying to measure real consumption, one must measure the transaction; otherwise one must estimate inventories and the like for the household sector.

On the question of imputing income and a parallel consumption element to owners of consumer durables, Mr. Denison urged that if it were done, the flow should be kept segregated from the other elements. Mr. Sunga was opposed to imputing income even on owner-occupied housing, since the producer and consumer are the same person; and thus the owner is making a profit by selling to himself without assuming one of the major risks of property ownership. Furthermore he felt that institutional change is a fact of life, and that the market/nonmarket allocation at a point in time is of interest. Mr. Juster replied that, by imputation, estimates are made invariant to whether people own or rent; and the imputation is made on the basis of the cost of the rented service. He also pointed out that the owner-user is assuming the risk that the price of the asset will go down, and the imputation technique uses the market in deciding on the amount of "profit" realized by owner-users. Mr. Sigel, in response to Sunga's point that this imputation procedure could be carried to extreme, pointed out that Mr. Juster's proposal was self-limiting to the income from tangible assets.

Mr. Copeland noted that the proposal to expand the imputations of nonmarketed products was a proposal of an objective to be aimed at, not a proposal of how to achieve it. He noted that the reason for the limited imputations of the old S.N.A. was the difficulty of developing broader ones. In contrast to Mr. Easterlin's faith in the skill of the estimators, Mr. Copeland, while agreeing that expanding the imputations is a desirable objective, insisted that the proposal to expand them can only be considered effectively when it is made specific. He also pointed out that there are alternative direct physical measures for some items

which allow the comparison of standards of living for them, without having to resort to imputations.

The question of consumer interest and its treatment provoked considerable discussion. Mr. Denison pointed out that this whole question is very difficult because there are so many different things called interest, and because the uses made of the income and product side of the accounts raise issues that are not apparent when only the product side is considered. Treatment of consumer interest as a transfer payment reduces nonlabor income. It does so incorrectly insofar as interest receipts finance the lender's operating expenses. Mr. Denison felt that one should probably try to impute a consumer expenditure corresponding to the service charge. Mr. Sigel said that the traditional discussion of how to treat government or household interest payments in income and product measurements has seemed to accept the proposition that such payments represent the purchase of an economic good or service only to the extent that the borrowings for which the interest is paid somehow result in real capital goods with an economic return out of which in some sense the interest is paid. Mr. Sigel felt that this did not make complete economic sense. The economic service being demanded and supplied, provided and paid for is command over funds. The supplier has alternative uses and will give it up only at a price, in accordance with some supply schedule; it has utility for the demander who is willing to pay for it rather than do without it, in accordance with some demand schedule. Clearly we are dealing with an economic service irrespective of whether the subsequent application of the funds thus demanded and supplied results in a capital asset in physical form. One could, of course, take a crude commodity view of the boundaries of economic goods and production but in that case one would exclude much more than interest. Moreover, even in that case, the existence of a subsequent underlying physical capital asset would have nothing to do with the question of whether interest on loans represents the purchase of an economic service. On the other hand, the accounts can obviously never hope to cover every economic activity. Some operational boundaries must be set, some conventions adopted. If a good case can be made for setting the boundaries in such a way as to exclude certain kinds of economic activities because their inclusion would result in inconveniences and problems, say, for certain kinds of productivity analyses and measurements (which are themselves in a rather murky state both conceptually and statistically), then make the case directly and explicitly. Make such exclusions of economic activities as are prompted by such considerations explicitly on the grounds of convenience, and do not pretend or claim that the economic services excluded on this basis are excluded because there is no economic service involved. Mr. Jaszi maintained that there is some sense to the question of whether there is capital behind the interest flow, and also to the question of how much of the interest payment is really service charge, though when you begin to ask the second question for all interest, a whole Pandora's box of problems is opened up. Mr. Denison pointed out that if one carries the transfer payment notion too far, one transforms "interest" into labor income. Mr. Rottenberg pointed out that "interest" runs the gamut from the prime rate

to 3% per month, and that there is also a lot of interest mixed up in the purchase price and terms of contract. Mr. Juster was unable to see why the type of lending institution should determine whether the borrower is paying pure interest or a service charge; the borrower is paying what he has to pay for the service—the use of a sum of money over a specified period of time. One wants to be able to split the gross return on owning this asset between interest and profit, no matter how the purchase was financed; and both of these are productive inputs.

Capital Formation and Stocks

The third session of the Conference considered the proposed treatment of capital formation and stocks in the SNA revision. The session organizer, Mr. Creamer, introduced the topic with the observation that the memoranda say nothing about the techniques of estimating stocks of capital, even though balance sheets are part of the grand design. He wondered whether it is really premature to include recommendations for balance sheets.

Mr. Creamer pointed out that there is nothing unusual about the definition of capital formation in the proposals. This flow is defined as expenditures on the domestic supply of commodities for purposes other than intermediate or final consumption; and, "Households, by convention, do not make such expenditures." The concept does not include nonreproducible tangibles and the growth of timber and crops, so this flow does not really measure gross additions to real wealth. Inventory change is shown for materials and supplies, work in progress, and unsold finished goods held by resident enterprises plus government strategic stocks and surplus commodities. Machinery made to order but not yet delivered is included in inventories; but livestock is in the stock of wealth. Fixed capital formation is defined as additions to the stocks of reproducible fixed assets of resident enterprises, nonprofit institutions, and general government, net of sales or similar withdrawals, but gross of consumption in production. It thus consists of new and used assets plus the transfer costs involved in the purchase of non-reproducible tangible assets less sales or transfers of used assets or scraps. The government component does not include military assets. The flow includes own-account production of such assets as well as outlays on the development and extension of farms, mines and the like. However, research and development expenses, advertising, market research and public relations expenditures are left out since they yield no concrete benefits and are not embodied in tangible assets.

Capital consumption allowances are defined as the part of gross product required to replace fixed capital used up in the process of production. This does not include depletion, since these assets were never counted as part of capital formation. Depreciation is included for structures owned by nonprofit institutions and government. Depreciation charges are not made for public dams, roads and the like on grounds of practical difficulties, though no procedure is recommended for similar assets owned by the enterprise sector. These depreciation charges are to be made on the straight line basis with reference to the expected life of the asset, though no attempt is made to justify this choice, and there is no explicit

recommendation made for the derivation of stocks as a base to which this formula is to be applied. (There seems to be an implicit recommendation that stocks be measured as one-horse shays with respect to allowances for retirement.) The depreciation charges are to be valued at replacement cost with quality change and price deflators; the adjustment process is to be made explicit, since it may be large and subject to error. Mr. Creamer posed the questions of whether these recommendations were consistent with the expected uses of these estimates, and whether there is provision within the system for adjusting the operating surpluses in conformity with the revaluation of capital consumption charges.

Inventories are to be valued essentially by the LIFO method—additions at purchase price and withdrawals at current cost. (The proposal states that in practice it may be necessary to first-difference stocks valued at some average price.) Fixed investment is to be valued at purchase price including delivery and installation charges. Construction should include all outlays to put structures in condition for use excluding the value of land before improvement; own-account construction is to be entered at cost. This excludes any constant price or original cost estimates, though STAT/11 seems to suggest some constant price series.

The next discussant, Mr. Alterman, recommended the inclusion of a capital flow table, that is gross capital formation cross-classified by type of capital good and purchasing sector. He felt that this is a natural complement to the current account input-output table, and would also produce a connection between producing industry, purchasing industry, and through a perpetual inventory procedure, stocks. For such purposes one needs some notion of the weights to be given to types of equipment by sectors, and such information is also useful for forecasting the impact of investment intentions. He indicated that the growth of leasing might ultimately obscure the use of the equipment unless some sort of bridge table was provided between the allocation by purchaser and the allocation by user.

The third discussant, Mr. Goldsmith, focused on the treatment of consumer durables and military durables. For the former, he felt that the authors of the report had the right idea, but suffered from an ultimate failure of nerve. Both of these items should be included in wealth and thus in capital formation. Stocks of both of these are unusually easy to estimate, especially in the case of consumer durables where you have good information, short asset lives, and a functioning second-hand market. The stock of military durables is desirable for providing a picture of the time allocation of resources, and again the data are or could be easily available.

Mr. Wasson, the fourth discussant, presented some estimates of the gross stock and depreciation charges to indicate the degree of over-estimation introduced into the stock and its growth rate by using too aggregated an investment series and failing to account for the dispersion of retirement dates about the mean. While he was in all cases assuming that the individual assets were one-horse shays, the fact that he considered quite a large number of these separate assets in cumulating his stocks gave him an effective survival curve. Depreciation estimates are little affected; stock estimates are very much so. The implication of this for the SNA proposal is obvious, since few asset types are distinguished,

and this coupled with the limited statistical resources of many countries would lead quite naturally to some misleading estimates.

In the informal discussion which followed Mr. Gort stated that stock estimates are extremely sensitive to the implicit theorizing involved in the assumptions used in creating them; changing these assumptions changes the results so radically that alternative estimates cannot be used as measures of the same phenomenon. These assumptions are in part dictated by one's theory of production relations, and the conceptual problems and the ultimate use of the estimates are interdependent. Providing several alternative measures as the Commerce Department does (a procedure not recommended in the SNA proposal) mitigates some of the problem, but it does not eliminate it, as very many alternative measures are implied by various combinations of assumptions.

Mr. Leontief maintained that one needs information on undiscarded durables classified by year of installation. The one-horse shay is less vicious than is the smooth depreciation concept, since you at least know whether it is there or not. If you could inventory directly, then perhaps you could discover a statistical procedure to duplicate this without direct measurement.

Mr. Sigel observed that the present problems of getting agreement on the proper definitions and of getting adequate measures of capital stock for even a single country seemed to underscore the wisdom of the U.N. report in leaving out specific proposals for the balance sheet at the present time. Mr. Kendrick was disturbed by the view that stock estimation should be left to the user, feeling that the statistician has the responsibility of coming out with a judgmental series, even though he may recommend several depending on purpose. Mrs. Carter requested a less alarming presentation of the difficulties of estimating and interpreting the estimates, since planners and the like need some capital estimates and should not be frightened away from those which exist.

Mr. Sigel observed that the capital expenditures categories used in the proposed tables did not permit one to obtain a plant and equipment figure. Mr. Ruggles pointed out that the capital concept focuses too much on durability and this is dangerous for growth policy since one should have a wealth concept that incorporates a broader view. Mr. Leacy wondered whether the proposed classification of incomes will not make it impossible to match it up with stock estimates to get some notion of a rate of return.

Finally Mr. Aidenoff commented briefly on the proceedings. He observed that the capital flow cross classification is built into the system even though no such table is provided in the official list. Consumer durables, educational and health expenditures are there separately, though you cannot get research and development except for the government. For military durables, since the material product system separates them out and puts them in capital formation, SNA will show them separately.

Financial Transactions

The fourth session discussed the treatment of financial transactions in the proposed revised system. The session organizer, Mr. Taylor, began by remarking

that it was not until STAT/11 that the system spelled out a set of "financial" accounts in the sense of transactions in financial claims. The proposal is taken quite directly from an Economic Commission for Europe working group report of three years ago. This is a very primitive account, however. There is no attempt made at distinguishing between intermediate and final flows (though this is still an open question, theoretically); and the level of discussion is rather like the stage of development attained in income and product accounting forty years ago. Since the whole business is so underdeveloped, the session was to be devoted to narrow topics rather than broad questions such as classification and the concept of intermediation.

The second discussant, Mr. Gorman, addressed himself to two questions. The first was the classification of financial claims from the point of view of two types of financial analysis: that of changes in liquidity conditions and that of who lent money to whom. For both of these types of analysis, a slight modification of the proposed treatment would make such analysis considerably easier. The list of claims does seem to be arranged according to some sense of degree of liquidity. If some of the other categories, such as "other claims", were distinguished by type and maturity, this would allow some analysis of liquidity change. Also if the breakdown of "loans and advances" and "other domestic claims" were augmented with some further institutional detail, it would be possible, formally, to get a to-whom-from-whom credit flow analysis.

Gorman did not care for the capital transfers concept, and would prefer to treat all transfers as current. Failing that, he would prefer to treat as current all transfers which are not considered capital transfers by both parties to the transaction.

The question of valuation and the balance sheet, though not covered in any great detail in the documents, was the subject of Gorman's final remarks. He observed that you could do nothing about the problem, recording assets at market value, and liabilities at book value; however, when consolidating to the national balance sheet and the national wealth, you get an adjustment item which would include net claims held by foreigners, and not be a very useful number. E/CN.3/320 proposes that liabilities also be revalued at market, and the contra-entry would then go into net worth. This would lead to increases in net worth in times of tight money, an implication that Gorman does not like. He would propose that both be revalued at market, but the contra-entry be in an asset of the issuer, goodwill. When one consolidates to the national balance sheet and to the national wealth, one finds that tight money reduces the value of the firm and of the national wealth. This discussion was illustrated with a numerical example in which the financial asset whose value was changing was a bond. He also produced an equity example which had the result that when the stock market valuation of the firm increases, rather than reducing the firm's surplus as in the SNA proposal, the goodwill asset is increased, and the tangibles are in effect valued by the security market's assessment of the value of the firm. On a national wealth basis, this would in part help to compensate for the failure of the system to capitalize research and development expenditures.

The third discussant, Mr. Hicks, remarked that there are some readily

obtainable data with great and immediate utility for both analysis and policy which could be had if we could get agreement on a few basic definitions. The major problem is really the definition of government, and much of the apparent chaos in trying to piece together estimates on such things as the domestic credit of the banking system, the banking system's loans to the government, changes in the money supply or in savings and time deposits, etc., will disappear when you get agreement on defining the separate monetary authorities sector recommended in the report.

Development banks create another problem, and the documents are confusing about their treatment, since the definition puts them in one category and the list of examples seems to put them in another. Counterpart funds are a further problem area since their treatment varies, as are loans to the government, which may be recorded gross or net. There are also difficulties in differentiating between combined and consolidated accounting schemes. However, these are really quite simple matters, if one could only get some agreement on consistent treatment.

Hicks also discussed the valuation problem. Since so much of the information on this subject comes from balance sheets, the E/CN.3/320 proposal to value everything at market would destroy the basic source of information. This procedure is not necessary to get balance sheets which collapse into the national wealth, and it destroys the primary purpose of the integration of these two accounting systems. Hicks does not think that the issuer feels a capital loss or gain in a direction opposite from that of the holder; if he feels anything, it will be in the same direction. If assets are valued at market and liabilities at par, then both will be at the valuations that presumably motivate the holders of the one and the obligors of the other and the difference between the data on assets and the data on liabilities will provide a third very useful measurement. The period-to-period changes in the amount of the difference between the two accounts provides a measure of the changes in valuation that have come about during the period owing to interest rate movements and the like.

In the discussion which followed, several people discussed the subject of the valuations recommended in the proposal. Mr. Taylor pointed out that in the case of a financial enterprise, at least, the revaluation of liabilities at market is not so meaningless; if the goal of the entrepreneur is to maximize the present value of the firm, then the market value of liabilities is as relevant as the market value of assets. Mr. Sigel remarked that there seems to be a tendency in the documents to think of valuation as involving different parties like some kind of transaction and as therefore requiring the same treatment on the books of the two parties, that is, the debtor and the creditor. But the recording of a valuation change (including the recognition of a capital gain or loss) involves only a single transactor and is reflected in his accounts alone with a single debit-credit pair. (The distinction between internal one-party entries and two-party transactions is, incidentally, easier to keep track of and communicate in a system of accounts than in the master matrix format of the report.) There is nothing in the logic of either social accounting or economic analysis that automatically requires, or establishes a presumption, that the recording of valuation changes decided on by

the debtor and creditor (or by the social accountant for the debtor and creditor) will be the same, though of course they may be. Mr. Sigel also pointed out that the statistical valuation adjustments or capital gains needed as part of the estimating process to derive the transactions valuation basis wanted for the flow accounts from diverse existing actual balance sheets should not be confused with the valuation adjustments or capital gains entries that reflect the difference in valuation basis of the financial flow accounts and the analytically chosen valuation bases of the national and sector balance sheet system in the over-all social accounting structure. These two "capital gains" will be quite different both definitionally and statistically. Mr. Copeland observed there are bound to be discrepancies between annual figures on financial sources and uses of funds, on the one hand, and changes in the year-end levels of assets and liabilities that are shown on balance sheets, on the other hand. He urged that there should be a standard reconciliation form set up on a regular annual basis for such discrepancies. He also suggested that there should be provision made for distinguishing between realized and paper capital gains. Mr. Goldsmith pointed out that not only will you have changes in market prices of financial claims as a result of interest rate movements, but there will also be valuation changes in plant and equipment from price movements.

There was a discussion among Messrs. Gorman, Goldsmith, Taylor, and Sigel about the proper footing for the national wealth table in Mr. Gorman's presentation. Mr. Goldsmith did not like the Gorman suggestion for adding goodwill to the value of the tangibles and net foreign claims in deriving the estimate of the national wealth, which he felt should be limited to the last two items. It was pointed out that the question really involves which market—the capital goods market or the securities market—should be used to value the enterprise.

The desirability of building to-whom-from-whom information into the financial transactions table was also discussed at some length. Mr. Taylor contrasted this approach with that implicit in the Federal Reserve's Flow of Funds account, which focuses on markets for particular kinds of claims. A financial instrument can be separated from the borrower as a basis for its value; it is important which groups are putting funds into the market and which groups are taking money out, but it is not important and indeed moot as to who is supplying whom within the market. He did not care for the format of the table in the SNA proposal, since the physical separation of assets and liabilities makes it difficult to look at a market. Furthermore he did not care to have foreign assets and liabilities separated from domestic ones, since, apart from any interest in the totals of foreign claims one is also interested in seeing the markets into which the money goes and from which it comes. Sigel, while supporting the need to provide as much to-whom-from-whom identification as could be done without undue forcing of the data, observed that often such information may be analytically and institutionally irrelevant and may even be misleading. The cross-identification of debtors and creditors in net flows doesn't really give true to-whom-from-whom information about financing, since often the form which the financing takes is the sale of an existing instrument in which the debtor does not participate. Mr.

Goldsmith remarked that this detail does not interfere with the desire to have totals for markets, since one is just adding sub-rows. This will be a natural complement to a fully sectorized statement of sources and uses of funds. Mr. Goldsmith also did not feel that the market is always as clear-cut as Mr. Taylor seems to think.

Several of the participants addressed themselves to the problem of sectoring. Mr. Sigel recommended that the monetary authorities and the commercial banks be recorded as two separate major sectors rather than being merged in a single consolidated sector since most of the analytic and policy uses of the accounts will want to focus on the relationship between the monetary authorities and the rest of the banking system. In addition, because of their role in the financial mechanism, he would like to see noncommercial-bank depositary institutions as a separate sector rather than being part of a catch-all "other financial enterprises" subsector. He also would like to see foreign transactions recorded in a separate rest-of-the-world sector rather than being treated as a summary of the external transactions of the domestic economy; the explicit sector approach is particularly desirable in a system to be used in analyzing or describing financial markets. Mr. Copeland stressed the need for comparable sectoring for capital accumulation and capital financing information. Mr. Goldsmith remarked that the social security system is going to present major difficulties, both in terms of sectoring and in terms of what figures should be put in. Mr. Taylor suggested that there ought to be a separate sector for international corporations and financial institutions, since for many small countries there would be problems analogous to those raised by the existence of national corporations in the context of regional financial accounting. Without some segregation of these institutions, one does not get a true picture of the economic activity of the country or region.

Other topics were discussed, though not at great length. Mr. Sigel pointed out certain difficulties in trying to order financial claims in terms of liquidity. What is meant by liquidity varies both from sector to sector and over time. It depends on the structure, level, and movements of interest rates and on the structure and state of financial markets. About the best one can do is to adopt some convention, such as differentiation between fixed dollar claims and those which must be liquidated through the market and to accept the idea that no matter where the boundaries are set the economic and analytical significance of the concept adopted will vary considerably over time and over sectors. He also agreed with Mr. Gorman's position on capital transfers. Mr. Copeland emphasized that developing countries should be encouraged to develop and use financial data.

Mr. Sigel also took issue with Mr. Hicks' remarks on the ease of getting agreement at an international level on these simple definitional matters. He remarked that the initial agreement on these matters had been relatively easy because in the early meetings on the subject many countries had not yet had extensive experience with financial accounts. More recently, as more countries began to develop financial accounting systems of their own, they began to have some basis for seeing difficulties in the agreements. The present documents have overstated the extent of agreement. The basic problem is the real question of

comparability of financial structures where we are dealing with institutional arrangements and where the very notion of setting up an international standard system by abstracting from institutional differences may be a contradiction in terms. We can probably get real agreement covering all countries only on a list of sectors and claims so condensed and primitive as to limit its usefulness for purposes other than the most simple kind of international comparisons. Thus the purpose and scope of the international system must be agreed on before we can evaluate any proposed financial structure.

The Government Sector

The fifth session of the conference considered the treatment of the government sector proposed in the documents. Mr. Ruggles, the session organizer, introduced several topics for consideration. He remarked that the question of the purpose of a national accounting system is quite relevant here, since he would like an accounting system which could be used for policy analysis. However, the objectives and uses of this information are so large and so complex that what the accounts must do is provide an organizing device for specific economic data which can then be related to the information system as a whole. The accounts should lay major emphasis, not on a detailed presentation of information, but on the conceptual framework, with priority given to information used for appraising economic conditions; they should measure certain economic constructs to which sets of information can be related. This conceptual emphasis implies that definitions should be consistent throughout the system if this is feasible and possible.

Thus one should consider the relationship between the government account in the national economic accounts and the government budget, since one often wants to trace the impact of specific programs in the economy. He felt that the SNA had not paid sufficient attention to integrating into the accounts the work of the U.N.'s fiscal division in such matters as program and performance budgeting, budgetary reform, and the like. Though the functional classifications mesh reasonably well, the authors of the SNA proposals have not faced some issues in breaking the public sector into its institutional components.

Mr. Ruggles did not find the treatment of taxes very useful. "Indirect taxes" he finds to be not a very useful economic concept; detail by type of tax is much better for analysis. Although there is some breakdown by level of government, actual institutions are much more complicated than this. There are many independent bodies, and the framework should have some room for the institutional characteristics of the system. (Forcing comparability by neglect of institutional differences will not do much.)

Mr. Ruggles remarked that he had never liked "Public Administration and Defense", a sort of n.e.c. category for government items in the industrial classification. He felt that a good which is given away by the government—public consumption—is a different good and the industry which produces it is a different industry from the segment of the private economy making a comparable product. In practice, the figures countries have reported almost always refer to general

government, rather than to "Public Administration and Defense." There are data in the expenditure list for general government that will allow one to compare collectively provided services with those that are sold commercially.

Finally, Mr. Ruggles mentioned the basic philosophical question of whether we are trying to erect a set of tables sufficient for all possible analytical uses, or whether we are designing an information system. If the purpose is the latter, we have to design the system so that it can be used with the increasing number of sets of micro-data which lie behind the macro-data.

The second discussant was Mr. Rottenberg, who commented on the tables, the definitions, and some of the issues raised by Mr. Ruggles as session organizer. He felt that there has been considerable improvement in the tables presented in the latest documents as opposed to the initial proposal. He was pleased to see the separating out of general government from a sort of fixed composite. The production accounts he felt are too complicated to serve simple pedagogical purposes, and they should be moved to the position of supporting tables. The matrix format has necessitated a production account for government; and though it is considerably simpler than the one originally proposed in STAT/11, he would like to see some netting of sales. He would also like to see more netting in the income and outlay accounts; and he wondered why insurance is given such a major role in the accounts. He liked the table on general government consumption expenditure by type and purpose, though again he would like to see net sales, since so much of the data that his office, the Office of Business Economics of the Department of Commerce, uses comes in that form. He would also like to have a combined table showing all expenditures of government in one place.

Mr. Rottenberg would like to eliminate the distinction between current and capital transfers. This is a slippery concept, and there might be rather wide differences in treatment internationally. He does feel that countries might wish to distinguish between home-generated savings and that arising in the form of international grants. He also thought that the treatment of government enterprises might well differ among countries. For example, the inclusion of the U.S. Post Office with its large recurring deficit in the enterprise sector would produce some very misleading estimates. Mr. Rottenberg also observed that if one follows the proposed sectoring in which the social security system is separated from the two levels of government, this again will result in some rather meaningless deficits and surpluses for the other sectors of government, since the Social Security Fund is not really a fund, and does not really enter the capital markets. One might also think of the payroll tax as a separate taxation system and therefore as a policy variable. Mr. Rottenberg also had some doubts about the treatment of nonprofit organizations, since it is proposed to divide them into those serving business, those serving households, and those serving government, the last group being combined with government. If the RAND surplus or deficit enters the government surplus or deficit, this reduces the usefulness of the latter measure; and thus Mr. Rottenberg would prefer to see such government contractors in the enterprise sector. Another category, nonprofit institutions supported by the government but serving households, might pose problems for some countries.

Mr. Rottenberg also commented on some of the issues raised by Mr.

Ruggles. He felt that the supporting tables should show the kind of tax detail that the latter recommended, though he was dubious about the extent to which such information could be standardized. He also cited the OBE's reconciliation table between the cash budget and the national income budget as an example of what might be done to use the national accounts for the measurement of fiscal impact, and he mentioned a proposed study of the impact of government commitments traced from the time orders are placed until the expenditure enters the accounts. He did not, however, feel that program, project and performance budgeting should be incorporated into the accounts except insofar as the measures used should be defined in a manner similar to comparable concepts in the accounts; and he did not think that consistency of definition throughout the information system, although desirable, is appropriately called part of national accounting.

The third discussant, Mr. Cobren, felt that the parcelling out of the various facets of government activity had led to too much shrinkage in the concept of government; public administration and defense is too narrow, and one is not allowed to see the whole government, just a bundle of establishments. Government enterprises have always posed problems, and the old SNA's public corporation sector merely added to the problems, since its content was never very clearly defined. He felt that the income and outlay accounts have pieces of public activity incorporated into the non-government sectors which both obscure a clear statement of the types of services that the government provides which are analogous to private ones, and fail to show the government surplus or deficit which must appear clearly laid out if the accounts are to be used by public officials. Mr. Cobren also felt that the commodity breakdown is far too detailed; the U.S. derives its measure of government purchases residually after subtracting transfers, grants, and the like from expenditures. The rudimentary commodity classification has to meet all sector needs, so for much of government it might be blank. The OBE is attempting to ask agencies to classify expenditures in a fashion useful for national accounting purposes; but even if this is successful, the states and localities would still present problems.

The last discussant, Mrs. Rice, echoed the desire of the other panelists to see the whole government. She pointed out that one of the OBE's concepts which is most popular with its customers is that of "government purchases of goods and services". This seems to have no single home in the revised SNA; it is rather allocated over a number of entries. She raised the question of what one would do with the largest item of government purchases, missiles, which present timing problems as well as other complications; there are apparently a number of places that one might record this transaction, some of which seem mutually exclusive. Furthermore the term "government purchase" has a broader conceptual coverage, since the purchase may be either capitalized, expensed, or placed in inventory; the missile is rather hard to classify in one of these categories but the proposed SNA will force you to choose. She also raised the question of just how good the estimates of depreciation on government assets are likely to be; they figure quite prominently in the accounts.

The ensuing discussion focused on several topics raised by the panelists.

With reference to Mr. Ruggles' desire for a clearer demarcation between the enterprise sector and the collective sector, Mr. Aidenoff remarked that the first of the supporting tables, showing domestic product and factor incomes by kind of economic activity, which currently cut across the distinction between enterprises, nonprofit institutions, and general government, would be redone with separate sectors. Distinctions between industries, general government, and private nonprofit institutions serving households would also be drawn in the other supporting tables on data classified according to kind of economic activity. Mr. Gigantes asked whether the table on government expenditure by type and purpose would also show the details of the commodity classification, since this seemed to be implicit in the synoptic matrix of E/CN.3/320. Mr. Aidenoff replied that the system's submatrices make this possible, but that no such tables were included because of the lack of data and the rather limited interest in this type of information.

Mr. Adler observed that although he was not completely happy with the form of the production account for government included in the system, it makes sense since it permits one to trace commodities purchased internally and since direct services and imports are somewhat better articulated. Services do get incorporated into expenditures, and netting does not really help much in the estimating procedure. Furthermore, as there develops more and more government selling to individuals, business, or other sectors, the nettings introduced distortion. Mr. Rottenberg felt, however, that the accounts which describe the system should be kept as simple as possible; netting is appropriate here, although items in supplementary tables might well be shown gross. Mr. Aidenoff commented that the government's production account was not introduced just as a matter of pedagogy, but because there is real analytical need for it. The government plays an important direct role in many countries, and one needs to know its demands on the enterprise sector of the economy. In addition many countries are attempting to measure the productivity of government activities, and many are trying to analyse the relationship between government and households in terms of goods and services. In the new accounting system, general government does not produce commodities; it produces goods and services.

While agreeing with Mr. Ruggles that there should be a link between the government accounting manuals and the national accounting manuals, Mr. Taylor remarked that a country can follow these recommendations perfectly without getting into a social accounting estimate of receipts and expenditure which tied into the form of financial statement he wanted, because of the practice of funding. There really needs to be a cash budget and a similar financial statement of assets and liabilities showing the assets over which the government has control. The procedures for handling these need to be spelled out. Mr. Ruggles maintained that these funds should not be consolidated out because their existence has important effects on public policy and resource allocation; the framework must allow for this institutional information to be preserved. Mr. Rottenberg observed that the situation is growing more and more complicated as new programs come into being and more borrowing and lending is shifted into the administrative budget.

The measurement of depreciation on government assets was mentioned by several of the participants. Mr. Adler remarked that sooner or later one is going to have to get into this in order to be able to measure the net stock of government assets. The Canadians depreciate commercially usable buildings owned by government, though roads and streets are difficult. Mr. Sunga wondered whether government surplus or deficit calculated by excluding all government capital formation from expenditure, without a corresponding depreciation estimate for the highway portion, might not be seriously distorted. Mr. Ruggles observed that this is something that one has to live with, and that perhaps a better measure is the government surplus or deficit on current and capital account. Mr. Gorman saw little value in the U.N. recommendations on current and capital outlays of government and public sector depreciation. He felt that it is better to speak of total purchases and one surplus or deficit, treating depreciation and revaluation as a capital loss in the asset revaluation account which the documents do not spell out.

Mr. Barger stated that governments must be persuaded to differentiate between capital and current expenditure. Having done that, one may hope that they will begin to feel uncomfortable enough to make some estimates of depreciation. Mr. Aidenoff observed that a number of European countries do charge depreciation on the fixed assets of government. Mr. Denison requested that roads and streets be made a separate capital expenditure component; these are such a large fraction of capital expenditure and the capital stock, and their movements are so different from the rest, that one cannot really use the figures intelligently without this detail.

Functional Distribution of Income

The sixth session on the functional distribution of income was opened by its organizer, Mr. Budd, who remarked that the functional distribution of income seemed to have been an afterthought in the revised system. He observed that there are problems in how to classify shares within an income total, problems in the relationship of the functional distribution to the industrial distribution of income, and problems in the classification of shares which affect the income total.

The production account gives informaiton on the compensation of employees, the operating surplus, indirect taxes less subsidies, and capital consumption allowances. The income and outlay account gives income from property and entrepreneurship. The documents are unclear on the additional detail to be provided. While this treatment does bring out the transfer nature of interest and dividends as contrasted with property income earned from production, this is achieved at the cost of considerable information on the composition of the operating surplus which is presently available. It is difficult to do better than this at the establishment level, but with ten or twelve industries a legal form breakdown is both possible and useful. This could at least be done at the aggregate level, so that one could distinguish the income of the self-employed. Furthermore, not only is there no separate item of corporate profits, there also seems to be no way to construct it. In addition the corporate sector contains too much,

since part of the unincorporated enterprise sector is included there. For unincorporated enterprises, Mr. Budd mentioned the problems involved in imputing own-account production in primary industries, and suggested that imputations of entrepreneurial labor income and savings might be better left to the user than made in official estimates.

Mr. Budd mentioned the problems posed for the industrial allocation of income of the conventional distinction between factor and nonfactor or intermediate purchase, and pointed out that changes in the industrial allocation of distributive shares can occur simply because of a change in the industrial origin of factor hire, such as that involved in the growth of Manpower Inc. Although the industrial allocation of rental income is not too clearly explained, it seems that rental payments are handled as an intermediate flow and the rental income will appear as operating surplus to the owners of rental property. If the industrial classification is on an establishment basis, all of this will appear in the real estate sector. Mr. Budd would like to see an industrial distribution of rent on a user basis, treating rental payments as arising in the sector of use, and then treating rental income as a transfer. He liked the fact that the SNA puts agricultural rent in the agricultural sector. He also would prefer to exclude consumer and government interest from gross national product and national income on the grounds of their transfer nature.

While Mr. Budd likes the factor cost approach to distributive shares, there are problems with the measurement and concept of indirect taxes and subsidies. He wondered whether property taxes are appropriately treated as indirect taxes, and how one would treat a value added tax. He also mentioned the effect on distributive shares of efforts to exclude capital gains and losses through inventory valuation adjustments and depreciation valuation adjustments; he suggested that the revaluation procedure appropriate for the product side of the accounts might not necessarily be the best one for the income side. Finally he pointed out that the size distribution of income is accorded only three sentences in the documents.

The second speaker, Mr. Marimont, spoke first about the company-establishment problem. He indicated that much information, while not obtainable on an establishment basis, is available for the company which is, of course, a composite of financially related establishments which may well cross lines in an industrial classification. The SNA proposal would apparently abandon this source of information, though the proposed classification is so broad that, at the level of aggregation employed, the empirical problems may not in practice turn out to be too great. There are, he felt, better solutions for the detail than that adopted in the U.N. proposals. One could regroup income flows on a company basis; one could introduce an intermediate reporting unit, the division, which combines both financial data and a large degree of homogeneity of product; or one could find out where the problem is critical and prepare periodic tables linking the company with the establishment by such indicators as the distribution of employment, sales, and value added. The SNA should, he felt, encourage the development of such data and of techniques for handling them. He also noted a seeming inconsistency in the SNA proposal, since with information on the operating surplus by industry of origin already provided in one of the proposed tables,

one could subtract the proprietorship component (since here the company and establishment are virtually identical) and get corporate profits and net interest flows on an establishment basis.

Mr. Marimont also advocated the inclusion of a legal form classification in the table showing gross product and income originating by kind of economic activity. He was also disturbed by some of the details of the industrial classification; he felt that own-account construction should have been left with the other establishment activities; that the category of "ownership of dwellings" should have been retained; and that the inclusion of repair activities with the manufacture of comparable goods should have been modified.

The third speaker was Mr. Fromm, who began his remarks by reading an account of a hypothetical society in which the information system has acquired total coverage of all activity by the simple expedient of changing socio-economic institutions in a direction which facilitates accurate reporting of all economic transactions and demographic detail. (The society had not yet managed to convert this information into knowledge, however.) Mr. Fromm then observed that he found the U.N. documents deficient in understanding in three respects. First, the authors seemed, in his opinion, to lack a real conception of what an information system is. The purpose of data collection is to serve analytical needs. A set of accounts is not an end in itself; one is primarily concerned with the data which go into it. One wants these to test behavioral hypotheses. Furthermore, it is necessary to be aware of the fact that there are alternative sources of information; perhaps the accounts should reflect these differences rather than provide an integration in name only. Document E/CN.3/320 also states that it is the obligation of the statistician, but not those who frame the accounts and collect the data, to remove timing problems, residual errors, and unallocated items; this commandment Mr. Fromm finds to be nonsense. Nor does the proposal mention the period of observation of any of the data; Mr. Fromm wonders whether a valid input-output table can be produced on an annual basis.

Second, Mr. Fromm found the authors deficient in their appreciation of statistical problems. There is no room in the system for a statistical discrepancy. Not only is one interested in obtaining some idea of the impact of differential errors of measurement, but with an integrated system of accounts, errors are transmitted throughout the system in an attempt at attaining consistency. Third, Mr. Fromm questioned the authors' understanding of the economic implications of the system. The treatment of the unincorporated enterprise sector is strange in his view; these units belong in the enterprise sector, not part with enterprises, part with households. Furthermore input-ouput, though a useful analytical tool, has been unduly emphasized in this system. The input-output model is a zero-order approximation (with zero elasticity of factor substitutions) to the structure of the economy. In his opinion, the structure of the accounts should not be constrained by these assumptions.

Mr. Fromm suggested that it might have been better, rather than undertaking a complete revision, to make some changes in the old SNA and add supplementary tables like the flow-of-funds and input-output tables.

Mr. Denison opened the discussion by reiterating Mr. Marimont's plea for a retention of the "ownership of dwellings" industry; dwellings account for such a large share of capital that one eliminates many problems by having their contribution to national income all separated out. Mr. Copeland urged that the imputation of property income for financial enterprises should not only be retained, but also that procedures should be devised to improve and extend it. The remainder of the discussion revolved around three issues: the suitability of the proposed system to income analysis, the nature of the information system, and the role of the statistical discrepancy.

Mr. Denison stated that in effect the U.N. had said "we are not interested in income analysis"; the system provides no usable or useful information on income. At a very minimum, Mr. Denison feels, one needs a table such as the one the U.S. provides on national income by legal form and type of income. The new SNA doesn't even have as much information as was available before; all that is now available is compensation of employees and an undifferentiated "operating surplus". Movements in the former are meaningless unless one knows what is happening to proprietors' income, which is partly a return to labor. Information on corporate profits is no longer available, so one cannot talk about saving very intelligently. Messrs. Goldberg and Jaszi concurred in Mr. Denison's position; Mr. Goldberg remarked that this deficiency is the weakest part of the system and it should be remedied whether or not it fits the grand design.

Mr. Aidenoff replied that this treatment stems from the basic philosophy of the system; that disbursements and receipts of property income are transfers. It is possible, however, to subdivide the flow into interest, dividends, and entrepreneurial income. He pointed out that the old system did have a table on income shares which the Statistical Office included in the questionnaire with little success, either because the data were not yet available or because the conceptual backgrounds of the accounting system were incapable of generating it. In the revision this table has been abandoned; in its place is "net property and entrepreneurial income of households" (an item which combines the net profits of unincorporated enterprises, interest and dividends). Net entrepreneurial and property income of general government and of corporations (equal to corporate saving) also appears. For quasi-corporate enterprises, one has the gross profits, the operating surplus, and receipts and disbursements of property income. Mr. Goldberg observed that if one purpose of the SNA is to encourage countries to improve their techniques of data collecting and national accounting, then Mr. Aidenoff's argument for dropping the functional shares table is rather weak.

On the subject of the information system, Mr. Goldberg pointed out that Mr. Fromm and others had been a bit unfair to the U.N., since one of the important innovations in this document is the fact that it presents an integrated operational classification system oriented around the national accounts. Mr. Fromm felt that this was really no improvement, it was just a rearrangement of data which were not comparable. Mr. Goldberg said that the real problem lay in the fact that in the case of the data which Mr. Fromm was using as an example,

the classification system had not in fact been applied uniformly to data which are used in conjunction with one another. Mr. Budd said he felt that one thing that the session participants had agreed upon was their dislike of the manner in which the documents classify items; they suppress too much information.

Finally, the subject of statistical discrepancies and the like was considered. Mr. Aidenoff pointed out that one of the advantages of such an integrated system is the confrontation of statistics with one another in terms of classification, reliability, and definition. When discrepancies arise, one can either show them, which does not look too nice, or one can remove them by some objective and useful technique such as the Bayesian technique devised by Professor Stone in 1942. Mr. Jaszi disagreed with this position. He pointed out that discrepancies should be indicated, since this disciplines the estimator and warns the user that something is amiss. Furthermore, there is no operational scientific method of getting rid of them; the Stone method does not work. Mr. Goldberg agreed with Mr. Jaszi, though he thought that as a service to the user the statistician might distribute the discrepancies as well as show them. Mr. Sigel pointed out that when one sets up an integrated system—with both financial and non-financial entries, and with a focus on full sector accounts—the discrepancy problems and the value of showing discrepancies become greater, not less, than in an income and product system focusing on national consolidated accounts. The compilers of the accounts should, of course, take all possible substantive steps to reduce the discrepancies through improvement in the basic data and through better adaptation of existing data to the definitions and boundaries of the entries in the national accounts. But the formal procedural elimination of all discrepancies will result in worse analysis and in poorer insight into the economy and into the extent that the national accounts are an adequate representation of the economy. Moreover, with the statistical inadequacies successfully hidden, there will be less pressure for real improvement of the statistical base of the accounts and for the searching out of definitional and conceptual inconsistencies. The presence of the discrepancies is in fact an important statistical and analytic control.

Product at Constant Prices

The seventh and final session on product at constant prices was introduced by the session organizer, Mr. Kendrick, who observed that the proposed revision is a considerable improvement in this respect over the old document which had no provision for constant price data in either the accounts or the supporting tables. He enumerated the constant price series which were to be given in the supporting tables of the new system: gross domestic product and net domestic product at constant prices with correlative price indexes for major components; domestic product by industry of origin, calculated by the double deflation method; labor input or employment by industry; real private consumption at constant prices; and gross domestic capital formation at constant prices.

He then posed several questions about the scope of the constant price coverage. Should government product be shown in constant prices as well?

Should there be a series on real wealth? Without the latter, Mr. Kendrick wondered how one gets constant price depreciation estimates. Would not something more than employment be desirable for the physical volume of inputs so that one could measure total factor productivity? Manhours, real labor compensation, real capital stocks, real property inputs—all of these might be desirable. Although Mr. Kendrick would not recommend doing so, there is the question of whether or not one might like to deflate noncommodity flows in terms of constant purchasing power.

Mr. Kendrick would like to see more on the specification of quantity units and the price series used for deflation. The techniques used by the various countries will affect comparability if some adjust for quality change and productivity while others do not. Do you want to ask those capable of it for more sophistication in measurement at the cost of comparability? The problem areas here would be: (1) in the treatment of the output of non-market sectors (government, households, nonprofit institutions), does one deflate by costs or try to measure real output directly; (2) the definition and measurement of real financial services; (3) nonstandard products such as construction and ships; (4) on the treatment of quality change E/CN.3/320 is ambivalent, though it suggests that such adjustments might be desirable; (5) net exports are to be deflated by the double deflation method.

Mr. Kendrick also mentioned the index number problem. He feels that the statistician must make an informed judgment while giving inputs for those who want them. The report suggests periodic updating of the weight base every five to ten years, although it is silent about whether the change should be made over the whole time series, or just back to the previous base period. The report does point out that the nature of the current value series determines the type of weights; there is a question of how to combine deflators when they must be combined to deflate the smallest group possible. Mr. Kendrick asked whether it is enough just to give Laspeyres quantity aggregates, current value series, and Paasche indexes of price relatives by type of expenditure and industry, or whether something fancier might be desirable.

Finally Mr. Kendrick commented on the section on inter-country comparisons, which he found to be somewhat inappropriately included in a report designed for the use of national estimators. The issues here are (1) the noncomparability of products; (2) possible sensitivity to choice of weight base; (3) the effect of differing institutional mix on product comparisons; and (4) to the extent that this is done on a recurring basis, the need for international price checks.

The second discussant, Mr. Garston, said that he and his Canadian colleagues were delighted to see constant dollar data by industry included in the proposed revised S.N.A., though there are still some vexing conceptual and practical problems relating to these data. However, he noted that the proposed S.N.A. industry of origin framework has not completely clarified gross output industry boundaries. For example, trade margins and transportation costs were not examined at the industry level; and this should be done before any final recommendations are made. Mr. Garston pointed out that the concentration

on input-output tables in the proposed S.N.A. "may have obscured the necessity to measure the various real world valuation boundaries of industry for gross output flows." This is essential to systematic industry value-price matching and to an integrated establishment-based industry classification. He noted that it is not enough, from an industry of origin point of view, merely to meet input-output table requirements. The necessity in these tables to minimize product mix problems, to purify the flows of changing industrial structure, to short-circuit many service-producing industries, and the tendency to over-simplify the output and intermediate input boundaries of the commodity producing industries, if carried to the annual and sub-annual data, would cause much practical difficulty and would obscure real-world changes in the actual organization of the economy.

Mr. Garston then discussed some of the developments in real product accounting in Canada. So far they have prepared measures of real gross domestic product at factor cost on an industry of origin basis for the period 1935 to date; they are converting their industrial statistics to an establishment reporting basis and changing the coverage of these units from main activity only to encompass all activities. They hope "to achieve integration of value and price reporting for each industry's gross output and intermediate input boundaries". Since they believe it is both easier and less expensive to sample for price change than for quantity change on an industry basis, they are beginning to use and further extend and develop the industry price index system, first published by the Dominion Bureau of Statistics in 1961, to aid in obtaining quantity flows on an industry output and input by commodity class basis. This approach is just as effective for intermediate input as for gross output; and one can include or exclude indirect taxes, trade margins, common or contract carrier transport costs, and discounts since the information is flexible enough to serve the needs of several different types of indexes. They would like to see (in the new SNA) a table of industry price indexes encompassing gross output, intermediate inputs, capital consumption allowances, and domestic product. The Canadians also plan to develop a series for expenditure on gross domestic product at factor cost by using existing deflated expenditure data at market prices in detail, and applying, with some modifications, input-output techniques in order derive constant dollar indirect taxes net of subsidies.

Mr. Garston also discussed some attempts made in Canada to deal with nonstandard products. For highways, they have a new index of bid prices in contract awards; this diverges sharply from an index based on incomplete input costs because of increased productivity and declining profit margins. For electric utility construction, they are using final product prices for machinery which they price by setting up specifications for a good rather like an item which is in production, and then asking manufacturers to price it. The Economic Council of Canada has experimented with an input measure of price for construction, taking deflated materials costs as an initial proxy measure, then combining indexes of unit labor costs and gross profits per unit of output with materials prices.

Mr. Garston finally mentioned that they have found that rebasing appears to be more crucial for constant dollar gross national product than it is for the

production of a base-weighted price index since, for final demand components, relative prices change more significantly than do relative quantities. Canada produces constant dollar series with only one time base but more than one weight base, with linkage through overlapping years. The price structure for each period is more suitable for valuing production for that time period than is the price structure for some other period.

The third discussant, Mr. Fabricant, observed that deflation was given far too little emphasis both in the documents and at the conference, considering the great emphasis placed on the deflated figures in many practical uses of the national accounts. Much of the elaboration of the current account is over-elaboration in terms of expressing items in constant prices; this constitutes a misallocation of the resources available for national accounting. Mr. Fabricant believes that there needs to be much more attention paid to the problem of getting price data, the meaning of price data, the use of price data, and the application of price data in the deflation process.

On the choice of the index number formula, Mr. Fabricant observed that although the implicit deflator is viewed as a sort of Paasche index, it is really a mixture because both Laspeyres and Paasche methods come in at different stages. He suggested that perhaps one should go further in setting up a consistent set of price and quantity indexes, both Laspeyres and Paasche. He also pointed out that although the choice of base is quite often not important, it can at times make quite a lot of difference in cross-sectional analysis.

He pointed out that the double deflation method can lead to problems; at times a paradox develops since the sign of the difference may be opposite in current and in constant prices. For net exports, he feels that the net balance is what should be deflated, since what you are asking is what the nation gets for its exports. One can also deflate labor income by the prices of the goods that labor buys; and value added could also be deflated directly, asking the question, what does the industry get from the economy, rather than the question asked by the double deflation method, of what does the industry give to the economy.

Mr. Fabricant went on to observe that although the documents say that capital consumption allowances should be deflated, they do not say how this should be accomplished. They also say little about the differences between book values of assets and current values of assets; he felt that one should have a surplus account to make the adjustments necessary for all the asset revaluations. He reiterated the need to develop real input measures and to obtain real output measures for government and for construction. He also raised the question of how and at what price imputed items enter the current price indexes.

In the discussion which followed, Mr. Fromm stated that the discrepancy problem arises in constant price series too; one would have a discrepancy between deflated expenditures and deflated value added arising from differences in price indexes and also from aggregation and homogeneity problems. Mr. Kendrick disagreed on the ground that both sides would be deflated by the same price indexes. Mr. Fromm observed that the U.S. had not eliminated the discrepancy but Mr. Fabricant said that the size of the error cited could be considered a minor error.

Mr. Garston, prompted by a request from Mr. Creamer, commented further on Canadian selling price indexes. The producers are asked for the actual transaction price of a commodity, as well as indirect taxes, discounts, etc., applicable to the commodity's selling value, and for public carrier transport costs to the transaction boundary or point. In each industry, the statisticians pick the most important commodities as well as the establishments producing them; then, by consulting these establishments, the most common types are identified and specified in detail and the producers are asked to price them over time. Systematic periodic updating of commodity variety coverage is also part of the program. Mr. Kendrick said there should be a technical manual and that one of the things it should recommend would be the weighting of intraoccupational wage rates so that the aggregate would not reflect the occupational shift. Mr. Ruggles said that by pricing a group of commodities to the neglect of new goods, we take the stagnant portion of the economy as a measure of the whole, thereby getting a distorted picture of price and productivity change.

It was pointed out that since so much of government expenditure consists of wages, if one projects constant price series, one can predict very large government deficits which can thus have quite severe effects on policy; therefore some sort of productivity trend should perhaps be imputed to government from the private sector. Mr. Kendrick pointed out that this procedure was specifically forbidden in the documents, though they did not suggest how one might go about measuring productivity directly for government. Mr. Fabricant suggested that the data might be arranged so that private gross product is easily identifiable —which of course skirts the problem rather than solves it. Mr. Kendrick remarked that he was quite encouraged by the prospect of getting output measures for government on the basis of a pilot study made by the Bureau of the Budget, *Measuring Productivity of Federal Government Organizations* (1964). He estimates that about seventy per cent of civilian government activity might be susceptible to such direct productivity measurement. Mr. Kendrick pointed out that comparability will be reduced, however, if some countries allow for productivity while others just deflate by cost indexes. Mr. Fromm pointed out that problems of productivity and output measurements still exist in the private service sector; and Mr. Leacy observed that since nonprofit institutions are being put in the household sector, there will be deflation problems there as well.

The session closed with summary statements by Messrs. Bowman and Goldsmith. Mr. Bowman began by observing that all economic statistics, and especially the national accounts, are designed for economic analysis; but that people differ in the manner in which they wish to conduct economic analysis. If the national accounts are not useful for analysis in their own right, we should not have them; they provide a partial basis for guiding the major elements of the information system, but their function is more than just that of providing a framework for the information system.

The U.S. accounts have developed with reference to the data base more than has been the case in other countries, which have often emphasized the theoretical structure assuming that the data would appear. Mr. Bowman felt that the SNA's emphasis on the structure rather than the data in the new system

may be doing the developing nations a great disservice. He felt that too little attention had been paid by the conference to the structure of the accounts for purposes of economic analysis; if you take the extreme position that the only function of the accounts is to provide a framework for the information system, then this implies the matrix format presented in E/CN.3/320 and one may thus eliminate a few interesting bits of the analysis because they do not fit neatly into the system. He then observed that the attention received by the logic of the new system may keep people from asking the hard questions of how one provides quantitative measures. In essence, he felt, the major issue before the U.N. is integration versus a concentration on income and product accounting.

The chairman of the conference, Mr. Goldsmith, summarized the conference in terms of four points on which there seemed to be general agreement. First, integration of the accounts is good and this aspect should be preserved and extended. Secondly, the accounts other than income and product accounts need considerable strengthening in matters of detail, in the connections among them and in the way in which the information is to be used. Thirdly, some simplification of the basic system might be desirable, including development of a minimum system which all would be expected to fill in, and fourthly, more consideration needs to be given to the possibilities and needs of the developing countries.

Postscript: The Revised Revision of the SNA

General Comments on the New Document

On June 28, 1966, there appeared *Proposals for Revising the SNA, 1952: June 1966* (E/CN.3/345), the document which was being drafted at the time the conference was held. Much of what it contains has already been covered in this report, either because it appeared in STAT/10 and STAT/11 or because it was offered by the U.N. representative in rebuttal to some of the critical points raised by other conference participants.

It is mentioned that the proposals were discussed at a special meeting of the Conference on Research in Income and Wealth. One cannot help but speculate on the influence which the conference may have had on this report when one reads

> Questions of apportionment between the consumption expenditures of households and the intermediate and capital expenditure of industries will occur in the case of goods utilized by professional practitioners and other independent proprietors for business and household purposes, e.g. automobiles. In principle, the costs of acquiring and operating such automobiles should be divided between households and industries, based on the relative extent to which the automobile is utilized for business and household purposes. (p. 96)

or

> . . . there may be statistical discrepancies between these data. It will be useful to indicate the amount of the statistical discrepancies. (p. 158)

Even more thought-provoking is the following statement from the introduction:

> For example, it has become evident that the revised SNA should include explanations of the range of analytical interests which the wealth of data in the proposed tables and accounts might serve, and should furnish guidance as to the extent, frequency and priority with which these data might be published. Or, the need has been emphasized to study the compilation of data on the total consumption of the population and the appropriate treatment [sic] outlays by employers on general recreational, health and educational facilities for their employees. Questions have also been raised as to the links between the data of the system on establishment-type and enterprise-type transactor units. (p. 8)

Whether the conference did more than reinforce decisions already made on the basis of other discussions is debatable; it is encouraging to note, however, that many of the critical points raised can no longer be applied, at least in such force, to the new document and its proposals.

The presentation and discussion are considerably clearer, possibly because in this document specific recommendations are made and there is little discussion of alternatives. There are from time to time discussions of the purposes which are to be served both by the system as a whole and by the specific sets of data which it contains. The terms "real" and "financial" have been dropped; they have been replaced by references to "Class II Accounts" and "Class III Accounts" or to "production, consumption and capital expenditure accounts" and "income and outlay and capital finance accounts". Since the old terminology seems to have something in common with Voltaire's God, the designation PCCE and IOCF will be used throughout the remainder of this discussion.

Some consideration is given to the company-establishment problem; the philosophy of classification for the two sets of accounts is treated in somewhat greater detail, as are some of the conceptual and practical issues involved in separating the legal entity of the IOCF accounts into its constituent parts for purposes of the PCCE classifications by kind of economic activity and the like. The new document again calls for an industrial classification of enterprises in the IOCF accounts, stating

> This scheme will differ from, but be linked to, the classification of industries according to kind of economic activity. The categories of the former classification will be much fewer in number and wider in scope than those of the latter classification. (p. 55)

The rationale for the treatment of unincorporated enterprises in the institutional sector classification is explained somewhat more effectively here than in the earlier documents.

Aside from certain definitional and classificational changes, the major respects in which the new document departs from those discussed by the conference and in this report are the following: a clear separation of the activities of general government and private nonprofit institutions serving households as producers and as final consumers of their own gross output; and a special adaptation of the system to the needs and requirements of developing nations. The latter is discussed here because of the light it may shed on general informational priorities, as well as those explicitly set out for these countries.

Modifications for Developing Nations

In addition to the more specific recommendations for national accounting in these countries, the concept of production has been made still more realistic by a further extension of the range of own-account production activities included. Gross output is to include all production of primary products; the processing (manufacture) of commodities from primary products by farmers and other producers of these products, whether or not sold; and all production of other products so long as some is offered for sale.

The special system for developing nations consists of a set of special accounts and tables and suggestions for orders of priorities in the compilation of both the special and the general systems of accounts and tables. The special tabulations are designed to focus attention on problems of dualism, the prominent role of the public sector, and the importance of external trade. The new accounts look at segments of the economy; areas, such as rural areas, traditional urban producers, etc.; and key kinds of economic activity, i.e. major export industries and the like. The new tables attempt to subdivide gross output into that produced for sale and that destined for own-account consumption, and to present a less detailed statement of use and supply of commodities which leaves out services produced by general government and private non-profit institutions serving households. It is also suggested that such countries use gross concepts of saving and of operating surplus to facilitate the estimation of many of the aggregates.

The highest priorities are given to information on external transactions, the PCCE accounts, and tables relating to commodities, production in the non-service sectors, household consumption expenditure, capital formation by type of good, and the public sector accounts and tables in both PCCE and IOCF systems. The transactions of the monetary sector and the gross investment portion of the capital finance accounts of enterprises are also assigned a high priority. Every item cited is a current price flow; the constant price series are generally assigned low orders of priority.

Other Changes

Changes in Classification

Most of the changes in the classifications, accounts, and tables shown in E/CN.3/345 stem from the highlighting of the roles of the public sector and of private nonprofit institutions serving households. The nonprofit sector is formally separated from households in both PCCE and IOCF accounts and tables. There are now three production sectors, each with its own production account and capital expenditure account: industries (classified by kind of economic activity); services of nonprofit institutions serving households (classified by nonprofit purposes); and government services (classified by government purposes). The last two will by definition sell most of their output to themselves. There are in addition three consumption accounts: household goods and services (classified by consumers' goods and services); nonprofit institutions' purposes;

and government purposes. This restructuring has necessitated some modification in the classifications previously discussed; other changes were made as well; and all changes are summarized below.

1. *Kind of Economic Activity*: This classification now shows education and research as separate items under the general heading of "Social, recreational, and related community services" instead of combining them as before. The category "Public administration and defence" is now subdivided into seven categories corresponding to the "general administration, . . ." sub-classes in the Government Purposes Classification. A new major group has been created out of forestry and logging.

2. *Consumers' Goods and Services*: Categories of this classification which applied to expenditures of nonprofit institutions have been removed. These include "Welfare services", the "research and scientific institutions" category of "Education and research", and trade unions, churches, professional societies, etc., from the category "Other services". In addition repair services, while still included in the same broad category as expenditure on the item, are now separated from new purchases at a more detailed level of classification.

3. *Government Purposes*: "General research" is now a full major category instead of a component of "General administration".

4. *Purposes of Nonprofit Institutions Serving Households*: This new classification contains six categories with no subdivisions: (1) Education services; (2) Research and scientific institutes; (3) Medical and other health services; (4) Welfare services; (5) Recreational and cultural services; (6) Religious, professional and labor organizations, civil associations and the like.

5. *Types of Capital Formation*: This classification has been modified in order to show transactions in livestock somewhat more effectively. A new category of inventory change has been added, "Livestock except breeding stock, draught animals, and dairy herds"; and "Other fixed capital formation" has been divided into "Plantation and orchard development" and "Breeding stock, draught animals, and dairy herds".

6. *Financial Claims*: These are now classified by type of instrument and liquidity, with debtor detail, rather than by debtor with type of instrument and liquidity detail as before. The two items beginning "Counterpart of transfer . . ." have been eliminated.

7. *Business Capital Formation and Land*: The second component has been extended to include art objects, antiques, mineral rights, patents, etc.; in short, all nonreproducible tangible items and nonfinancial intangibles.

8. *Institutional Sectors*: No modification has been made in this classification except as noted in the opening paragraph of this section. In effect the existing subsector of the household sector covering private nonprofit institutions serving households has been elevated to full sector status.

Changes in Structure and Presentation

As with the changes in classification, most of the changes in accounting design and presentation are also the result of the new emphasis on government

and nonprofit institutions. The synoptic matrix has been revised to accommodate the changes in a manner described in the first paragraph of section 1 above.

The PCCE accounts have new entries showing transactions of the household, industry, and government sectors with the new nonprofit sector; otherwise the format of the production accounts is little changed. The household sector no longer has a capital expenditure account, however, since the removal of nonprofit institutions also removed the only capital formation which the system allows the old sector to undertake.

The PCCE supporting tables now include a current price table of the expenditure of the new nonprofit sector by purpose; this information was formerly a component of the consumption expenditure table; all tables except the input-output table 3 which were formerly classified by kind of economic activity now have additional information classified appropriately under services of general government and under services of private nonprofit institutions serving households. There are also some new constant price tables showing the consumption expenditures of government and of nonprofit institutions by purpose, and imports and exports classified in terms of the industrial or kind of economic activity classification.

Most of the changes in the IOCF accounts and tables are the result of the changes previously indicated in both the institutional sector classification and in the classification of financial claims. Life insurance claims and premiums are no longer identifiable in the income and outlay accounts, though one still finds casualty insurance transactions. Because of the extension of the old category "Business capital formation and land" to include other nonreproducible tangibles and some intangibles, items including transactions in these new items are shown in the capital finance accounts and in the consolidated capital and external accounts. There are few changes in the supporting tables other than those arising from the causes already discussed. There is more detail on the composition of "Compensation of employees" in the table on the distribution of the national income, but not on the other items.

The Conference and the New Revision: Remaining Differences

It is clear that some of the critical comments made during the two days of the conference are no longer applicable; at least many of them would not need to be so vehement. It seems likely that links at something other than the most aggregative level will be built between the PCCE and the IOCF accounts, and that the company-establishment problem will thus be given a somewhat better solution. General government has been reassembled out of the establishments into which it had been fragmented, and nonprofit institutions have achieved independent status. Some new constant price tabulations have been added, though nothing more has been said on matters of how to construct such estimates. Some of the classifications have probably been improved from the point of view of the participants at the conference, and it is likely that more will be done when the ISIC is revised and a commodity classification other than the SITC is established.

However, there are still disparities between the system presented in

E/CN.3/345 and what the tenor of the discussions would seem to indicate that the participants would like to see there. Consumer durables are still firmly established as an item of current consumption. The types of capital goods distinguished are still few and broad. Of greater importance is the fact that the unincorporated business sector is still split between the corporate and the household sectors for purposes of the IOCF accounts; the sentiment of the conference was not at all in favor of this arrangement.

The most important difference in opinion, however, is in the importance of income analysis. Compensation of employees is now shown in more detail at the aggregative level; it will be possible to separate wages and salaries, employers' social security contributions, and other supplements for both military and civilian employees. The operating surplus and the income transfer caetgories remain as defined in the documents before the conference. It seems unlikely that their acceptability has improved over the intervening months.

List of Sessions and Panelists

Session #1—**United Nations Proposal for Integration of All the Major Accounting Systems**
Leader: Stanley J. Sigel, *Federal Reserve Board*
Discussants: Morris A. Copeland, *University of Missouri*
Simon A. Goldberg, *Dominion Bureau of Statistics*
George Jaszi, *Department of Commerce*
Wassily W. Leontief, *Harvard University*

Session #2—**Consumption**
Leader: Irwin Friend, *University of Pennsylvania*
Discussants: Richard A. Easterlin, *University of Pennsylvania*
F. Thomas Juster, *National Bureau of Economic Research*

Session #3—**Capital Formation and Stock**
Leader: Daniel Creamer, *National Industrial Conference Board*
Discussants: Jack Alterman, *Bureau of Labor Statistics*
Raymond W. Goldsmith, *Yale University*
Robert C. Wasson, *Department of Commerce*

Session #4—**Financial Accounts**
Leader: Stephen P. Taylor, *Federal Reserve Board*
Discussants: John A. Gorman, *Department of Commerce*
Earl Hicks, *International Monetary Fund*

Session #5—**The Government Sector**
Leader: Richard Ruggles, *Yale University*
Discussants: George M. Cobren, *Department of Commerce*
Marilyn Y. Rice, *Department of Commerce*
Irving Rottenberg, *Department of Commerce*

Session #6—**Functional and Industrial Distribution of Income**
Leader: Edward C. Budd, *Pennsylvania State University*
Discussants: Gary Fromm, *The Brookings Institution*
Martin Marimont, *Department of Commerce*

Session #7—**Product in Constant Prices**
Leader: John W. Kendrick, *George Washington University*
Discussants: Solomon Fabricant, *National Bureau of Economic Research*
Gordon J. Garston, *Dominion Bureau of Statistics*

Ce rapport résume les travaux d'une série de réunions organisées par The Conference on Research in Income and Wealth du National Bureau of Economic Research en juin 1966. Les conclusions principales de la Conférence telles qu'elles on été transmises au Bureau Statistique des Nations Unies étaient les suivantes: (1) Le but d'intégrer les diverses parties du système des comptes nationaux, y compris l'analyse input-output et les transactions financières, doit être soutenu. (2) Les parties du système développées plus récemment doivent être approfondies considérablement pour atteindre le même niveau de clarté et d'utilité acquis par les comptes nationaux du revenu et de la production. (3) Il y aurait lieu d'envisager une simplification du système de base proposé, comportant l'identification d'un minimum d'information qui devrait et pourrait être fourni par tous les pays. (4) En conformité avec l'intérêt dominant de la Conférence à l'égard des comptes nationaux considérés comme un instrument d'analyse économique et un moyen d'élaboration plus informée de la politique, le système proposé doit être structuré davantage dans le domaine de la distribution du revenu.