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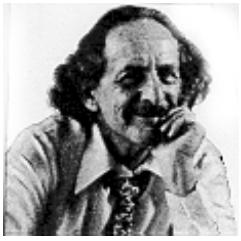

Current Comments®

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The 1984 Nobel Prizes in Economics and Literature Are Awarded to Sir Richard Stone for Pioneering Systems of National Accounting and to Jaroslav Seifert, the National Poet of Czechoslovakia

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Recently we reviewed the work of Niels K. Jerne, César Milstein, and Georges J.F. Köhler, who shared the 1984 Nobel Prize in medicine.[1] We also examined the work of Carlo Rubbia and Simon van der Meer, joint recipients of the physics prize, and that of R. Bruce Merrifield, who was awarded the chemistry prize.[2] In this essay we review the achievements of the prizewinners in economics and literature.

Economics

Sir Richard Stone, 72, the emeritus Leake Professor of Finance and Accounting, Cambridge University, UK, was awarded the 1984 Alfred Nobel Memorial Prize in Economic Sciences for his "fundamental contributions to the development of systems of national accounts [that] greatly improved the basis for empirical economic analysis."[3] Stone's method of national accounting organizes and aggregates the billions upon billions of transactions among sectors of a nation's economy to achieve a coherent picture of a nation as an economic unit. Since its development and refinement over three decades ago, Stone's system of national accounts (SNA) has been indispensable in assessing a nation's economy, in tracking its development, as well as in comparing one economy with another. Today, over 100 nations rely on his method of accounting for monitoring their economies, domestically and internationally.

In this brief review of Stone's major works, I have indicated, in brackets, the number of citations that each of his 10 most-cited publications has received (see Table 1). All citation data derive from our *Social Sciences Citation Index®* (*SSCI®*), which covers the period 1966-1984. (The *SSCI* for the period 1956-1965 is now planned.) The cumulative citation count to Stone's papers and books from *SSCI* data is about 1,200. The cumulative counts of other recent Nobel Prize winners in economics, before receiving their awards, range from about 1,000 (Sir W. Arthur Lewis, 1979) to about 4,800 (George Stigler, 1982).

Early Years

John Richard Nicholas Stone was born in London on August 30, 1913. He was educated at Westminster School and attended Gonville and Caius College, Cambridge University. At Cambridge he initially studied law but was eventually drawn to economics. After receiving his baccalaureate in 1935, Stone joined the London stock brokerage firm of C.E. Heath and Co., where he wrote an economic newsletter. This assignment put him face to face with mountains of data on the British economy, all of which required systematic compilation and analysis.

Big Accounts for the Big War

In 1939 Stone resigned from C.E. Heath and Co. to join the British Ministry of Economic Warfare. One year later, at the request of John Maynard Keynes, he moved to the Central Statistical Bureau of the War Cabinet Offices. The government's leaders had directed Keynes to analyze the country's economy so that its resources could be expended on the war in the most efficient manner. Stone and the 1977 Nobel Prize winner in economics, James Meade, assisted Keynes in this effort by collecting, processing, and systematizing the data necessary to assess the current total resources of the nation as weighed against its total consumption, investments, and disbursements on the war. In 1944 Stone and Meade published *National Income and Expenditure*, which laid out the methods of accounting on a national scale that they had developed to date during their tenure at the War Cabinet Offices.[4,5]

Stone's deft work at the Treasury so impressed Keynes that after the war he recommended that Cambridge University form a department of applied economics and appoint Stone as its director. The university followed this recommendation, and so began in late 1945 Stone's long residence at Cambridge.

Stone's Systems of National Accounts

During the immediate postwar years and in the 1950s, Stone refined national accounting. In essence, Stone used the methods of double-entry bookkeeping to record the activities of each sector (households, private businesses, public corporations, nonprofit institutions, departments of central and local government) of a nation's economy. In its simplest form, Stone's ledger is divided into four accounts: production, consumption, accumulation, and foreign finance. For each account there are listed "outgoings" (costs) and "incomings" (revenues) of the various sectors. The entries in these accounts are interlocking: what is outgoing in one account must show up as incoming in another. From these entries, government officials can assess their nation's economy for a single year by examining the levels at which its sectors are producing, consuming, accumulating, and interacting with the economies of other nations.

Stone's system of national accounts can also be used to track a nation's economy over time. This involves comparing the accounts of a single country at different periods. A simple figure-for-figure comparison of the numbers in the accounts of two different years, however, is unacceptable because these numbers are expressed in the current money units of each year. To achieve true comparisons, recourse is made to index-numbers of price and quantity. Price index-numbers eliminate the false appearance of growth by deflating the current totals in each account to constant base-year values. Quantity index-numbers indicate how much of various kinds of goods are produced at different periods, something not revealed by account entries expressed in money terms. In his 1956 book *Quantity and Price Indexes in National Accounts*[6] [20 citations], Stone explained how index-numbers can be used in national accounting.

SNA Adopted Internationally

Besides assessing the state of a nation's economy and tracking its development over time, the third chief use of SNA is for comparisons of the economies of different nations. For this reason, SNA has proved especially useful to international organizations such as the United Nations (UN), the World Bank, the International Monetary Fund, and

the Organization for Economic Co-operation and Development (OECD), which from 1949 to 1960 was known as the Organization for European Economic Co-operation (OEEC). Each of these international bodies decides what type of and how much economic assistance to provide to member nations. Stone headed both UN and OEEC efforts in standardizing national accounting systems for international use in the late 1940s and throughout the 1950s. By the late 1950s, the UN and OEEC systems of national accounting were virtually identical.[7-11]

Social Accounting

Social accounting unites national accounts and a diverse complex of other information into a vast system of interlocking accounts, thereby adding a depth of detail to the necessarily simplified structure of national accounting. For example, production figures are consolidated in a national account. In a social account, however, the process of production is analyzed in all its aspects and coordinated with other parts of the economy. Subdivision of the consolidated production account is achieved through the use of input-output tables that organize production data on an industry-by-industry basis. An input-output table can reveal, for example, intermediate products bought by one producer from another. The 1973 Nobel Prize-winning economist, Wassily Leontief, pioneered the construction of input-output tables;[12,13] however, in his volume *Input-Output and National Accounts*[14] [23 citations], Stone explained their use within the specific context of social accounting. For more detailed information on social accounting, the reader should consult the book by Stone and Giovanna Croft-Murray entitled *Social Accounting and Economic Models*.[15]

Demographic and Environmental Applications

In his Nobel lecture, "The Accounts of Society," Stone noted the usefulness of accounting not only in economic analyses of society but also in socio-demographic and environmental analyses.[16] As with their economic counterparts, demographic accounts are based on the equality of inflows and outflows during a given period. The inflows and outflows in this type of account are human beings who enter or leave a country. By dividing the population of a nation into a few groups (students, workers, and others) and broad, socioeconomic groups (family size, social class, income bracket, place of residence, race, and religion, to name a few) and by setting these data in the form of integrated accounts, Stone was able to assess the pattern of activities of a population over a given period. A number of his papers in this field focused on the use of demographic accounts in educational planning.[17-19] The most comprehensive expositions of Stone's work in this area appear in his volume *Demographic Accounting and Model-Building*[20] [50 citations] and in *Towards a System of Social and Demographic Statistics*.[21] In one article on environmental accounting published in 1972,[22] Stone demonstrated how degrees of reduction and elimination of pollution would affect living standards. The costs of pollution, he pointed out, are typically not counted in the outgoings column of a production account but ought to be if society desires an accurate reckoning of the depletion of its total assets.

Demand Analysis and Growth Models

While the Nobel committee explicitly cited his development of standardized systems of national accounting in award-

ing him the Nobel Prize, Stone has also contributed significantly to at least two other areas of economics: measuring consumer demand and building growth models.

Demand analysis examines how consumers respond to changes in income and prices. Hendrik S. Houthakker, Harvard University, claims that by using the tools of econometrics Stone "put demand analysis on a firm theoretical and statistical foundation, and...[made] the results useful in application."[23] (p. 1) In his 1945 article "The Analysis of Market Demand"[24] [22 citations], Stone worked out demand functions for specific goods and services in the UK and the US for the period 1920-1938. That is, he related the quantity demanded of each good or service to the real income of consumers, the price of the good or service, and a price index representing the relative price of all other goods and services. In addition, he included a time trend to allow for gradually changing tastes. His analysis was refined substantially in his magnum opus, *The Measurement of Consumers' Expenditure and Behaviour in the United Kingdom, 1920-1938*, the first volume of which was published in 1954[25,26] [97 citations]. In this work, Stone combined cross-section and time-series data in his model of demand. In this same year, Stone published his most-cited paper, "Linear Expenditure Systems and Demand Analysis: An Application to the Pattern of British Demand"[27] [155 citations], in which he used what was for its time a unique formulation of the demand function—a system of equations that had a sound theoretical base. His Linear Expenditure System (LES) assumes that the expenditure on each item is a linear function of income and all individual prices and that the set of relationships covering all goods meets the requirements which are suggested by the economist's theory of consumer choice. Although simple, this form proved serviceable and has been widely used. Houthakker notes that Stone's LES makes use of utility functions identified by Paul Samuelson and Lawrence Klein, the 1970 and 1980 Nobel Prize winners in economics, respectively.[23] (p. 15) During this decade Stone also published three papers focusing on demand for durable and semi-durable commodities;[28-30] two of these papers rank among his 10 most-cited works.

Stone's work in building growth models, mostly undertaken during the 1960s, stemmed from his desire to combine demand analysis, input-output analysis, and national accounting. Stone's growth model was not intended as a forecast; rather, it was a roadmap of sorts showing how a society can reach certain economic goals (production, savings, and so on). A general summary of his model appears in a 1961 paper, "An Econometric Model of Growth."[31] More detailed accounts of the work of the Cambridge Growth Project, as the work of Stone and his colleagues at the Department of Applied Economics is known, are to be found in *A Programme for Growth* (Vols. 1-10).[32]

The career of Sir Richard—he was knighted in 1978—spans nearly half a century. Two volumes that collect a number of his papers were issued in 1966 and 1970.[33,34] A bibliography of 169 of his works from 1936 to 1979 appears in a volume of essays published in his honor in 1981.[35]

Citation Data

Stone's two most-cited works during the period 1966-1984 were significant contributions to the field of demand analysis.[25-27] This may appear somewhat curious since the Nobel committee singled out his work in national accounting

as his most important achievement in economics. While three of his books on special problems of SNA[6,14,20] do appear in our list of Stone's 10 most-cited works (Table 1), these are far surpassed in number of citations by his article on the Linear Expenditure System[27] and his two-volume monograph, *The Measurement of Consumers' Expenditure and Behaviour in the United Kingdom, 1920-1938*.[25,26]

There are many reasons for the comparative lack of citation representation of Stone's contributions to SNA. First, we do not yet have citation data for the period before 1966, during which Stone's efforts in standardizing SNA, and in discussing special problems relating to its use, had great impact. Moreover, even if we had data for these years, Stone's SNA contributions might not be evident: it appears that SNA was quickly and widely adopted among the community of economists, so that citations to this work probably underwent obliteration by incorporation.[36,37] Second, aside from his three specialized volumes mentioned above, the greater part of Stone's work on national accounting systems was achieved through committee work for the UN and OEEC. The standardizations published by these bodies[7-11] by all accounts owe much to Stone's ideas; however, the names of the organizations—and not Stone's name—appear on the covers of these volumes. Third, it is also important to remember that our citation data derive mostly from academic journals and from relatively few government publications. Stone's work in SNA, however, has been widely quoted in government publications.[38] This influence is not reflected in our citation counts.

The foregoing comments serve, I hope, to underscore the difference between citation counting and citation analysis and to caution against cavalier use of citation data.[39] Were the uninformed to examine our list of Stone's most-cited works, his crowning achievement in SNA would be overlooked. Conversely, without the counts, one might not realize the full extent of interest economists have shown in Stone's contributions to demand analysis.

Literature

Jaroslav Seifert, 84, a poet little known outside his native Czechoslovakia, was awarded the 1984 Nobel Prize in literature. Although he has produced over two dozen volumes of poetry in some 65 years, it was not until the late 1970s that his poetry was translated into

Table 1: Stone's most-cited papers and books for the period 1966-1984. Data are from the *SSCI®*. His works are arranged in descending order according to number of citations. A = number of citations received. B = bibliographic data.

A	B
155	**Stone R.** Linear expenditure systems and demand analysis: an application to the pattern of British demand. *Econ. J.* 64:511-27, 1954.
97	**Stone R.** *The measurement of consumers' expenditure and behaviour in the United Kingdom, 1920-1938.* Cambridge, UK: Cambridge University Press, 1954; 1966. 2 vols.
50	**Stone R.** *Demographic accounting and model-building.* Paris: OECD, 1971. 125 p.
50	**Stone R & Rowe D A.** The market demand for durable goods. *Econometrica* 25:423-43, 1957.
36	**Stone R.** A model of the educational system. *Minerva* 3:172-86, 1965.
26	**Stone R & Rowe D A.** The durability of consumers' durable goods. *Econometrica* 28:407-16, 1960.
25	**Stone R, Brown A & Rowe D A.** Demand analysis and projections for Britain: 1900-1970. (Sandee J, ed.) *Europe's future consumption.* Amsterdam: North-Holland, 1964. p. 200-25.
23	**Stone R.** *Input-output and national accounts.* Paris: OECD, 1961. 202 p.
22	**Stone R.** The analysis of market demand. *J. Roy. Statist. Soc. Ser. A—Gener.* 108:286-382, 1945.
20	**Stone R.** *Quantity and price indexes in national accounts.* Paris: OEEC, 1956. 120 p.

German, French, and English and consequently became known to an international audience. In his own country, however, Seifert has been acclaimed a national poet, much read by his fellow citizens, for many years. The Nobel committee observed that his poetry, "endowed with freshness, sensuality, and rich inventiveness, provides a liberating image of the indomitable spirit and versatility of man."[40]

Since Seifert's poetry has been available only in Czech until the past decade and owing in part to the admittedly limited coverage of Czech-language journals in our *Arts & Humanities Citation Index*™, Seifert's name did not appear in the list of 100 most-cited authors of twentieth-century literature that we published in 1980.[41] In fact, Seifert's cumulative count for the period 1976-1984 is only 12. Already, however, Seifert's Nobel Prize has drawn attention to his poetry. The 1985 edition of *2 Plus 2*, an annual collection of creative writing, contains English translations of selections from Seifert's memoirs and of some 14 poems.[42] Furthermore, in preparing this essay, we learned that the Fall 1984 issue of the *Hampden-Sydney Poetry Review*, delayed but soon to appear, is devoted almost entirely to translations of Seifert's works and features a literary analysis of his poems.[43] We also learned that George Gibian, Cornell University, Ithaca, New York, has edited a volume entitled *Selected Poetry of Jaroslav Seifert*, with translations by Ewald Osers and introduction, notes, and additional translations by Gibian. This book is scheduled for publication in April 1986 by Macmillan Publishing Co., New York.[44]

Early Years

Jaroslav Seifert was born in Žižkov, a working-class district of Prague, on September 23, 1901. He received a secondary-school education and worked as a journalist and editor for numerous newspapers and periodicals in Prague from 1922 to 1950.

His proletarian origins and his sympathy for the poor among whom he grew up undoubtedly contributed to his socialist convictions, which were in evidence in his first volume of poetry, *Město v slzách* (*City in Tears*), published in 1920.[45] In this work Seifert movingly describes the misery of the oppressed classes and the coming socialist revolution that, he predicts, will transform their troubles into joy. A second volume of proletarian poetry, *Samá láska* (*Nothing but Love*),[46] published in 1923, joined the themes of social revolution and sensual longing.

Poetism

Seifert traveled to Paris at this time and experienced a different world. His encounters there with European modernism, dadaism, and the poetry of Apollinaire and Rimbaud sparked his imagination. When he returned to Prague, Seifert became a follower of the "poetists," an avant-garde group deeply influenced by modernism, dadaism, as well as by Italian futurism. Although they were political leftists, the poetists rejected the didactic, social mission of poetry. Instead, they believed in the value of unfettered expression, improvisation, wordplay, the unconscious, and the senses. They sought to capture the full experience of the modern urban world.

What flowed from the poetist pen of Seifert marked a distinct and exotic departure from his earlier proletarian themes. His titles in the poetist mold include *Na vlnách TSF* (*On Radio Waves*), 1925,[47] and *Slavík zpívá špatně* (*The Nightingale Sings Poorly*), 1926.[48] A

disappointing trip to Moscow in 1925 put even more distance between the poet and the Marxist ideals expressed in his earlier poems. In 1929 he was expelled from the Communist Party when he and six other writers protested the leadership of Klement Gottwald. He subsequently joined the Social Democratic Party.

Lyric Poetry of Everyday Life

Leaving behind proletarian and poetist themes, Seifert found a mature voice during the 1930s and adopted a set of subjects that he has returned to throughout his life. In the words of Sir Cecil Parrott, Seifert was writing at this time "pure lyric poems on scenes of everyday life and the thoughts they aroused in him, interspersed with memories of his boyhood, his mother and his home; often ballad-like in form and sometimes deceptively simple, tossed off with apparent lightness but always exquisite, pure and fresh, their moods varying from the playful and paradoxical to the mournful and nostalgic."[49] Volumes published during this period include *Jablko s klína* (*Apple from One's Lap*), 1933,[50] and *Ruce Venušiny* (*The Arms of Venus*), 1936,[51] both of which deal with everyday life and the sensual delights of love.

The Voice of the Nation

The rise of Nazism in Germany brought a sense of foreboding to the Czechs, who were already burdened by economic depression and by the death in 1937 of their beloved first president, Tomáš Masaryk. Seifert gave effective voice to his fellow citizens' hopes and fears during this time. The elegiac poem *Osm dní* (*Eight Days*)[52,53] was Seifert's tribute to Masaryk. The title of his next volume of poetry, *Zhasněte světla* (*Put Out the Lights*),[54] took on great significance in the disastrous aftermath of the Munich Agreement, signed on September 29, 1938, which led to the total annexation of Czechoslovakia by German troops on March 15, 1939. During the war years, Seifert's choice of themes was limited. He selected outwardly innocuous, nonpolitical subjects such as the beauty of Prague; however, these poems, inasmuch as they celebrated the proud history and unique character of the capital city, actually helped steel the Czech people to the Nazi domination and advanced the national resistance movement. *Světlem oděná* (*Robed with Light*), 1940,[55] and *Kamenný most* (*Bridge of Stone*), 1944,[56] are among Seifert's wartime works. He commemorated the Prague Uprising of May 1945 in *Přilba hlíny* (*The Helmet of Clay*), 1945.[57]

Listening to the Muse

In 1948 the nation came under the Communist leadership of Gottwald, with whom Seifert had earlier come into conflict. Under the new regime, poets were expected to write verses supportive of the State's program of social engineering. Not since the early 1920s, however, had Seifert been so inclined. In 1950 Seifert's volume *Píseň o Viktorce* (*Song of Viktorka*)[58] took as its theme an incident from the novel *Babička* (*Grandma*) by the Czech writer Božena Němcová.[59] In her novel, Viktorka, a peasant girl, is seduced by a soldier who then abandons her. She bears a child from this union, drowns the child, loses her mind, and lives like a wild animal in the woods. Finally, a lightning bolt cuts her down. A. French, in *Czech Writers and Politics, 1945-1969*, suggests that the character Viktorka symbolizes "sympathy for the romantic outcast, who seeming degraded, yet rises above the man-imposed restraints of society."[60] (p. 68)

This volume met with strong criticism, especially from Marxist poet-critic Ivan Skála. Seifert, he said, failed to express "the joys of the working-man," and for this his work was condemned as disloyal, bourgeois, and escapist. Throughout the Stalinist era, Seifert's themes were determined by the Muse. He turned to the life of his favorite composer in *Mozart v Praze* (*Mozart in Prague*), 1948,[61,62] to children's verse in *Šel malíř chudě do světa* (*A Poor Painter Set Out in the World*), 1949,[63] and to memories of his mother in *Maminka* (*Mother*), 1954.[64] French remarks of the last: "In itself it summed up a whole trend of literature away from the monumental to the humble; from public themes to private; from the pseudo-reality of political slogans to the known reality of Czech home life which was the product of its past."[60] (p. 104)

In 1956 the new Soviet liberalization programs under Krushchev had a ripple effect in Eastern Europe. Literary figures broached the subject of freedom of expression during the Second Congress of the Czechoslovak Writers' Association, held in April of that year. Seifert, in particular, was outspoken in his denouncement of the cultural policies of previous years, which had been extremely harsh on many writers. In a bold speech he declared, "If an ordinary person is silent about the truth, it may be a tactical manoeuvre. If a writer is silent, he is lying."[60] (p. 114-5)

Seifert's outspoken assertions that writers were the conscience of the nation, however, were not well received by the politicians.[65] Consequently, little was heard from Seifert during the period from 1956 until 1968. He was ill for much of this time as well. His collected works were published in six volumes from 1953 to 1964 (a seventh appeared in 1970), but any new poetry was composed "for the drawer." At this time Seifert observed: "For a long time I have written no verses. Years ago I put down my pen and they put in my hand a thermometer.... How many people who were once close to me are already dead and I myself am already old. I don't write so easily as I did. And a greater feeling of artistic responsibility holds back my pen as it moves across the paper. I am not so carefree when I write as I once was."[49] (p. xvii)

Seifert again entered the political arena during the Prague Spring of 1968, opposing foreign intervention and signing the "2,000 words" manifesto drafted in support of Czech autonomy and the Dubček government. Once again Seifert spoke out on behalf of persecuted authors.[65] In 1969 he was elected Chairman of the Czechoslovak Writers' Association, but he resigned in 1970.

A New Voice

New works by Seifert appearing during the late 1960s—*Odlévání zvonů* (*The Casting of Bells*), 1967,[66,67] *Halleyova kometa* (*Halley's Comet*), 1969,[68]—initiated a new style, simpler and more direct. Seifert described this change in an interview with *Time* correspondents Henry Grunwald and John Moody: "In the beginning [my poetry] contained many rhymes and had a singing quality. Now it's poetry of free verse and some rhyme, but less emphasis on rhyme, and more inner rhythm."[69]

During the early 1970s official channels of publication were closed to Seifert. His popularity, however, never flagged, and his new poetry was produced in *Samizdat* versions, copied and recopied by his admirers for distribution at home and abroad.[65] Seifert was a signatory of Charter 77, an appeal in 1977 to the government by some 700 Czech intellectuals and artists for greater freedom of expression.[70] Some of Seifert's new poetry began to be published abroad at this time, and in the early

years of this decade publication at home was again possible. *Morový sloup* (*The Plague Monument*)[71,72] recalls the Stalinist era in Czechoslovakia from 1948 to 1953 and is considered by some to be Seifert's masterpiece. *Deštník z Piccadilly* (*An Umbrella from Piccadilly*)[73] is his most recent collection of poems. Seifert's memoirs recently appeared under the title *Všecky krásy světa* (*All the Beauties of the World*), 1981.[74,75]

William E. Harkins, Columbia University, writes of Seifert's claim to the Nobel Prize: "He is the last surviving member of a great literary generation.... He is a thoroughly Czech national writer, not so much of landscape or history (though his Prague poems do fall into this category) as of mood and attitude toward life. His cult of optimism and love is doubtless closer to the mood of his countrymen than was his fellow poet Halas's cult of gloom and death. In his lifetime he has created two kinds of poetic speech and commanded them thoroughly, one of song and one of statement; both are totally free from rhetoric."[76]

This concludes our review of the 1984 Nobel Prize winners. The 1985 Nobel Prizes have been announced recently. The economics prize was awarded to

Autobiography

by Jaroslav Seifert

Sometimes,
when she would talk about herself,
my mother said:
My life was sad and quiet,
I always walked on tip-toe.
But if I got a little angry
and stamped my foot
the cups, which had been my mother's,
would tinkle on the dresser
and make me laugh.

At the moment of my birth, so I am told,
a butterfly flew in by the window
and settled on my mother's bed,
but that same moment a dog howled in the yard.
My mother thought it
a bad omen.

My life of course has not been quite
as peaceful as hers.
But if I gaze upon our present days
with wistfulness
as if at empty picture frames
and all I see is a dusty wall,
it has been so beautiful.

There are many moments
I cannot forget,
moments like radiant flowers
in all possible colours and hues,
while evenings filled with fragrance
resembled purple grapes
hidden in the leaves of darkness.

With passion I read poetry
and loved music
and blundered, ever surprised,
from beauty to beauty.
But when I first saw
the picture of a nude woman
I began to believe in miracles.

My life unrolled swiftly.
It was too short
for my vast longings
which had no bounds.
Before I knew it
my life's end was drawing near.

Death soon will kick open my door
and enter.
With startled terror at that minute
I'll catch my breath
and forget to breathe again.

May I not be denied the time
once more to kiss the hands
of her who patiently and with my steps
walked on and on and on
and loved me most.

(Translation by Ewald Osers. Reprinted from *An Umbrella from Piccadilly*. London: London Magazine Editions, 1983, p. 7-8, with the permission of the publisher.)

Franco Modigliani of MIT; the literature prize to Claude Simon of France; the physics prize to Klaus von Klitzing, Max Planck Institute for Solid State Research, Stuttgart; the chemistry prize to Jerome Karle, US Naval Research Laboratory, Washington, DC, and Herbert A. Hauptman, Medical Foundation of Buffalo, New York; and the medicine prize to Joseph L. Goldstein and Michael S. Brown, both of the University of Texas Health Science Center, Dallas. We will examine their contributions in a series of *Current Contents*® essays in 1986.

* * * * *

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